Annual Progress Report (APR)

2025 Air Quality Annual Progress Report (APR) for North Lanarkshire Council

In fulfilment of Part IV of the Environment Act 1995, as amended by the Environment Act 2021

Local Air Quality Management

September 2025

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Executive Summary: Air Quality in Our Area

Air Quality in North Lanarkshire

North Lanarkshire Council is Scotland's fourth largest (by population) local authority, situated in Central Scotland. Traditionally an area associated with heavy industry, this has significantly declined in recent years, and the economy of the area now focuses on commerce and light industry. Due to its geographical location many of Scotland's trunk roads pass through North Lanarkshire, including the M74, M73, M8/A8, M80/A80. There is also substantial cross-boundary travel with neighbouring local authority areas, including Glasgow, South Lanarkshire, Falkirk and West Lothian, for employment, education and leisure activities. The main source of air pollution in North Lanarkshire is road traffic emissions, with a small element attributable to small-scale quarrying activities.

North Lanarkshire Council operate an extensive network of air monitoring equipment. In 2024 this comprised nine automatic air monitoring stations measuring Nitrogen Dioxide (NO_2) and fine Particulate Matter (PM_{10} and $PM_{2.5}$) and 51 passive diffusion tubes monitoring NO_2. The locations of our air monitoring equipment, both automatic and diffusion tubes are reviewed on a regular basis to ensure we target the most appropriate locations in terms of air pollution sources and the potential for receptor exposure. In 2024 we reduced the number of diffusion tube sites from 81 to 51 to reflect very low levels of monitored NO_2. We also set up a new automatic air monitoring station in Gartcosh to reflect the ongoing extensive growth in this area.

During the reporting period of 2024, measured concentrations of NO_2 across monitoring sites, both automatic and diffusion tube monitoring all complied comfortably with the statutory annual mean objective. There were also no exceedances of the short-term statutory objective for NO_2. Similarly, for PM_{10} and $PM_{2.5}$ all statutory air quality objectives were met at the automatic monitoring sites in 2024. Measured concentrations of all three pollutants (NO_2, PM_{10} and $PM_{2.5}$) remain broadly consistent with measured concentrations from 2023, and comfortably below the statutory air quality objectives. Two new diffusion tube sites have also been set up in 2024 – one close to a large school/community campus in Coatbridge, and one in Wester Moffat which is the site of the proposed access road (East Airdrie Link Road) for the New Monklands Hospital.

In 2024 we revoked the Air Quality Management Areas (AQMAs) at Coatbridge and Chapelhall, following discussion with SEPA and the Scottish Government. This followed several years of compliance with air quality statutory objective limits in the area. We will continue to monitor at these locations for now. The remaining AQMA in Motherwell Town Centre will remain in place but under review.

The two Eco stars schemes running in North Lanarkshire (for fleet, and for taxis) continued to grow their membership in 2024, with current fleet scheme having 309 members (10,626 vehicles) and the taxi scheme 13 members (107 vehicles).

Work has also been ongoing on tackling vehicle idling in North Lanarkshire, with 2024 seeing 188 idling patrols carried out at idling hotspots including schools, taxi ranks, laybys and areas of complaint. 288 vehicle idling warnings were issued to drivers during these patrols.

As with previous reporting years North Lanarkshire continues to experience high levels of major development, of both residential and commercial/industrial developments. This includes the ongoing City Deal infrastructure projects as well as the nationally significant Ravenscraig development and the East Airdrie Link Road and New Monklands Hospital. We continue to engage with our development control service to ensure air quality is considered at the earliest opportunity in all relevant developments.

Actions to Improve Air Quality

Several air quality projects aimed at improving air quality in North Lanarkshire were undertaken in the reporting year of 2024.

- The Air Quality Management Areas (AQMAs) at Chapelhall and Coatbridge have been revoked, following several years of compliance with the air quality objectives. Automatic air monitoring will continue in these areas for the moment.
- The Croy automatic air monitoring site has been decommissioned.
- A new automatic monitoring site has been set up at Gartcosh in North Lanarkshire.
- Diffusion Tube sites have been reduced from 81 to 51, with two new sites being established at Moffat Mills, close to the site of the forthcoming New Monklands Hospital, and the other close to a large school and community campus in Coatbridge.
- The Council’s Eco Stars schemes for Fleet and Taxi Operators continued to grow in 2024, with current membership standing at 309 members in the Fleet Scheme (10,626 vehicles) and 13 members in the Taxi Scheme (107 vehicles).

- A joint North Lanarkshire Council and SEPA Clean Air Day project was carried out in two schools in Motherwell, involving the use of zephyr sensor monitors to monitor vehicle pollution in the area. A banner competition and classroom talks were also held to raise awareness and community action in response to air pollution concerns in the area.
- Using funding from the Scottish Government the Strathclyde Park Treasure Trail competition was relaunched in conjunction with South Lanarkshire Council. This saw the revamped Treasure Trail promoted and a competition ran during summer/autumn of 2024.
- The necessary optics assembly replacement was carried out on four of the FIDAS particulate analysers in our air quality monitoring network.

Local Priorities and Challenges

In 2025 North Lanarkshire Council expects to prioritise work in the following areas.

- We will continue our programme of vehicle idling patrols and will commit to undertaking 160 vehicle idling patrols at known hot spots in 2025.
- We are developing an Active Travel Promotion page on the council website. This will be a one-stop-shop for Active Travel information and will include mapping elements that illustrate existing and planned active travel routes throughout North Lanarkshire.
- We will purchase 16 electric vehicles to replace 10-year-old diesel vehicles in the council fleet.
- We will continue to monitor air quality in North Lanarkshire using both automatic and passive diffusion tube monitoring equipment.
- We will undertake the necessary optics replacement on two of our FIDAS particulate analysers.
- We will continue to run the two North Lanarkshire Eco Stars schemes for fleet and taxi operators in the area.
- We will undertake a school air quality project for Clean Air Day and continue with any relevant air quality awareness raising opportunities that we can be involved in.

How to Get Involved

Further information on air quality in North Lanarkshire can be found on the Council's website at https://www.northlanarkshire.gov.uk/pests-and-pollution/pollution/air-pollution or by contacting (01236)856300 or kildonanps@northlan.gov.uk

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1 Local Air Quality Management

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

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Progress Report (APR) summarises the work being undertaken by North Lanarkshire Council to improve air quality and any progress that has been made.

Table 1.1 – Summary of Air Quality Objectives in Scotland

Pollutant	Air Quality Objective Concentration	Air Quality Objective Measured as	Date to be Achieved by
Nitrogen dioxide (NO_2)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
Nitrogen dioxide (NO_2)	40 µg/m^3	Annual mean	31.12.2005
Particulate Matter (PM_{10})	50 µg/m^3, not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
Particulate Matter (PM_{10})	18 µg/m^3	Annual mean	31.12.2010
Particulate Matter ($PM_{2.5}$)	10 µg/m^3	Annual mean	31.12.2021
Sulphur dioxide (SO_2)	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
Sulphur dioxide (SO_2)	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
Sulphur dioxide (SO_2)	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005
Benzene	3.25 µg/m^3	Running annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m^3	Running annual mean	31.12.2003
Carbon Monoxide	10.0 mg/m^3	Running 8-Hour mean	31.12.2003

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 must prepare publish and implement an Air Quality Action Plan (AQAP) within the shortest possible time and no later than 12 months from the date of AQMA Designation Order. The AQAP must set out measures the local authority intends to put in place in pursuit of the objectives within the shortest possible time. Measures should be provided with milestones and a final date for completion. The action plan itself should have a timescale for completion and for revocation of the AQMA. Where measures to reduce air pollution may require a longer timescale an action plan shall be reviewed and republished within five years of initial publication and then five-yearly thereafter.

A summary of AQMAs declared by North Lanarkshire Council can be found in Table 2.1 . Further information related to declared or revoked AQMAs, including maps of AQMA boundaries are available online at https://www.northlanarkshire.gov.uk/pests-and-pollution/pollution/air-quality/air-quality-management-areas or AQMA webpage

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Pollutants and Air Quality Objectives	City / Town	Description	Action Plan
Motherwell AQMA	PM_{10} Annual Mean	Motherwell	An area encompassing part of Motherwell Town Centre	https://www.northlanarkshire.gov.uk/pests-and-pollution/pollution/air-quality/air-quality-management-areas

2.2 Cleaner Air for Scotland 2

Cleaner Air for Scotland 2 – Towards a Better Place for Everyone (CAFS2) is Scotland's second air quality strategy. CAFS2 sets out how the Scottish Government and its partner organisations propose to further reduce air pollution to protect human health and fulfil Scotland's responsibilities over the period 2021 – 2026. CAFS2 was published in July 2021 and replaces Cleaner Air for Scotland –The Road to a Healthier Future (CAFS), which was published in 2015. CAFS2 aims to achieve the ambitious vision for Scotland "to have the

best air quality in Europe". A series of actions across a range of policy areas are outlined, a summary of which is available on the Scottish Government's website.

Progress by North Lanarkshire Council against relevant actions for which local authority are the lead delivery body within this strategy is demonstrated below.

2.2.1 Placemaking – Plans and Policies

Local authorities with support from the Scottish Government will assess how effectively air quality is embedded in plans, policies, City Deals and other initiatives, and more generally in cross-departmental working, identifying and addressing evidence, skills, awareness and operational gaps.

North Lanarkshire Council's Local Development Plan (LDP) was adopted and implemented in July 2022. This is the land use planning strategy for the coming 5-10 years and it focused on Promoting Development Locations and Protecting Assets. Air Quality is specifically mentioned in the LDP in the section on Placemaking Environment and Design Qualities (EDQ) for Development Category. Category EDQ2 includes air quality as a Special Feature for Consideration for proposed development. Also, within EDQ3 Policy section of the LDP there is reference to air quality as one of a number of considerations in relation to planned development. Note is made of proposed development within or adjacent to AQMAs which are detailed in the LDP's Protect Map. The Policies are written in such a way as to apply to any AQMA the Council designates in the future during the lifetime of the LDP.

National Planning Framework 4 (NPF 4) was adopted in 2023 and is part of the Development Plan for North Lanarkshire Council. Within NPF4. Policy 23 Health and Safety makes specific reference to air quality in branch d. This policy provision has additional requirements for consideration and should be read in conjunction with policies EDQ2 and EDQ3 of the LDP. Where there is deemed to be conflict between policies in NPF4 and the LDP, NPF4 will take precedence as the more recently adopted element of the Development Plan.

The Council is currently preparing its Evidence Report as it works towards delivery of its next LDP. Evidence on the presence and management of AQMAs will be incorporated in any site selection methodology, as appropriate, and consideration will be given to the adequacy of NPF4 policy for local circumstances and whether any additional policy provisions may be required in NL LDP2.

2.2.2 Transport – Low Emission Zones

Local authorities working with Transport Scotland and SEPA will look at opportunities to promote zero-carbon city centres within the LEZs structure.

North Lanarkshire Council has previously conducted a National Low Emission Framework Stage/Screening Appraisal and concluded that Low Emission Zones would not be appropriate for the Motherwell AQMA at that time. As there has not been a substantial change to the circumstances of the AQMA a further LEZ assessment is not deemed necessary at this time.

2.2.3 – Transport – Active Travel Strategy

North Lanarkshire Council Active Travel Strategy 2021 – 2031 aims to create a wide range of (transport) connections across North Lanarkshire which can be used for everyday journeys such as travelling to access employment, education or meeting essential needs in addition to recreational purposes. Key targets of the Active Travel Strategy include increasing the number of cycle parking spaces at local amenities, employment centres, transport links and Town and Community Hubs, and introducing additional walking, wheeling and cycling connections to key destinations and local community hubs.

2.2.4 Air Quality and Climate Change

North Lanarkshire Council has a statutory duty to reduce carbon emissions, adapt to climate change and act sustainably. In recognition of the threat of increased global temperatures, the Council has declared a Climate Emergency and is developing a new pathway to net zero. The Council's response to climate change is set out in the document Climate Plan – Action on Climate Together (2030) supported by a list of multi-service actions. The plan will be revised in line with the new pathway.

2.3 Implementation of Air Quality Action Plan(s) and/or measures to address air quality

To ensure that local authorities implement the measures within an action plan by the timescales stated within that plan, the Scottish Government expects authorities to submit updates on progress through the APR process. North Lanarkshire Council has taken forward

several measures within the action plan during the current reporting year of 2024 in pursuit of improving local air quality and meeting the air quality objectives within the shortest possible time. Details of all measures completed, in progress or planned are set out in

Table **2.2.** More detail on these measures can be found in the Council's Air Quality Action Plan which can be viewed on the North Lanarkshire Council website at https://www.northlanarkshire.gov.uk/pests-and-pollution/pollution/air-quality/air-quality-management-areas

Key completed measures for this reporting year are:

- The Air Quality Management Areas (AQMAs) at Chapelhall and Coatbridge have been revoked, following several years of compliance with the air quality objectives. Automatic monitoring at these sites will continue for the moment.
- The air monitoring station at Croy has been decommissioned
- A new automatic monitoring station has been set up at Gartcosh in North Lanarkshire
- Diffusion Tubes sites have been reduced from 81 to 51, with two new sites being established at Moffat Mills, close to the site of the forthcoming New Monklands Hospital, and the other close to a large community campus in Whifflet/Kirkshaws.
- The Council's Eco Stars schemes for Fleet and Taxi Operators continued to grow in 2024, with current membership standing at 309 members in the Fleet Scheme, consisting of 10,626 vehicles. The Taxi scheme has 13 members, which consists of 107 vehicles.
- A joint North Lanarkshire Council and SEPA Clean Air Day project was carried out in two schools in Motherwell involving the use of Zephyr sensor monitors to monitor vehicle pollution in the area of the schools. A banner design competition and classroom talks were also held to raise awareness and encourage community action in response to air pollution concerns in the area.
- Using funding from the Scottish Government the Strathclyde Park Treasure Trail competition was relaunched in conjunction with South Lanarkshire Council. This saw the revamped Treasure Trail promoted and a competition ran during summer/autumn of 2024.
- The necessary optics assembly replacement was carried out on four of the FIDAS particulate analysers in our air quality monitoring network.

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

- Decommissioning of the automatic air station at Kenilworth Drive in Airdrie was not completed in 2024 due to delays with contractors at the various stages of the decommissioning process.

North Lanarkshire Council expects the following measures to be completed over the course of the 2025 reporting year:

- We will continue our programme of vehicle idling patrols and will commit to undertaking 160 vehicle idling patrols at known hot spots in 2025.
- We are developing an Active Travel Promotion Page on the council website. This will be a one-stop-shop for Active Travel information and will include mapping elements that illustrate existing and planned active travel routes throughout North Lanarkshire.
- We will purchase 16 electric vehicles to replace 10-year-old diesel vehicles in the council fleet.
- We will continue to monitor air quality in North Lanarkshire using both automatic and passive diffusion tube monitoring equipment.
- We will undertake the necessary optics replacement on two of our FIDAS particulate analysers.
- We will continue to run the two North Lanarkshire Council Eco Stars schemes for fleet and taxi operators in the area.
- We will decommission the Kenilworth Drive automatic air monitoring station as it has been recording very low levels in recent years.
- We will undertake a school air quality project for Clean Air Day and continue with any relevant air quality awareness raising opportunities that we can be involved in.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Expected/ Actual Completion year	Organisations Involved	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
1	We will undertake 160 vehicle idling patrols at known hotspots in North Lanarkshire in 2025	Public information	2025	Protective Services, North Lanarkshire Council	In progress	Funded by Scottish Government Air Quality grant	Committed number of patrols reported on at end of year	In progress during 2025	None anticipated
2	We will publish a one-stop-shop Active Travel information and promotion resource on the North Lanarkshire Council website.	Promoting travel alternatives	2025	North Lanarkshire Council Roads and Transportation Service and other relevant parties	In progress	Funded by NLC internal budget. No additional external funding required	Publication of web pages	In progress and will be completed by end of reporting year (2025).	None anticipated
3	We will purchase 16 electric vehicles to replace 10-year-old diesel vehicles in the council fleet	Vehicle Fleet Efficiency	2025	North Lanarkshire Council Fleet and Transport	In progress	NLC Capital Funding	Addition of greener vehicles to council fleet	In progress during 2025	None anticipated
1	Facilitate modal shift from private car use to active travel and public transport including (a) Input to Local Transport Strategy (LTS) (b) Pre- and post-implementation monitoring of strategic active travel infrastructure projects including traffic counts, speed and air quality (c) Complete an audit of public transport across NL, including key commuter routes to main employment centres, out of hours provision and age of fleet	Alternatives to private vehicle use	2024-2026	NLC roads and transportation service, SPT	Ongoing	Funding from a variety of sources	Publication of LTS	LTS update is under way with expected completion of end 2025 and committee approval in 2026. First round of stakeholder engagement completed Feb 2025 Currently developing number of schemes through	None anticipated

								design and towards construction for which there have been baseline traffic count data collected that can later be compared to monitor usage of active travel routes. Liaising with SPT who are leading on this work for all of Strathclyde area. This will be picked up through the Regional Transport Strategy as well as any future franchising as well as other strategies being implemented.	
2	Investigate air quality around schools in North Lanarkshire with particular focus on drop-off and pick-up times. (a) Review of existing monitoring network and if necessary deploy additional monitoring (b) Establish Air Quality Champion Schools in each of the AQMAs and other relevant behaviour change campaigns to encourage sustainable travel to/from school for both pupils and staff working at the school	Promoting Travel Alternatives	2023-2028	NLC Pollution Control and Public Health Team NLC Education and Families	In progress	Ongoing	Scottish Air Quality Monitoring grant for monitoring and analysis costs.	A review of monitoring sites was undertaken in 2024. A new diffusion tube site was set up near to a large joint campus school in Coatbridge AQ Champion schools not yet identified. Now only have one AQMA, in Motherwell, so preferably focus	None anticipated for monitoring review. For work with schools need to fit in with their timetabling.

								will be on that area.	
3	Improving Active Travel Options to North Lanarkshire Community Hubs (a) Audit existing infrastructure (b) Publicity campaigns to promoted options	Promoting travel alternatives	2023-2028 and beyond	NLC Roads and Transportation/	In progress	Ongoing	Publication of the web page.	Through the delivery of the community hubs there have been audits of the existing infrastructure to determine how active travel to the sites could be improved. In addition to those noted last year we have also been looking at links in Bellshill to support the Orbiston Community Hub. During 2023/24 an audit was undertaken to ensure appropriate active travel infrastructure was provided for the Riverbank Community Hub, Carnbroe. This fed into the detailed design of Carnbroe active travel link project and construction of phases 1-3. The Transport Planning Team have been	

								developing an Active Travel promotion page for the NLC website. This will be a point of info for the public on all things active travel and include mapping.	
4	Lead by example in taking measures to reduce air pollution in North Lanarkshire (a) In line with the council's approved Leadership/Operating Model we will support home working and the use of hubs in addition to fixed work locations to reduce workplace travel (b) We will enhance the digital delivery of services to reduce the need for employees and customers to travel to council buildings (c) We will continue to offer and promote the Cycle to Work scheme for NLC employees. We will also look to introduce a lease scheme for Electric/Low Emission Vehicles for NLC employees.	Promoting travel alternatives	2023-2028 and beyond	NLC	Ongoing	NA	Ongoing provision of NLC hubs and hybrid working	In line with the Council's proposed operating model the addition of Community Hubs continues over 2025 and the coming years. Air Quality and Active Travel will be considered for each Hub development. The Council has recently launched a salary sacrifice Electric Vehicle Lease Scheme for employees.	None anticipated
5	Review of monitoring network to optimise resources and coverage across North Lanarkshire	Policy guidance and control	2024	NLC Pollution Control and Public Health	Completed	Scottish Air Quality Monitoring Grant	Diffusion Tube sites reduced from 81 to 51. Automatic monitoring site at Croy being decommissioned. New	This exercise was completed in 2024	None

							automatic monitoring site set up at Gartcosh		
6	Ensure air quality and climate change policy actions in North Lanarkshire enjoy a relationship with co-benefits for both areas. (a) Work towards the decarbonisation of NLC fleet (b) We will increase EV charging infrastructure within NL new-build developments (c) We will increase EV charging infrastructure across NL	Policy guidance and control	2023-2028 and beyond	NLC Fleet and Transport	Ongoing commitment	NLC internal and external funding	Annual increase in EV provision	In 2024, we installed 12 twin communal EV chargers within the parking courts of new build housing developments. These installations were complemented by the inclusion of ducting infrastructure, allowing for future expansion of EV charging capacity as demand grows. In addition to communal chargers installed in 2024, we also installed 137 individual EV chargers on dwellings with private driveways, providing residents with direct access to charge their vehicles at home.	None
7	We will ensure air quality has greater importance in NLC's procurement and contract processes in terms of the sustainable procurement duty requirement as outlined in Section 9	Policy guidance and control	2023-2028 and beyond	NLC Procurement Team	In place	No budget implication	NA	Ongoing	None

	of Procurement Reform (Scotland) Act 2014								
8	Aligning Planning and Air Quality Guidance and Placemaking Targets outlined in CAFS2 (a) We will continue to ensure that air quality is a material consideration in development management decisions and where appropriate will promote best practice to realise air quality improvements such as connectivity to active travel/public transport (b) We will ensure air quality is included in any revisions to the Local Development Plan and take due cognisance of air quality requirements in NPF4.	Policy guidance and control	2023-2028 and beyond	NLC Planning and Place Team	Ongoing	No funding implication	Planning and AQ information reported on annual basis in APR	Ongoing	NA
9	Revoke the NO_2 element of the Chapelhall and Coatbridge AQMAs	Public information	2024	NLC Pollution Control and Public Health Team	Completed	No funding implication	Revocation process to be completed	Revocation of Coatbridge and Chapelhall AQMAs completed in 2024	NA
10	Continuation, expansion and promotion of the Eco Stars Environmental Fleet recognition scheme (a) An Eco Stars taxi operator scheme will be set up in North Lanarkshire in addition to the existing Eco Stars fleet scheme (b) We will promote the NLC Eco Stars scheme to council contractors and endeavour to ensure that they are members	Promoting vehicle efficiency	Ongoing	NLC Pollution Control and Public Health TRL Ltd on behalf of NLC	Ongoing	Dependent on Scottish Governme nt Air Quality Action Plan Grant	Annual increases in members of both fleet and taxi scheme	Current membership figures- Fleet scheme – 309 members, 10626 vehicles. Taxi scheme – 13 members 107 vehicles	Both Eco Stars Fleet and Eco Stars Taxi schemes are dependent on the provision of Scottish Government funding

11	Raising awareness including through Clean Air Day, Vehicle Emission Testing and Vehicle Iding campaigns	Public information	Ongoing annual	NLC Pollution Control and Public Health Team	Ongoing	Level of awareness raising dependent on Scottish Governme nt air quality funding	Clean Air Day initiative held annually	Joint SEPA/NLC air monitoring exercise and competition carried out at two schools in Motherwell for Clean Air Day	Funding and resources available
12	Continue our ongoing engagement with the Enterprise Projects Team to ensure that air quality is given appropriate consideration in City Deal Projects	Transport planning and infrastructure	2023-2028 and beyond	NLC Pollution Control and Public Health Team NLC City Deal team	Ongoing	City Deal funding provided by Scottish Governme nt on a project-by-project basis	Delivery of City Deal projects with relevant air quality input	Ongoing involvement in pre-application stage for East Airdrie Link Road	City Deal Projects are dependent on Scottish Government funding

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

This section sets out what monitoring has taken place and how local concentrations of the main air pollutants compare with the objectives.

North Lanarkshire Council undertook automatic (continuous) monitoring at 10 sites during 2024. Table A.1 in Appendix A shows the details of the sites. National monitoring results are available at www.scottishairquality.scot

A new automatic monitoring site was set up towards the end of 2024, at Gartcosh. Results from this site have been omitted from this report as due to the time of year it was set up there is only 7% data capture for the site. Monitoring results from this site will be included in the 2026 Annual Progress Report, in due course.

A map showing the location of the monitoring sites is provided in Figure 3.1. Due to the number of monitoring sites in North Lanarkshire Figure 3.1 is an overview of the sites. More detailed information on both the automatic and diffusion tube monitoring locations can be found on the website www.scottishairquality.scot/latest Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

3.1.2 Non-Automatic Monitoring Sites

North Lanarkshire Council undertook non-automatic (passive) monitoring of NO_2 at 51 sites during 2024. Table A.2 in Appendix A shows the details of the sites.

This is a reduction from 81 diffusion tube monitoring sites in previous years as part of a rationalisation of the monitoring network to ensure monitoring is being undertaken at the most appropriate locations and discontinuing some that have shown several years of measured annual mean concentrations that are significantly below the air quality objective. The rationalisation was also planned to align the changeover dates with the Defra calendar

deployment start and end dates. The diffusion tube IDs have been renumbered sequentially from 1-53, which includes two travel blank tubes. Where the site was in use in previous years its old site ID is also provided. In one case the tube has been moved slightly and the grid reference updated. This has been highlighted in Table A.2 in Appendix A which shows the details of all the sites.

Maps showing the location of the monitoring sites are provided in Figure 3.1 and at www.scottishairquality.scot/latest . Further details on Quality Assurance/Quality Control (QA/QC) and bias adjustment for the diffusion tubes are included in Appendix C.

3.1.3 Other Monitoring Activities

No other monitoring activities were carried out by North Lanarkshire Council during the reporting year of 2024.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for annualisation and bias. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO_2)

Monitoring of NO_2 was carried out at 10 automatic monitoring stations in North Lanarkshire in 2024 and results indicate that there were no exceedances of the annual mean Air Quality Objective (AQOs) at any of the automatic monitoring sites. The highest measured NO_2 concentration in 2024 was at the Chapelhall automatic monitoring site, which measured an annual mean of 24.2 µg/m^3, which is well below the AQO of 40 µg/m^3. Monitoring sites showed a mixture of minimal increases and decreases in measured NO_2 concentrations for the past five years with the air quality objective of 40 µg/m^3 at automatic monitoring sites. Table A.3 in Appendix A compares the ratified monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40 µg/m^3 at automatic monitoring sites.

Graphs in Figures A1 to A5 in Appendix A show the trend in annual mean NO_2 concentrations at continuous monitoring sites within the AQMAs that were in place in 2024.

In addition to automatic monitoring of NO_2 North Lanarkshire Council also monitored NO_2 through its network of 51 passive diffusion tubes. The full dataset of monthly mean values is provided in Appendix B. All diffusion tube monitoring results comply comfortably with the

annual mean statutory objective of 40 µg/m^3. The highest diffusion tube annual mean result was 23 µg/m^3 at DT3, a roadside site at Central Way in Cumbernauld, however this is still well below the annual mean AQO for NO_2.

Table A.4 in Appendix A compares the adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40 µg/m^3 at non automatic monitoring sites.

For diffusion tubes, the full 2024 dataset of monthly mean values is provided in Appendix B.

Table A.5 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past five years with the air quality objective of 200 µg/m^3, not to be exceeded more than 18 times per year. There were no exceedances of the short-term statutory air quality objective for NO_2 hourly mean at any of the automatic monitoring stations in 2024.

3.2.2 Particulate Matter (PM_{10})

Measured concentrations of PM_{10} at all automatic monitoring stations in North Lanarkshire all comfortably complied with the AQO of 18 µg/m^3 in 2024. The maximum annual mean concentration was at Croy, which measured an annual mean average of 10.4 µg/m^3. This was an increase of 1.6 µg/m^3 compared with 2023. The levels still comply comfortably with the AQO. All other sites were relatively consistent with measured concentrations from 2023, apart from CM13 Ravenscraig, which showed a decrease in measured concentrations of annual mean PM_{10}.

Table A.6 in Appendix A compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past five years with the air quality objective of 18 µg/m^3.

Graphs in Figures A.6 to A.10 in Appendix A show the trend in annual mean NO_2 concentrations at continuous monitoring sites within the AQMAs that were in place during 2024.

In terms of the short-term statutory objective for PM_{10} the monitoring results indicated that there were no exceedances of the objective for 24-hour mean PM_{10} (50 µg/m^3 not to be exceeded more than seven times/year). Table A.7 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the air quality objective of 50 µg/m^3, not to be exceeded more than seven times per year.

3.2.3 Particulate Matter ($PM_{2.5}$)

$PM_{2.5}$ was monitored at nine automatic monitoring sites in North Lanarkshire in 2024. Measured concentrations of $PM_{2.5}$ at all monitoring sites in 2024 comfortably complied with the 10 µg/m^3 statutory objective. All sites measured an annual mean concentration within the range of 5 µg/m^3 and 6 µg/m^3. The maximum measured annual mean concentration was at Croy. Table A.8 in Appendix A shows the annual mean $PM_{2.5}$ monitoring results for all automatic air stations in 2024 and compares the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past five years with the air quality objective of 10 µg/m^3.

Graphs in Figures A.11 to A.15 in Appendix A show the trend in annual mean $PM_{2.5}$ concentrations at continuous monitoring sites within the AQMAs that were in place during the reporting year of 2024.

3.2.4 Sulphur Dioxide (SO_2)

Following several years with no measured exceedances of SO_2 and with the agreement of the Scottish Government and SEPA the monitoring of SO_2 in North Lanarkshire ceased at the beginning of 2018.

3.2.5 Carbon Monoxide, Lead and 1,3-Butadiene

Historically, CO monitoring was undertaken at one site in North Lanarkshire, at Croy, where measured concentrations were substantially below the CO objectives, with no exceedances of the air quality objectives noted. Monitoring was discontinued at the end of 2017. No monitoring was undertaken for Lead or 1,3-Butadiene concentrations within the council area in 2024. No significant sources of these pollutants have been identified in the previous round of review and assessment. Should any sources become known to the council then discussions around the monitoring of these pollutants would be undertaken to determine the most appropriate course of action.

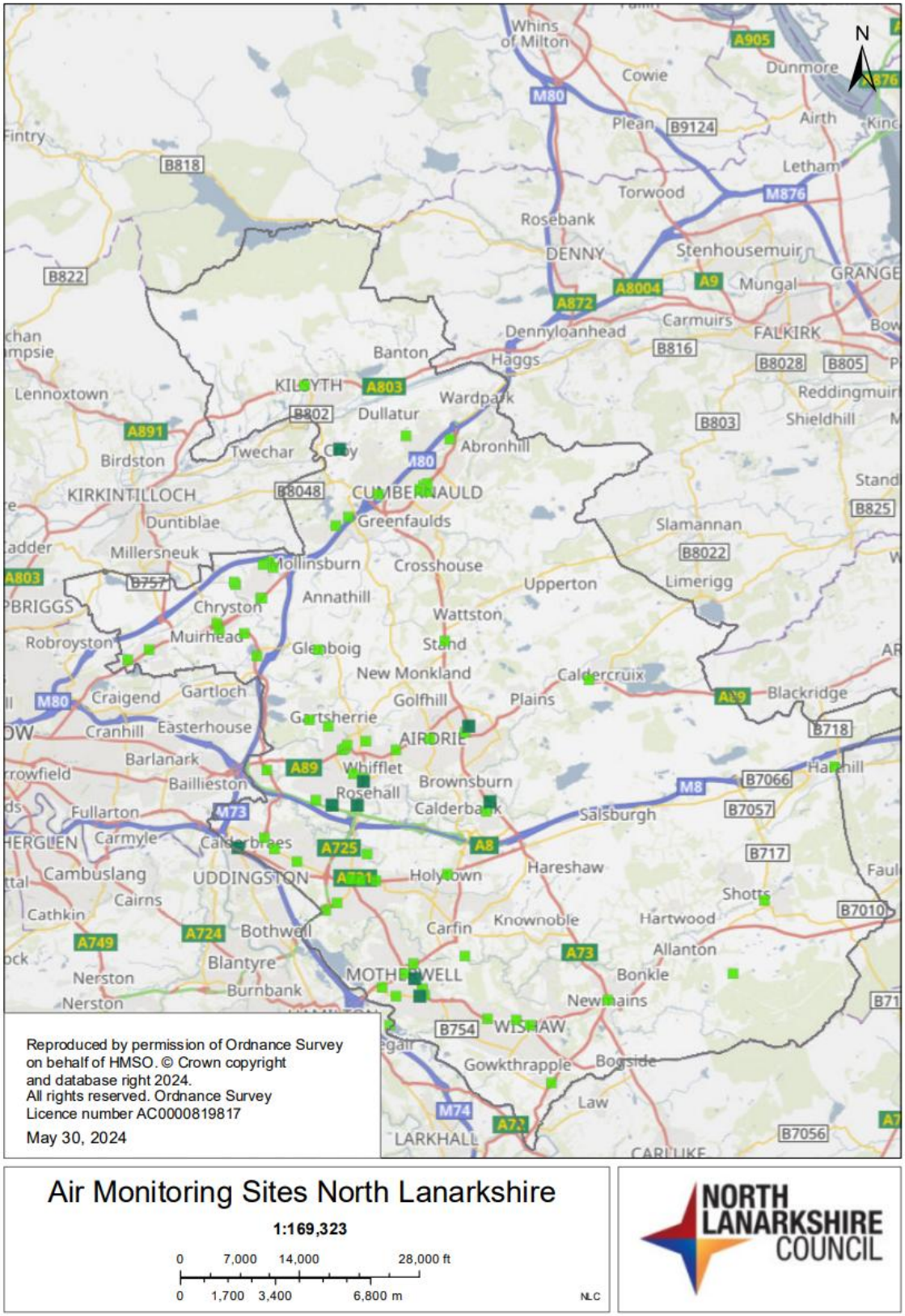

Figure 3.1 – Air Quality Monitoring Sites (dark green automatic stations, light green diffusion tube sites).

4 New Local Developments

4.1 Road Traffic Sources

North Lanarkshire Council Roads and Transportation Team was consulted in relation to changes in traffic flows on roads within North Lanarkshire in 2024, and the following information was provided.

- Narrow congested streets with residential properties close to the kerb – there are no new roads that meet these criteria.
- Busy street where people may spend one hour or more close to traffic – there are no new roads that meet these criteria.
- Roads with a high flow of buses or HGVs – there are no new roads that meet these criteria.
- Junctions – Cumbernauld Rd/Lenzie Road, and also Bellziehill roundabout - see below for details.
- New roads constructed or proposed – there are no new roads that meet these criteria.
- Roads with significantly changed traffic flows – pedestrian zone created at Graham Street, Airdrie. See below for further detail.
- Roads with new/changed layout – several active travel projects have involved changed layout to certain roads, see below for further detail.
- Bus or coach stations – no new bus or coach stations.

In addition to the above information the following projects are of interest in terms of air quality in North Lanarkshire.

- Junction upgrade at Cumbernauld Rd/Lenzie Rd – provision of toucan crossings, resurfacing, improved active travel measures and signal upgrades. Works involved removal of existing traffic islands on Cumbernauld Rd, footway widening along northern arm of Cumbernauld Rd, the removal of HFS and replaced with HRA PSV65 on all approach arms and carriageway/footway resurfacing.
- Whifflet Street Signal refurbishment – traffic signal upgrade at the junction of Whifflet cross. This included the installation of new signal equipment, units and poles.

- Traffic calming installed on Roadside, Cumbernauld. This included the installation of speed cushions/roads markings and signage.
- Signalisation of Dykehead Rd and A73 Stirling Rd junction. This project also includes footway widening to improve active travel provision within the area.
- New speed limit orders on Glenmavis Rd/Carlisle Rd.
- New puffin crossing installed on Chapel Street, Airdrie.
- New Centre Pedestrian Zone created at Graham Street, Airdrie between Buchanan Street and Bailies roundabout. No Vehicle Traffic Regulation Order in place.
- New puffin crossing installed at A723 Carfin Road.
- A721 Glasgow Rd/Shieldmuir Street improvements- active travel improvements on Sheildmuir Rd. these works are continuing to complete the Carfin Road and Glasgow Road sections in 2025. Works were split into three phases with works commencing Feb 2024 and expected final completion date is September 2025.
- Carnbroe Hub Active Routes – active travel improvements in Carnbroe, to provide key sustainable transportation links to the new community hub. This includes active travel upgrades to Paddock Street, Sikeside Road. This was split into a number of phases commencing July 2023 to April 2025.
- Bellziehill Junction Improvements Phase 1 – active travel infrastructure installed in early 2025 with works continuing to progress to allow for the signalisation of the Bellziehill roundabout. Phase two is currently under way to signalise the roundabout with an expected completion of September 2025.
- Orbiston Hub Active Travel Routes Phase 1 – active travel improvements in Orbiston to improve connectivity to the new community hub, whilst assisting with the reduction in the reliance of vehicular transportation.

City Deal Road Infrastructure Projects Update

Glasgow City Region Deal is an agreement between the UK Government, Scottish Government and 8 local authorities, including North Lanarkshire Council. The City Deal consists of a £1.13 billion Infrastructure Fund to create economic growth by improving transport and regenerating or developing sites over the next 20 years. In North Lanarkshire, City Deal investment will provide major road infrastructure to support the redevelopment of Ravenscraig, as this is a nationally important development site. The main focus will be to deliver the Pan Lanarkshire Orbital Transport Corridor, or Pan Lan as it is known. The Pan Lan will link the M74 in the south with the M80 in the north on a route through the

Ravenscraig site. The Pan Lan will create new and upgraded transport infrastructure in North Lanarkshire. Pan Lan now comprises:

Motherwell Town Centre Transport Interchange

- Providing a new station access road, with new taxi rank, to serve the redeveloped Motherwell Train Station along with improvements to bus stop capacity, new and expanded footways and public realm improvements including street trees, to ease road traffic congestion along Muir Street in Motherwell Town Centre and to create more attractive and accessible public transport facilities.
- The infrastructure works were completed in 2023 with the new facilities now operational and in use.
- The new infrastructure will help to improve air quality within the Motherwell AQMA by relieving road congestion and encouraging modal shift to public transport for short, local journeys, commuting and leisure trips.

East Airdrie Link Road

- Creating a new link road between Chapelhall and Riggend (south of Cumbernauld) which will reduce traffic congestion on the A73 through Chapelhall and Airdrie.
- Will contribute towards improving air quality in Chapelhall village by relieving congestion along the A73.
- The road will have limited connections to the local road network to optimise traffic flow. It will be a single carriageway road link from north of the M8 (A723/Newhouse Interchange) to the A73, north of Riggend.
- Following a rigorous options appraisal process a preferred route has been selected. The next stage of the project is under way to develop the preliminary designs for the route alignment and prepare a planning application for submission in late 2025 including mitigation plans for potential impacts on the environment, local access forestry and existing properties.
- An Outline Business Case was approved by the Glasgow City Region Cabinet in August 2024.

Ravenscraig Access Infrastructure South

- Creating a new road link and pedestrian and cycle paths into Ravenscraig from Airbles Road, under the new West Coast Rail Main Line Crossing and continuing to the Ravenscraig Sports Facility.
- Completion of the dualling of Airbles Road supported by additional road improvements.

Please note that the Ravenscraig Access Infrastructure North which involved the dualling of the A723 has now been removed from the City Deal Programme.

M8/A8 Corridor Project

- The City Deal Orchard Farm roundabout project involves a £2 million funding contribution from City Deal towards the development of a new junction on the A8 for heavy goods vehicles, light commercial vehicles and cars to Mossend International Rail Freight Park and Mossend rail head, as well as to the former Shanks and McEwan site and Carnbroe Business Development. The roundabout will enable new industrial developments at these locations, linking to site infrastructure to be brought forward by the developers.
- Further information can be viewed by searching the North Lanarkshire Council online planning portal using the reference 19/00002/FUL. The Outline Business Case (OBC) which includes the Orchard Farm roundabout was approved by the Glasgow City Region Cabinet on 30th August 2022. The OBC also includes 10km of strategic Active Travel linking local communities with key employment sites along the A8/M8 to stimulate modal shift and address access barriers for local areas.
- The new roundabout on the A8 will enable direct access to the Mossend rail head and planned rail freight park from the strategic road network, removing heavy goods vehicles from local roads in the surrounding area, with associated air quality and road safety benefits within local communities in the Mossend and Bellshill areas.
- The Strategic Active Travel Links planned for Eurocentral will connect the strategic employment locations of Eurocentral, Mossend and Newhouse to rail stations at Whifflet to the north, Holytown to the south and Bellshill to the west, and surrounding communities, by active travel. This will remove barriers to the accessibility of jobs at these employment locations and encourage greater use of public transport and active

travel for commuting journeys. Work on the first phase of the project is programmed to commence in 2026.

NHS Lanarkshire New Monklands Hospital

In addition to City Deal Projects, NHS Lanarkshire has secured land at the Wester Moffat area of Airdrie and this is to the site of the proposed New Monklands Hospital. Aspiring to be a “woodland hospital” the chosen site is in a semi-rural location on the outskirts of Airdrie and will be accessed via the City Deal East Airdrie Link Road. This site has been approved by the Scottish Government and the projected opening year for the new hospital at the time of writing is 2031. An Outline Business Case was approved by the Scottish Government in July 2023 and a planning application for the new hospital was submitted in August 2023.

The development control process for each of these developments will consider the potential effects on local air quality and assessments will determine any impact on the relevant statutory objectives for air quality. Any potential for cumulative impacts on air quality as development progresses will also be considered in relation to these major infrastructure projects. Cognisance will be taken of developments close to or impacting the Motherwell AQMA.

4.2 Other Transport Sources

North Lanarkshire Council considered the relevant criteria set out in the template and can confirm that there are no other significant transport sources to be considered in the report.

- Airports – there are no relevant sources in North Lanarkshire.
- Locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.
- Locations with a large number of movements of diesel locomotives, and potential for long-term relevant exposure within 30m – there are no relevant sources in North Lanarkshire.
- Ports for shipping – there are no relevant sources within North Lanarkshire.

4.3 Industrial Sources

On consulting with SEPA for this section the following responses were provided for 2024.

Relevant sites which are permitted by SEPA and are new or have been substantially amended in 2024 are as follows: -

- PPC/B/5005676 – PPC Part B New Licence. Category - PPC(B) Combustion of Fuels. MCP – University Hospital Monklands, Monkscourt Ave, Airdrie, ML6 0JS. Granted 01/02/2024.
- PPC/B/1009229 – PPC Part B Operator Technical (Substantial) Variation to existing authorisation. Category – PPC(B) – Mining and Quarrying. Aggregate Industries UK Limited, Duntilland Roadstone Coating Plant, Duntilland Quarry, Salsburgh, Shotts, ML7 4NZ. Granted 03/04/2024.
- PPC/B/5006781 – PPC Part B New Licence. Category – PPC(B) – Other Manufacturing or Industry. Eurostampa UK Limited, 3 Hunt Hill, Cumbernauld, G68 9LF. Granted 03/04/2024.
- WML/L/1028820 – PPC Waste Management Licence. Operator Technical (Substantial) Variation to Existing Authorisation. Category – WML – Waste and Civic Amenity Sites. Bargeddie MRF, Langmuir Way, Bargeddie, G69 7RW. Granted 10/04/2024.
- PPC/B/5007241 – PPC Part B New Licence. Category – PPC(B) – Coating and Printing and Textile Treatments. Guala Closures UK Ltd, 2 Craignethan Drive, Gartcosh Industrial Estate, Gartcosh, G69 8GQ. Granted 02/05/2024.
- WML/W/0220257 – Waste Management Licence, WML – Operator Technical (Substantial) Variation to Existing Authorisation. Category – WML – Waste – Other Waste Storage and Treatment Sites. Saica Natur, Poplar House, Four Arches, Croy, G65 9TS. Granted – 25/07/2024.

In addition to the information from SEPA above we can confirm the following:-

- Major fuel depots storing petrol – there are no major fuel depots in North Lanarkshire.
- Petrol Stations – there were no new petrol stations in North Lanarkshire in 2024.
- Poultry Farms – there are not poultry farms in North Lanarkshire.

4.4 Commercial and Domestic Sources

On consulting with SEPA they have confirmed the following for 2024.

- Biomass combustion plant – individual installations – there are none that are regulated by SEPA (there could be smaller installations which are not currently PPC regulated by SEPA eg. NDRHI sites).
- Areas where the combined impact of several biomass combustion sources may be relevant – none that SEPA are aware of.
- Areas where domestic solid fuel burning may be relevant – there are no areas of North Lanarkshire where domestic solid fuel burning is a significant source of air pollution.
- Combined Heat and Power (CHP) plant – none that SEPA are aware of.

4.5 New Developments with Fugitive or Uncontrolled Sources

On consulting with SEPA the following information was provided for 2024.

- Landfill sites – no new landfill sites were permitted in North Lanarkshire in 2024.
- Quarries – no new quarries were permitted in North Lanarkshire in 2024.
- Unmade haulage roads on industrial sites – none that SEPA are aware of.
- Waste Transfer Stations – none that SEPA are aware of.
- Other potential sources of fugitive particulate matter emissions – none that SEPA are aware of.

5 Planning Applications

North Lanarkshire Planning and Place service was consulted for details of any relevant planning applications under consideration and planning applications granted consent during 2024 that have the potential to impact on local air quality. All relevant information is presented in Table 5.1 below.

Table 5.1 – Relevant Planning Applications from 2024

Application Number	Brief Description of development	AQ Impact	Comments/further information
24/00156/FUL	100 houses at Dunottar Ave, Shawhead, Coatbridge	No AQIA required as this is replacing existing housing on the site that is being demolished. Also not in AQMA	https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications
24/00182/FUL	Community Hub-St Stephen's PS, replacement school, sports facilities, community centre etc.	No AQIA provided. Replacement of existing school with other facilities added including active travel options. Not in AQMA	https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications
24/00208/PPP	Residential development and assoc infrastructure (application in principle) at Coltness Ave, Allanton.	No AQIA required. Not in/near AQMA	https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications

24/00210/FUL	137 houses at Carnbroe Rd, Carnbroe	No AQIA required. Not in/near AQMA	https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications
24/00230/PPP	Residential mixed-use development. Land at Palacerigg Rd, Cumbernauld	EIA produced, with Air Quality chapter. Report reviewed by Pollution Control and comments made accordingly to development control. Not in/near AQMA	https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications
24/00268/FUL	Extension to Chryston High School, Lindsaybeg Rd, Chryston. New early years facility, new sports facilities.	No AQIA required. Not in/near AQMA	https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications
24/00355/FUL	Development of units suitable for class 4,5,6. Land west of Ravenscraig Sports Facility, 1 O'Donnell Way, Motherwell	AQ Impact Assessment submitted as part of application. Near Motherwell AQMA	https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications
24/00732/PPP	Mixed-use development at land surrounded by Darngavil Rd, Dykehead Rd, Ballochney Rd Airdrie	AQIA submitted	https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications
24/01024/EIASCO	Land to East of Airdrie, North of M8 (A723 Newhouse	EIA scoping opinion report submitted	https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications

	Interchange) to A73 north of Stand/Riggend. Request for scoping opinion.		
24/01096/FUL	Residential development at former Clydesdale Works, Clydesdale Rd, Mossend, Bellshill		https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications
24/01227/MSC	300 dwellings, land at Mid Forest, Forest Rd, Cumbernauld		https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications
24/01250/PPP	120 residential units, land at Rydemains Rd, Glenmavis		https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications
24/01267/FUL	Land to south of Ravenscraig Park, Robberhall Rd, Motherwell. Extraction of contaminated material and remediation of ground at sites known as Meadowhead and TC1-3 within Ravenscraig Masterplan.		https://www.northlanarkshire.gov.uk/planning-and-building/planning-applications

6 Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

- In 2024 all measured concentrations of NO_2 at all automatic monitoring sites comply comfortably with the annual mean statutory objective. Monitoring results showed a mixture of minimal increases and decreases in measured NO_2 concentrations compared with 2023 levels.
- All NO_2 diffusion tubes measured well below the air quality objective, with the majority either the same or below 2023 measured concentrations.
- There were no exceedances of the short-term air quality objective for NO_2 at North Lanarkshire automatic monitoring sites in 2024.
- PM_{10} was measured at ten automatic monitoring sites in North Lanarkshire in 2024. Measured concentrations of PM_{10} all complied comfortably with the annual mean statutory objective and there were no breaches of the short-term objective for PM_{10}.
- $PM_{2.5}$ was monitored at nine automatic monitoring stations in North Lanarkshire in 2024. Measured concentrations of $PM_{2.5}$ at all monitoring sites in 2024 comfortably complied with the annual mean statutory objective.

6.2 Conclusions relating to New Local Developments

North Lanarkshire Council's Pollution Control and Public Health Team has taken due cognisance of the information provided by the Development Management and Strategic Planning Teams in relation to developments in 2024 and in reviewing any Air Quality Impact Assessments submitted in support of planning applications in 2024. In considering this, it is concluded that although there continues to be a high level of planning applications received by the council there are no significant issues in relation to new local developments and their impact on local air quality. This is most likely because the developments have generally not been in areas where air quality levels are close to the statutory objectives, mitigation against air quality impacts were included in the development, or the developments themselves did not lead to significant effects on air quality or result in exceedances of the air quality objectives at nearby receptors.

Pollution Control and Public Health will continue to work with planning and place colleagues to identify any future developments that may present air quality issues and take any action deemed appropriate at that time. We will also continue to request Air Quality Impact Assessments where necessary when consulted through the development management process.

We will also continue to have an input as required to City Deal projects and other major infrastructure projects aiming to highlight any potential impact on local air quality at the earliest possible stage (pre-planning and Masterplan stage where possible).

6.3 Proposed Actions

Work on air quality in North Lanarkshire in 2025/26 will focus on the following areas.

- We will continue our programme of vehicle idling patrols and will commit to undertaking 160 vehicle idling patrols at known hot spots in 2025.
- We are developing an Active Travel Promotion page on the council website. This will be a one-stop-shop for Active Travel information and will include mapping elements that illustrate existing and planned active travel routes throughout North Lanarkshire.
- We will purchase 16 new electric vehicles to replace 10-year-old diesel vehicles in the council fleet.
- We will continue to monitor air quality in North Lanarkshire using both automatic and passive diffusion tube monitoring equipment.
- We will undertake the necessary optics replacement on two of our FIDAS particulate analysers.
- Subject to Scottish Government funding we will continue to run the two North Lanarkshire Eco Stars schemes for the fleet and taxi operators in the area.
- We will undertake a school air quality project for Clean Air Day and continue to participate in any relevant air quality awareness raising opportunities that we can be involved in.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
CM1	Chapelhall	Roadside	278174	663124	NO_2; PM_{10} $PM_{2.5}$	NO	Not applicable	Chemiluminescent; FIDAS	20	10	2
CM2	Croy	Special-by quarry	272775	675738	NO_2; PM_{10} $PM_{2.5}$	NO	Not applicable	Chemiluminescent; FIDAS	30	10	2
CM4	Menteith Rd, Motherwell	Roadside	275458	656792	NO_2; PM_{10} $PM_{2.5}$	YES	Motherwell AQMA	FIDAS; Chemiluminescent	20	8	2
CM5	Shawhead, Coatbridge	Roadside	273411	662997	NO_2; PM_{10} $PM_{2.5}$	NO	Not applicable	FIDAS; Chemiluminescent	22	20	2
CM6	Kirkshaws, Coatbridge	Roadside	272523	663030	NO_2; PM_{10} $PM_{2.5}$	NO	Not applicable	FIDAS; Chemiluminescent	20	8	2
CM7	New Edinburgh Road, Uddingston	Roadside	269144	661496	NO_2; PM_{10} $PM_{2.5}$	NO	Not applicable	FIDAS; Chemiluminescent	30	10	2

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
CM10	Kenilworth Drive, Airdrie	Roadside	277385	665837	NO_2	NO	Not applicable	Chemiluminescent	30	10	2
CM11	Adele Street, Motherwell	Roadside	275642	656148	NO_2; PM_{10} $PM_{2.5}$	YES	Motherwell AQMA	Chemiluminescent; FIDAS	20	0.75	2
CM12	Whifflet A725, Coatbridge	Roadside	273646	663867	NO_2; PM_{10} $PM_{2.5}$	NO	Not applicable	Chemiluminescent; FIDAS	16	20	2
CM13	Ravenscraig	Roadside	277307	657613	NO_2; PM_{10} $PM_{2.5}$	NO	Not applicable	Chemiluminescent; FIDAS	30	1	2

Notes:

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

(2) N/A if not applicable.

Table A.2 – Details of Non-Automatic Monitoring Sites (previous site ID up to 2023 APR is in brackets – see note (4) below

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT1 (DT49)	Swimming pool, Kilsyth	Kerbside	271514	678040	NO_2	No	50	2	No	2.5
DT2 (DT61)	Central Way, Eastbound, Cumbernauld	Roadside	275778	674440	NO_2	No	10	2	No	2.5
DT3 (DT63)	Central Way, Westbound, Cumbernauld	Roadside	275642	674271	NO_2	No	10	2	No	2.5
DT4 (DT150)	Carrickstone Rd/Portland Rd	Kerbside	275160	676210	NO_2	No	25	2	No	2.5
DT5 (NewDT137)	Main St /Smithends,Village, Cumbernauld	Roadside	276710	676098	NO_2	No	10	2	No	2.5
DT6 (NewDT157a)	Swing Park, Castlecary	Roadside	278470	677901	NO_2	No	15	2	No	2.5
DT7 (DT52)	M80 Eastbound, traffic lights, Moodiesburn	Kerbside	269966	670412	NO_2	No	30	2	No	2.5
DT8 (DT53)	M80 Westbound, traffic lights, Moodiesburn	Kerbside	269986	670400	NO_2	No	10	2	No	2.5

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT9 (DT161)	Entrance Bridgend Cres	Roadside	269071	670889	NO_2	No	1	1	No	2.5
DT10 (DT166)	122 Cumbernauld Rd, Stepps	Roadside	268392	669502	NO_2	No	10	2	No	2.5
DT11 (DT157)	Layby Elmira Road	Roadside	268442	669262	NO_2	No	15	2	No	2.5
DT12 (DT151)	131 Cumbernaud Road	Kerbside	265971	668567	NO_2	No	30	2	No	2.5
DT13 (DT50)	1791 Cumbernaukd Road	Kerbside	265198	668204	NO_2	No	25	2	No	2.5
DT14 (DT59)	10-16 Coronation Place, Mount Ellen	Urban Background	269356	669173	NO_2	No	20	2	No	2.5
DT15 (DT152)	Coatbridge Rd, Townhead	Roadside	272391	665824	NO_2	No	10	2	No	2.5
DT16 (NewDT120)	218 Kirkshaws Rd, Kirkshaws	Roadside	271939	663179	NO_2	No	10	2	No	2.5

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT17 (NewDT119)	3 Dunottar Ave, Shawhead	Kerbside	273432	662965	NO_2	No	30	2	No	2.5
DT18 (DT140)	Dundyvan Rd, Coatbridge	Kerbside	273293	664120	NO_2	No	5	1	No	2.5
DT19 (DT133)	Bank St, Coatbridge	Roadside	272887	664991	NO_2	No	2	2	No	2.5
DT20 (DT154)	15-21 Sunnyside Rd, Coatbridge	Roadside	273042	665176	NO_2	No	20	2	No	2.5
DT21 (DT165)	Kildonan St, Coatbridge	Roadside	273727	665285	NO_2	No	20	2	No	2.5
DT22 (DT158b)	19 Deedes St, Airdrie	Roadside	274819	665005	NO_2	No	7	2	No	2.5
DT23 (DT156)	1 Stirling St, Airdrie	Roadside	276005	665406	NO_2	No	50	2	No	2.5
DT24 (DT136)	113 Springwells Cres, Airdrie	Roadside	274162	674130	NO_2	No	30	2	No	2.5

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT25 (DT132)	Airdrie Rd/Craigsmill Wynd	Roadside	281713	667517	NO_2	No	10	2	No	2.5
DT26 (New Site)	Craigson Pl/Towers Rd, Moffat Mills	Kerbside	278880	664914	NO_2	No	2	1	No	2.5
DT27 (DT135)	112 Motherwell St (A73)	Kerbside	277276	665615	NO_2	No	10	2	No	2.5
DT28 (DT47)	Layby in Stand	Roadside	276538	668899	NO_2	No	10	2	No	2.5
DT29	Travel Blank									
DT30 (NewDT56)	Langmuir Rd, Bargeddie (A752)	Roadside	270201	664281	NO_2	No	10	2	No	2.5
DT31 (NewDT55)	Old Edinburgh Rd, Uddingston	Roadside	270463	661441	NO_2	No	15	2	No	2.5
DT32 (NewDT54)	Columba Ct/Old Edinburgh Rd, Viewpark	Roadside	271259	661016	NO_2	No	15	2	No	2.5

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT33 (DT111)	New Edinburgh Rd, Uddingston	Roadside	269171	661451	NO_2	No	15	2	No	2.5
DT34 (DT123)	Hamilton Rd, Orbiston, Bellshill	Kerbside	272687	659512	NO_2	No	20	2	No	2.5
DT35 (DT125)	Main St nr Motherwell Rd, Bellshill	Kerbside	273767	661281	NO_2	No	25	2	No	2.5
DT36 (DT122)	Main St/Pollock St	Roadside	274082	660308	NO_2	No	60	2	No	2.5
DT37 (DT151)	Main St, Holytown	Urban Background	276635	660569	NO_2	No	10	2	No	2.5
DT38 (DT115)	Plantation Rd/Ravenscraig Spine Rd	Kerbside	276635[5]	660569	NO_2	No	10	2	No	2.5
DT39 (DT104)	Coursington Rd/Wilson St, Motherwell	Urban Background	276178	657344	NO_2	Yes Motherwell AQMA	20	2	No	2.5
DT40 (NewDT118)	Merry St/Dalziel St, Motherwell	Roadside	275444	657312	NO_2	Yes, Motherwell AQMA	15	2	No	2.5

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT41 (NewDT103)	75 Windmillhill St, Motherwell	Roadside	275733	656439	NO_2	Yes, Motherwell AQMA	20	1	No	2.5
DT42 (DT117)	156 Hamilton Rd, Motherwell	Urban background	275091	656986	NO_2	Yes, Motherwell AQMA	20	2	No	2.5
DT43 (DT101)	253 Shields Rd, Motherwell	Roadside	276792[6]	655242[6]	NO_2	No	9	2	No	2.5
DT44 (NewDT127)	526 Glasgow Rd (A721)	Kerbside	278059	655368	NO_2	No	10	2	No	2.5
DT45 (DT114)	44 Main St	Kerbside	280370	653072	NO_2	No	15	2	No	2.5
DT46 (NewDT128)	Wishaw Cross/Stewarton St	Roadside	279587	655125	NO_2	No	30	2	No	2.5
DT47 (DT129)	Police Station, Newmains	Roadside	282392	656016	NO_2	No	7	2	No	2.5
DT48 (NewDT142)	Stane Gdns, Shotts	Roadside	287954	659620	NO_2	No	20	2	No	2.5

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT49 (DT143)	Main St	Roadside	290482	664386	NO_2	No	10	2	No	2.5
DT50 (DT149)	20 Lauchope St, Chapelhall (R33)	Kerbside	278119	663075	NO_2	No	15	2	No	2.5
DT51 (DT139)	Lauchope St, Chapelhall (nr shops)	Roadside	278178	663111	NO_2	No	10	2	No	2.5
DT52	Travel Blank									
DT53 (New site)(3)	Old Monkland Rd/Dunkeld Pl, Coatbridge	Kerbside	272602	663578	NO_2	No	3	1	No	2.5

Notes:

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

(2) N/A if not applicable.

(3) New site for 2024.

(4) See Section 3.1.2 regarding rationalisation of diffusion tube networks.

(5) Slight change in grid reference from previous years to move tube to more appropriate location. If using this tube in model verification pre-2024, please refer to the earlier APR reports for old grid reference.

(6) Was listed in earlier APRs as 263 Shields Road with incorrect Grid Reference.

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 2024 (%) [2]	2020	2021	2022	2023	2024
CM1-Chapelhall	278174	663124	Roadside	70.50%	70.50%	18.0	14.8	13.8	18.2	24.2[3]
CM2-Croy	272775	675738	Special-by quarry	55.10%	55.10%	12.0	10.0	9.6	10.8	9[3]
CM4-Menteith Rd, Motherwell	275458	656792	Roadside	96.90%	96.90%	12.6	10.8	9.6	11.7	12
CM5-Shawhead, Coatbridge	273411	662997	Roadside	78.50%	78.50%	16.0	14.2	13.5	14.9	16
CM6-Kirkshaws, Coatbridge	272523	663030	Roadside	69.30%	69.30%	13.0	13.6	13	15.7	11.1[3]
CM7-New Edinburgh Rd, Uddingston	269144	661496	Roadside	31.60%	31.60%	17.0	16.6	15.1	16.6	15[3]
CM10-Kenilworth Dr, Airdrie	277385	665837	Roadside	99.80%	99.80%	14.0	11.9	12.2	12.4	12.4
CM11-Adele St, Motherwell	275642	656148	Roadside	99.20%	99.20%	-	9	13.2	12.7	9.9
CM12-Whifflet A725, Coatbridge	273646	663867	Roadside	99.70%	99.70%	-	13.9	17.2	17.1	15.5
CM13-Ravenscraig	277307	657613	Roadside	64.30%	64.30%	-	-	5.9	9.2	5.9[3]

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

NO_2 annual means exceeding 60 µg/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.

(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%).

(3) Data have been annualised – See Appendix C.

Table A.4 – Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3) – previous ID up to 2023 APR is given in brackets.

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
DT1 (DT49)	271514	678040	Kerbside	92.5	92.5	11.2	13	12.8	10.4	7.2
DT2 (DT61)	275778	674440	Roadside	100.0	100.0	12.6	27.2	23.7	17.2	18.9
DT3 (DT63)	275642	674271	Roadside	100.0	100.0	17.9	26.6	25.4	15.9	23.0
DT4 (DT150)	275160	676210	Kerbside	100.0	100.0	11.2	11.8	10.9	9.3	7.6
DT5 (NewDT137)	276710	676098	Roadside	100.0	100.0	13.9	16.4	15.2	11.9	9.9
DT6 (NewDT157a)	278470	677901	Roadside	100.0	100.0	14.4	19.1	12.7	13.5	11.4
DT7 (DT52)	269966	670412	Kerbside	100.0	100.0	14.6	14.2	12.5	10	10.2
DT8 (DT53)	269986	670400	Kerbside	100.0	100.0	10.5	11.1	9.8	6.8	7.7
DT9 (DT161)	269071	670889	Roadside	100.0	100.0	10.4	10.9	10	5.9	6.7
DT10 (DT166)	268392	669502	Roadside	100.0	100.0	14.5	16.3	14.4	9.1	10.5

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 2024 (%) [2]	2020	2021	2022	2023	2024
DT11 (DT157)	268442	669262	Roadside	100.0	100.0	14.4	19.1	12.7	6.9	8.3
DT12 (DT51)	265971	668567	Kerbside	100.0	100.0	14.6	16.8	13.4	9.6	9.6
DT13 (DT50)	265198	668204	Kerbside	92.5	92.5	12.4	16	11.5	9.6	14.4
DT14 (DT59)	269356	669173	Urban Background	100.0	100.0	14.3	12.5	10.8	6.6	7.6
DT15 (DT152)	272391	665824	Roadside	100.0	100.0	20.7	20.3	14.3	12.8	11.3
DT16 (NewDT120)	271939	663179	Roadside	100.0	100.0	18.9	20.5	16.2	14.1	12.0
DT17 (NewDT119)	273432	662965	Kerbside	100.0	100.0	18.5	19.7	17.7	14.3	11.4
DT18 (DT140)	273293	664120	Kerbside	100.0	100.0	14.8	20.9	13.6	12.8	9.6
DT19 (DT133)	272887	664991	Roadside	92.5	92.5	10.2	9.9	9.4	17.7	12.0
DT20 (DT154)	273042	665176	Roadside	100.0	67.9	18.3	21.5	18	14.9	15.0
DT21 (DT165)	273727	665285	Roadside	100.0	100.0	14.5	16.3	14.4	11.2	10.6

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 2024 (%) [2]	2020	2021	2022	2023	2024
DT22 (DT158b)	274819	665005	Roadside	100.0	100.0	22	23.4	19.6	19.8	14.5
DT23 (DT156)	276005	665406	Roadside	81.1	81.1	18.9	26	16	15.6	15.5
DT24 (DT136)	274162	674162	Roadside	100.0	100.0	22.1	27.1	17.4	8	8.8
DT25 (DT132)	281713	667517	Roadside	100.0	100.0	10.2	9.9	9.4	5.6	6.4
DT26 (New Site)	278880	664914	Roadside	100.0	34.0	-	-	-	-	5.6
DT27 (DT135)	277276	665615	Kerbside	90.6	90.6	12.8	15.4	13	15.6	14.1
DT28 (DT47)	276538	668899	Roadside	100.0	100.0	14.7	14	11.8	8.5	8.3
DT29 TRAVEL BLANK										
DT30 (NewDT56)	270201	664281	Roadside	100.0	100.0	12.2	14.1	12.2	7	8.7
DT31 (NewDT55)	270463	661441	Roadside	100.0	100.0	13.6	19.3	15	10.6	11.0
DT32 (NewDT54)	271259	661016	Roadside	90.6	90.6	14	16.4	13.1	9.9	10.0

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
DT33 (DT111)	269171	661451	Roadside	100.0	100.0	22.2	19	20.3	17.1	12.9
DT34 (DT123)	272687	659512	Kerbside	100.0	100.0	16.7	17.1	14.3	13.3	11.4
DT35 (DT125)	273767	661281	Kerbside	100.0	100.0	15.2	15.5	13.2	11.9	10.4
DT36 (DT122)	274082	660308	Roadside	100.0	100.0	17.1	15.2	11.4	11	8.2
DT37 (DT151)	276635	660569	Urban Background	100.0	100.0	12	14	13.2	11.7	9.8
DT38 (DT115)	276635	660569	Kerbside	100.0	100.0	10.7	8.2	7.4	5.9	4.4
DT39 (DT104)	276178	657344	Urban Background	92.5	92.5	10.2	7.7	5.9	4.8	4.1
DT40 (NewDT118)	275444	657312	Roadside	83.0	83.0	17.1	17.6	14.8	10.5	7.1
DT41 (NewDT103)	275733	656439	Roadside	100.0	100.0	16.6	15.1	15	10.8	10.5
DT42 (DT117)	275091	656986	Urban background	100.0	100.0	18.6	19.5	16.4	12.9	11.1
DT43 (DT101)	276792	655242	Roadside	90.6	90.6	22.4	14.8	13.5	10.1	9.0

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
DT44 (NewDT127)	278059	655368	Kerbside	100.0	100.0	18.8	18	14.3	14	10.7
DT45 (DT114)	280370	653072	Kerbside	100.0	100.0	14.1	9.9	8.5	9.7	5.9
DT46 (NewDT128)	279587	655125	Roadside	75.0	75.0	21.8	22.6	18.2	17.1	12.3
DT47 (DT129)	282392	656016	Roadside	75.0	75.0	17.7	21.5	17.9	14	12.5
DT48 (NewDT142)	287954	659620	Roadside	100.0	100.0	11.8	12.8	10.5	8.8	9.2
DT49 (DT143)	290482	664386	Roadside	100.0	100.0	11.6	11.6	9.9	7.2	6.8
DT50 (DT149)	278119	663075	Kerbside	100.0	100.0	17.2	20.7	16.4	14.3	11.1
DT51 (DT139)	278178	663111	Roadside	92.5	92.5	18.1	22.8	21.1	17	11.1
DT52 – TRAVEL BLANK										
DT53 – New Site	272602	663578	Kerbside	100.0	34.0	-	-	-	-	10.1

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

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

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

Notes:

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

NO_2 annual means exceeding 60 µg/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.TG(22) if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

(5) 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 > 200 µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1-Chapelhall	278174	663124	Roadside	70.50%	70.50%	0	0	0	0(83.2)	0
CM2-Croy	272775	675738	Special-by quarry	55.10%	55.10%	0(73)	0	0	0(60.9)	0
CM4-Menteith Rd, Motherwell	275458	656792	Roadside	96.90%	96.90%	0(113)	0	0	0(62.0)	0
CM5-Shawhead,Coatbridge	273411	662997	Roadside	78.50%	78.50%	0	0	0	0(79.5)	0
CM6-Kirkshaws, Coatbridge	272523	663030	Roadside	69.30%	69.30%	0	0	0	0(88.2)	0
CM7-New Edinburgh Rd, Uddingston	269144	661496	Roadside	31.60%	31.60%	0	0	0	0(70.1)	0
CM10-Kenilworth Dr, Airdrie	277385	665837	Roadside	99.80%	99.80%	0	0	0	0	0
CM11-Adele St, Motherwell	275642	656148	Roadside	99.20%	99.20%	-	0(75.1)	0(83.5)	0(72.1)	0
CM12-Whifflet A725, Coatbridge	273646	663867	Roadside	99.70%	99.70%	-	0(71)	0	0	0
CM13-Ravenscraig	277307	657613	Roadside	64.30%	64.30%	-	-	0(47.9)	0(45.9)	0

Notes:

Exceedances of the NO_2 1-hour mean objective (200 µg/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%).

Figures A1 to A5 below show the trend graphs of measured annual mean NO_2 concentrations over the period 2020-2024 in the three AQMAs that were in place in 2024 (Chapelhall and Coatbridge AQMAs were revoked in December 2024).

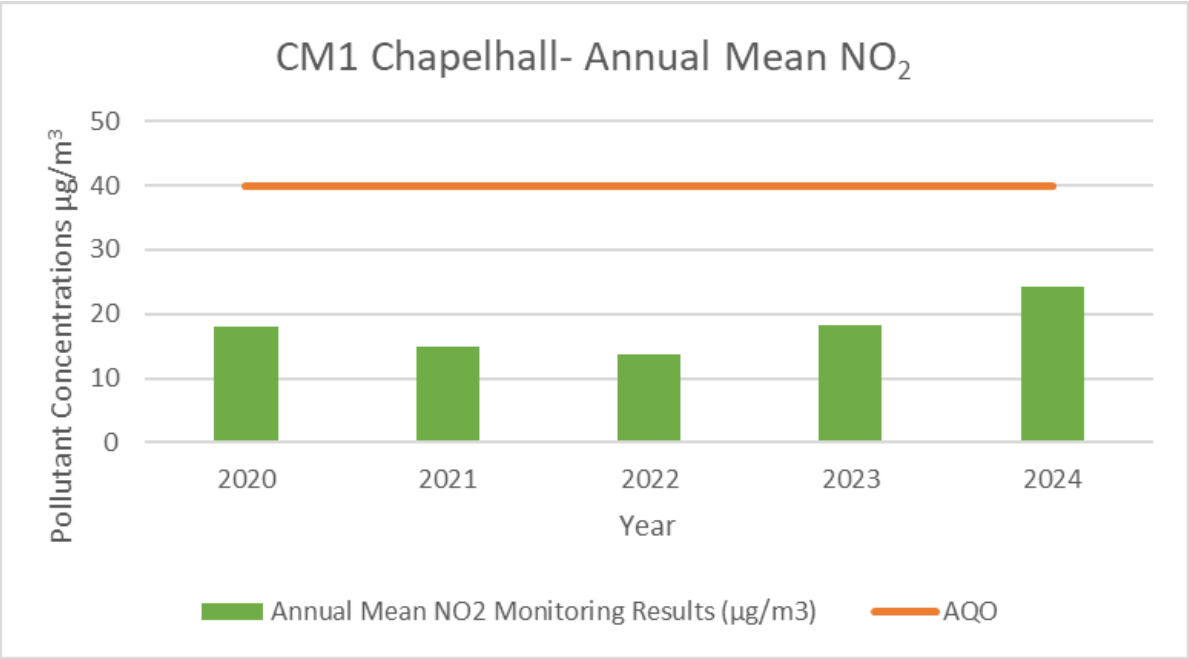

Figure A.1 Annual Mean Concentrations of NO_2 at CM1 Chapelhall

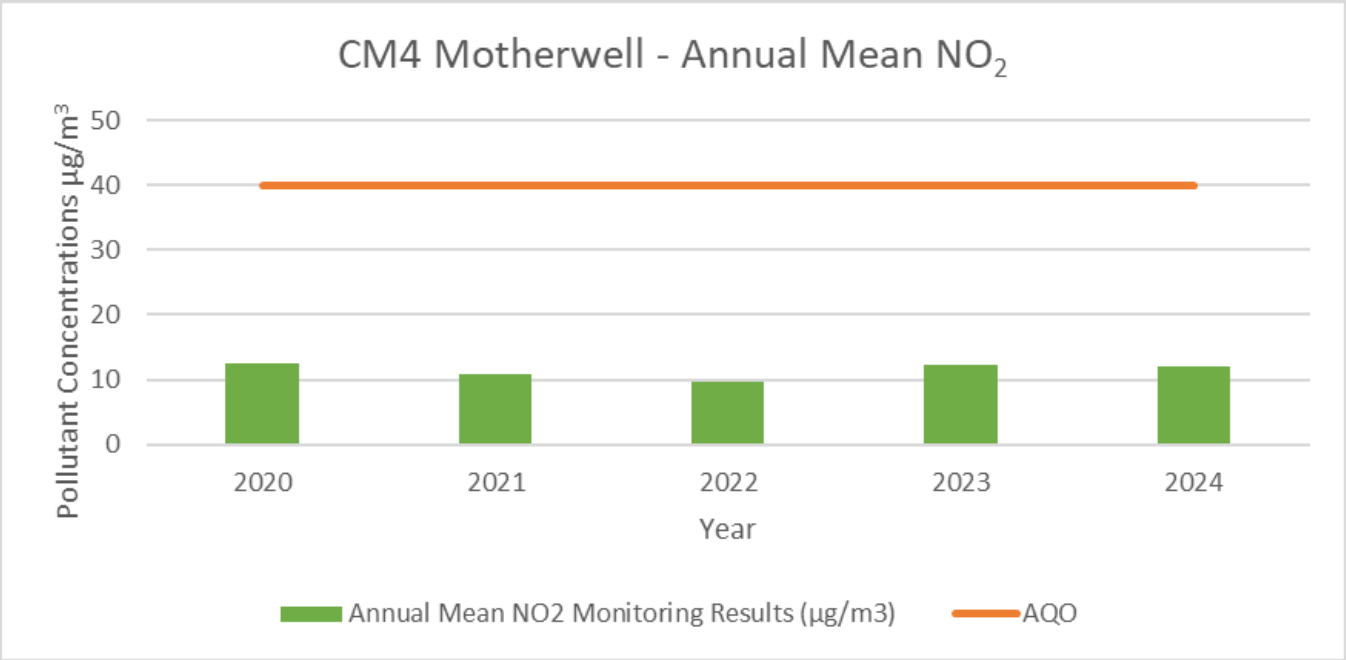

Figure A2. Annual Mean Concentrations of NO_2 at CM4 Motherwell

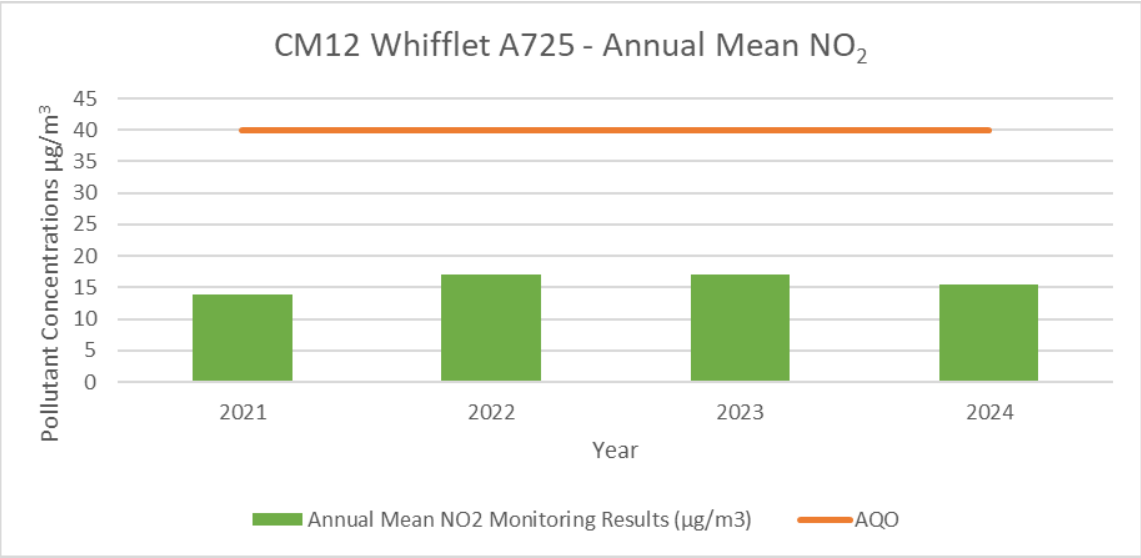

Figure A3 : Annual Mean Concentrations of NO_2 at CM12 Whifflet A725

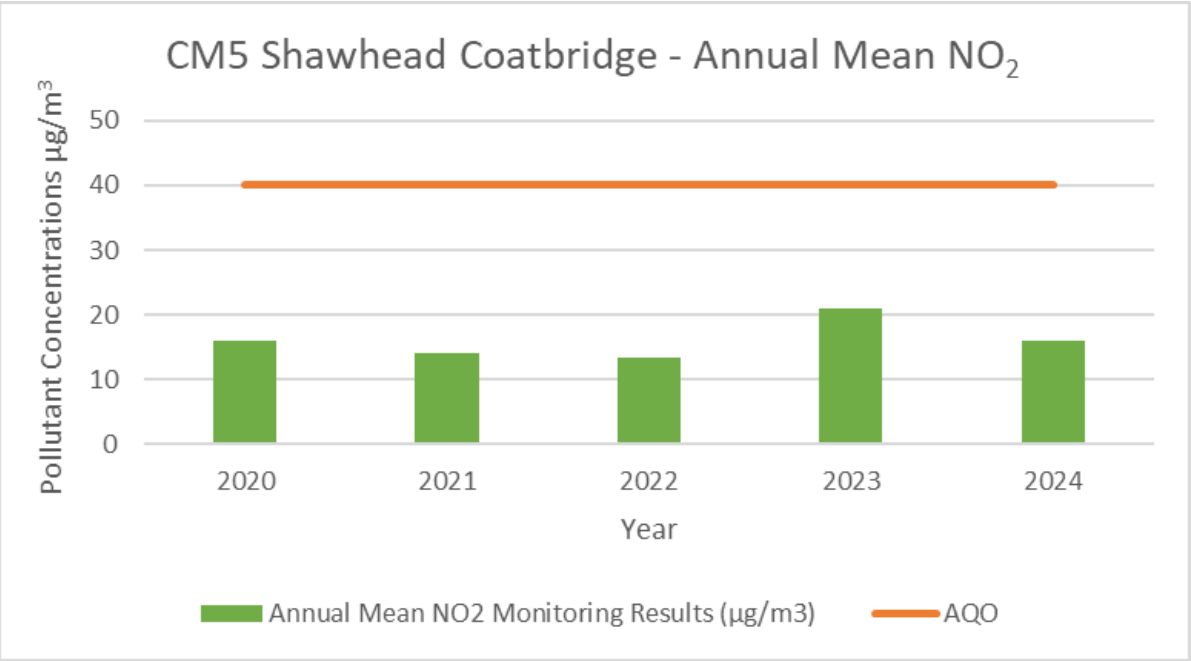

Figure A4 : Annual Mean Concentrations of NO_2 at CM5 Shawhead, Coatbridge

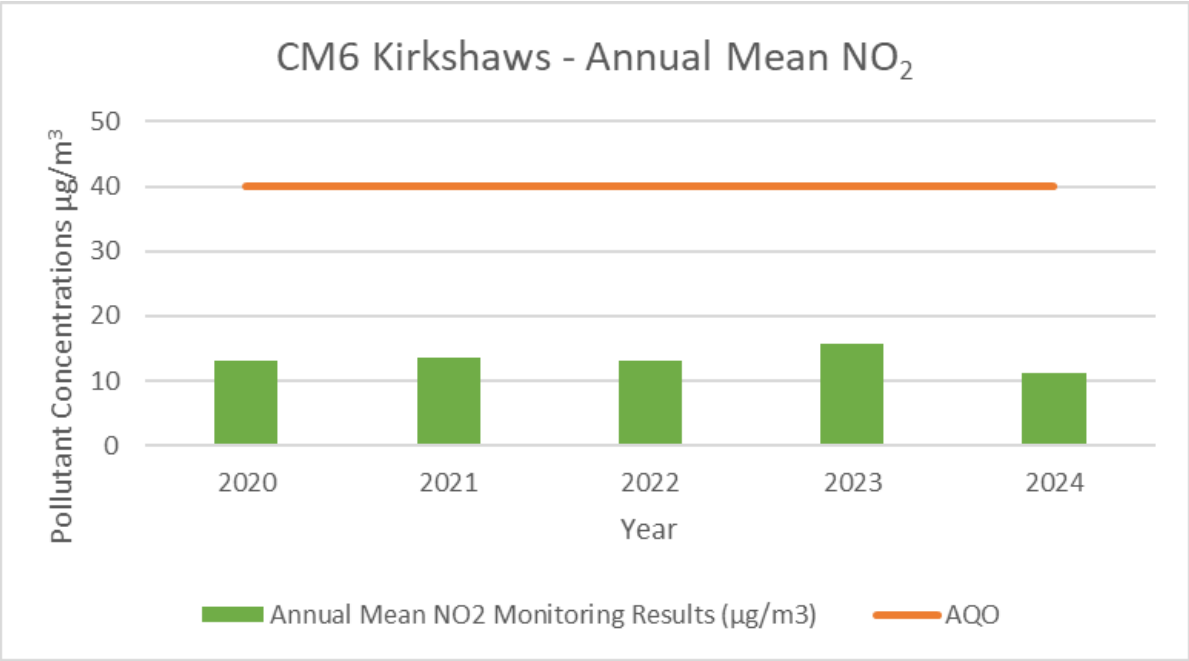

Figure A5 : Annual Mean Concentrations of NO_2 at CM6 Kirkshaws Coatbridge

Table A.6 – Annual Mean PM_{10} Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1-Chapelhall	278174	663124	Roadside	61.40	61.40	9.0	9.4	9.9	9.7	10(3)
CM2-Croy	272775	675738	Special-by quarry	89.70	89.70	8.0	8.5	10.6	8.8	10.4
CM4-Menteith Rd, Motherwell	275458	656792	Roadside	91.80	91.80	9.0	9.6	10	8.6	9.5
CM5-Shawhead, Coatbridge	273411	662997	Roadside	92.40	92.40	8.0	9.1	9.4	8.7	9
CM6-Kirkshaws, Coatbridge	272523	663030	Roadside	97.10	97.10	9.0	8.9	9.8	9.7	8.9
CM7-New Edinburgh Rd, Uddingston	269144	661496	Roadside	99.10	99.10	9.0	9.5	10.7	10.4	10
CM11-Adele St, Motherwell	275642	656148	Roadside	99.20	99.20	8.0	8.8	7.7	7.9	8
CM12-Whifflet A725, Coatbridge	273646	663867	Roadside	98.90	98.90	-	9.4	10.2	9.1	9.5
CM13-Ravenscraig	277307	657613	Roadside	99.50	99.50	-	-	8.3	10.1	7.7

Notes:

Exceedances of the PM_{10} annual mean objective of 18 µg/m^3 are shown in bold.

All means have been “annualised” as per LAQM.TG(22), valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

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

(3) Data have been annualised

Table A.7 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50 µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1-Chapelhall	278174	663124	Roadside	61.40	61.40	0	0	0	0	**0**
CM2-Croy	272775	675738	Special-by quarry	89.70	89.70	0(18)	0	2	0	0
CM4-Menteith Rd, Motherwell	275458	656792	Roadside	91.80	91.80	0	0	0	0	0
CM5-Shawhead, Coatbridge	273411	662997	Roadside	92.40	92.40	0	0	0	0	2
CM6-Kirkshaws, Coatbridge	272523	663030	Roadside	97.1	97.1	0	0	0	0	0
CM7-New Edinburgh Rd, Uddingston	269144	661496	Roadside	99.1	99.1	0(15)	0(18.3)	0	0	0
CM11-Adele St, Motherwell	275642	656148	Roadside	99.2	99.2	0(18)	0	0(16.2)	0	0
CM12-Whifflet A725, Coatbridge	273646	663867	Roadside	98.9	98.9	-	0(21.2)	0	0	0
CM13-Ravenscraig	277307	657613	Roadside	99.5	99.5	-	-	0	0	0

Notes:

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

If the period of valid data is less than 85%, the 98.1st percentile of 24-hour means is provided in brackets.

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

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

Figures A.6 to A.10 below shows the trend graphs of measured annual mean PM_{10} concentrations over the period 2020-2024 in the three AQMAs that were in place during the reporting year of 2024.

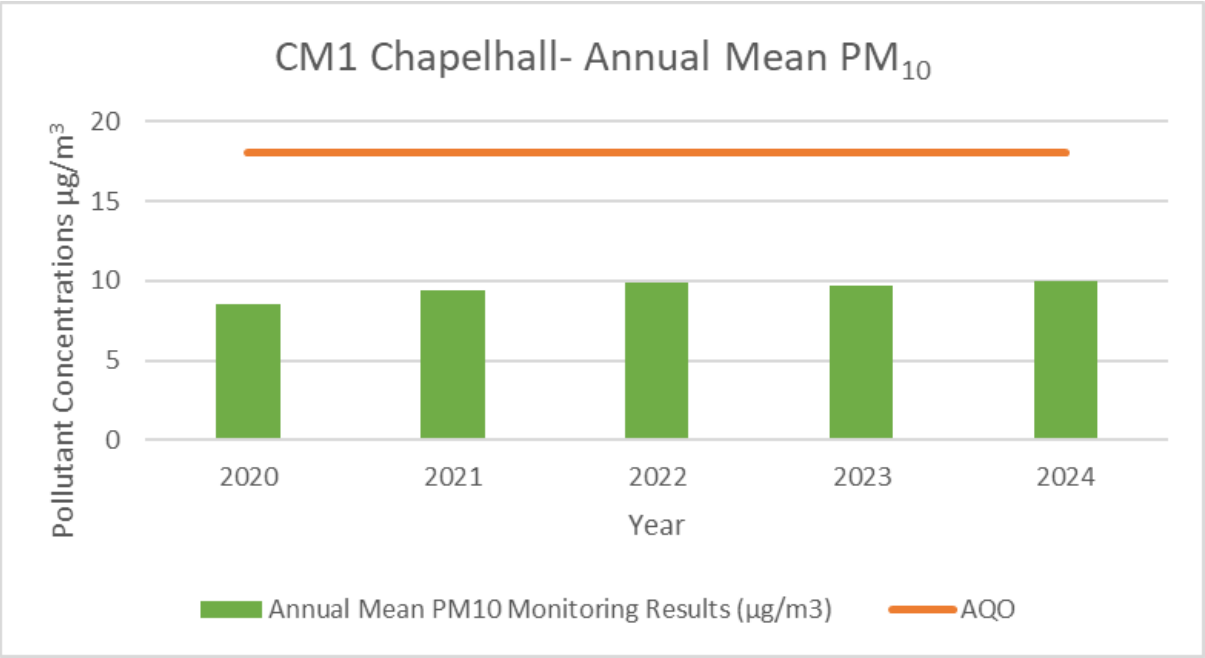

Figure A6 : Annual Mean Concentrations of PM_{10} at CM1 Chapelhall

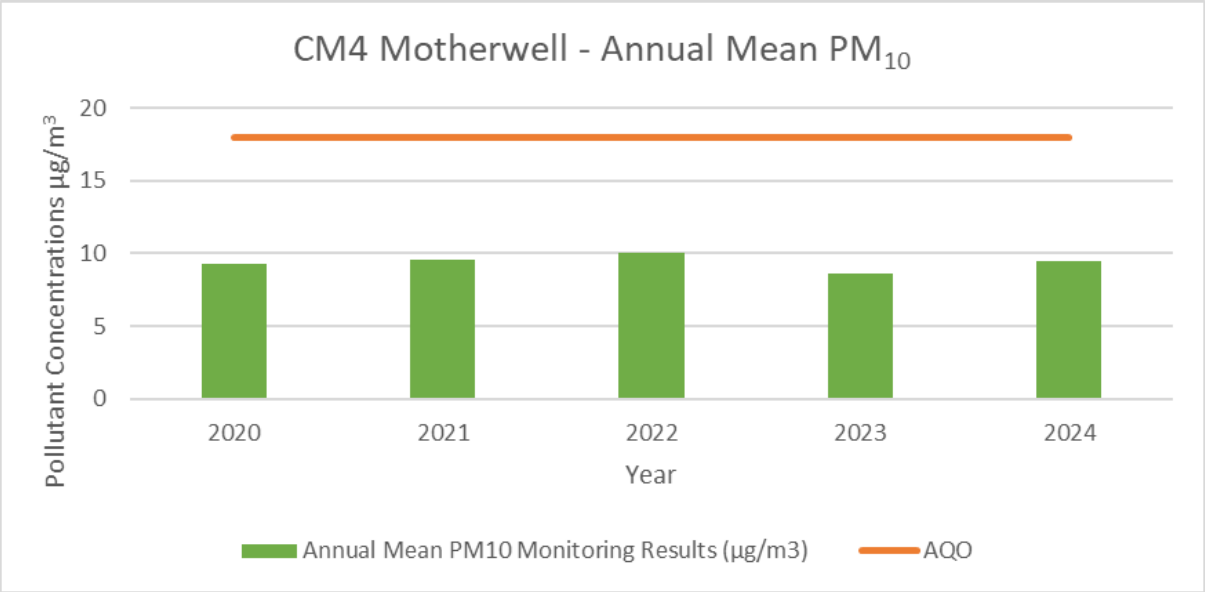

Figure A7 : Annual Mean Concentrations of PM_{10} at CM4 Motherwell

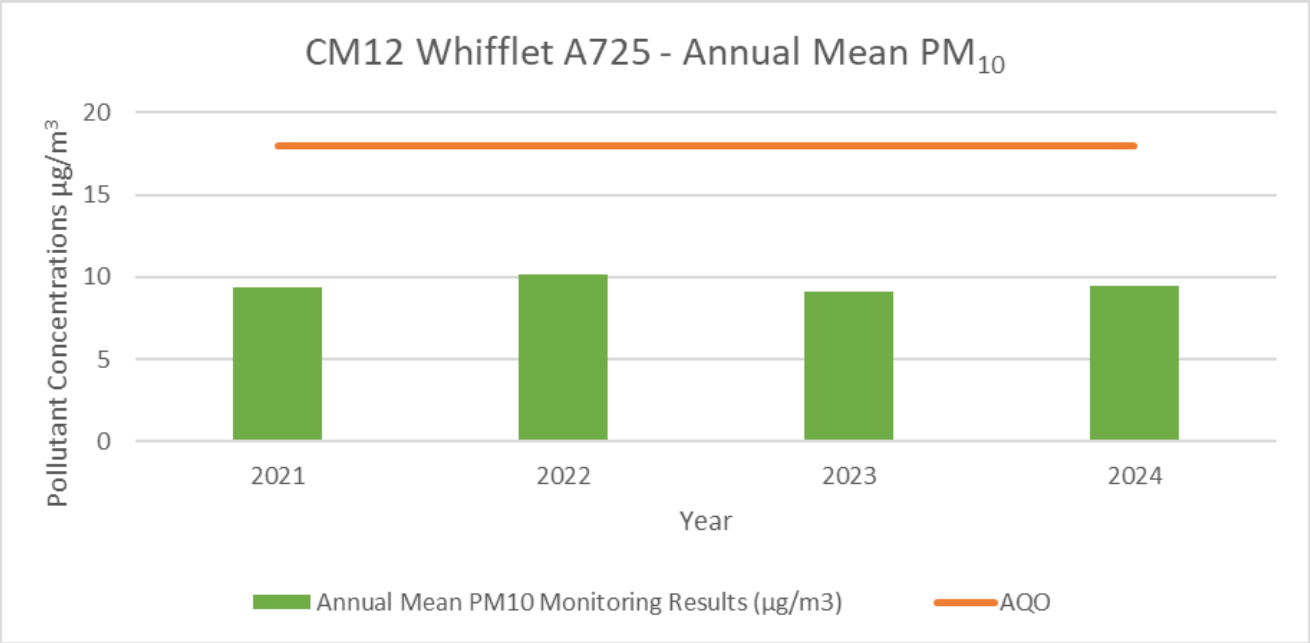

Figure A8 : Annual Mean Concentrations of PM_{10} ay CM12 Whifflet A725

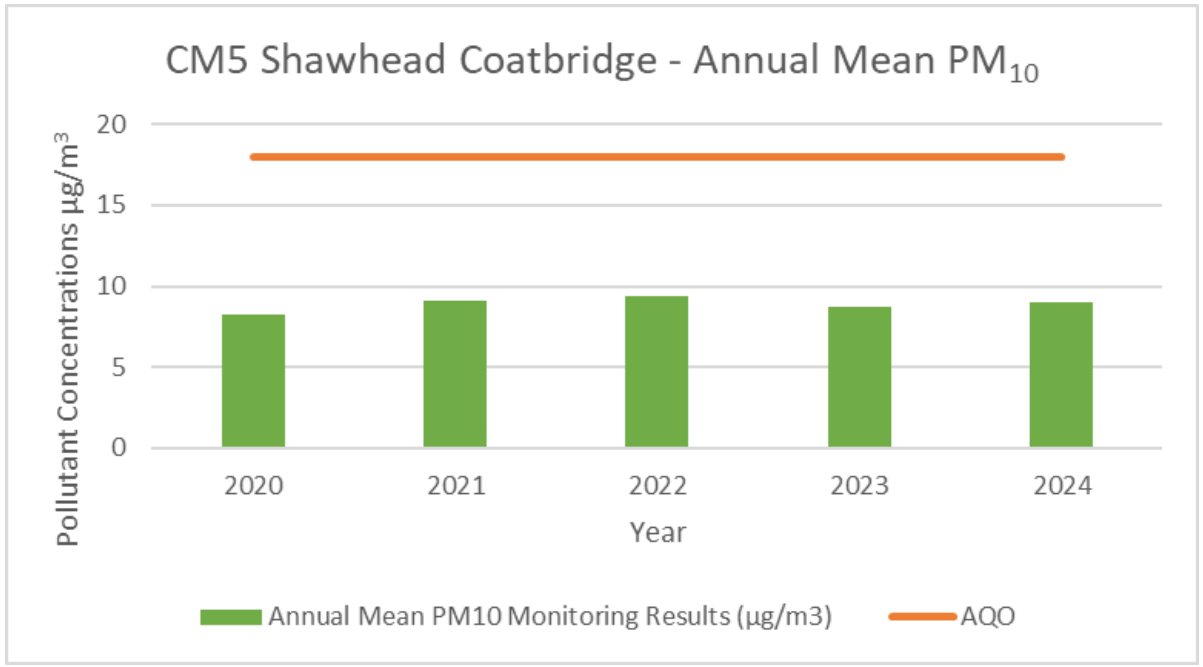

Figure A9 : Annual Mean Concentrations of PM_{10} at CM5 Shawhead Coatbridge

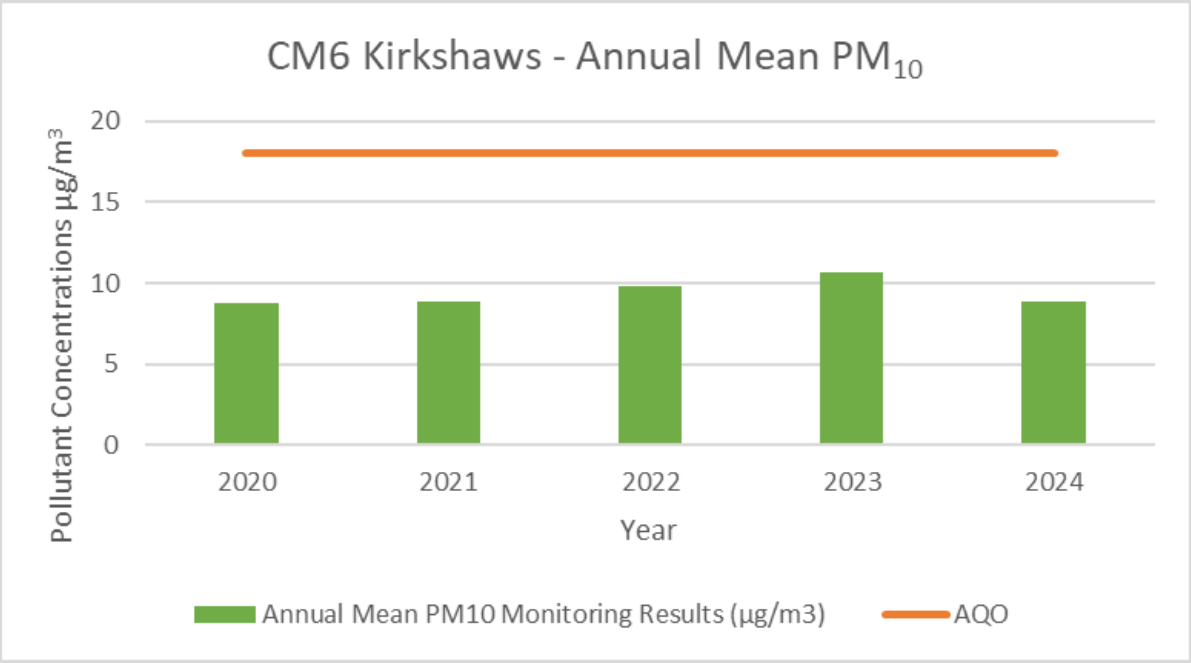

Figure A10 : Annual Mean Concentrations of PM_{10} at CM6 Kirkshaws Coatbridge

Table A.8 – Annual Mean $PM_{2.5}$ Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1-Chapelhall	278174	663124	Roadside	61.40%	61.40%	5.0	5.0	5.2	4.9	5.0(3)
CM2-Croy	272775	675738	Special-by quarry	89.70%	89.70%	4.0	4.9	5.5	4.9	6.0
CM4-Menteith Rd,Motherwell	275458	656792	Roadside	91.80%	91.80%	5.0	5.0	5.4	4.9	5.0
CM5-Shawhead, Coatbridge	273411	662997	Roadside	92.40%	92.40%	5.0	4.8	5.1	4.4	5.0
CM6-Kirkshaws, Coatbridge	272523	663030	Roadside	97.10%	97.10%	5.0	4.9	5.3	4.6	5.0
CM7-New Edinburgh Rd, Uddingston	269144	661496	Roadside	99.10%	99.10%	-	5.0	5.2	4.3	5.0
CM11-Adele St, Motherwell	275642	656148	Roadside	99.20%	99.20%	4.5	5.0	4.3	4.3	5.0
CM12-Whifflet A725, Coatbridge	273646	663867	Roadside	98.90%	98.90%	-	5.2	5.6	5	5.0
CM13-Ravenscraig	277307	657613	Roadside	99.50%	99.50%	-	-	4.6	4.3	5.0

Notes:

Exceedances of the $PM_{2.5}$ annual mean objective of 10 µg/m^3 are shown in bold.

All means have been “annualised” as per LAQM.TG(22), valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

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

(3) Data have been annualised – See Appendix C for details.

Figures A11 to A15 below show the trend graphs of measured annual mean PM_{10} concentrations over the period 2020-2024 in the three AQMAs that were in place during the reporting year of 2024.

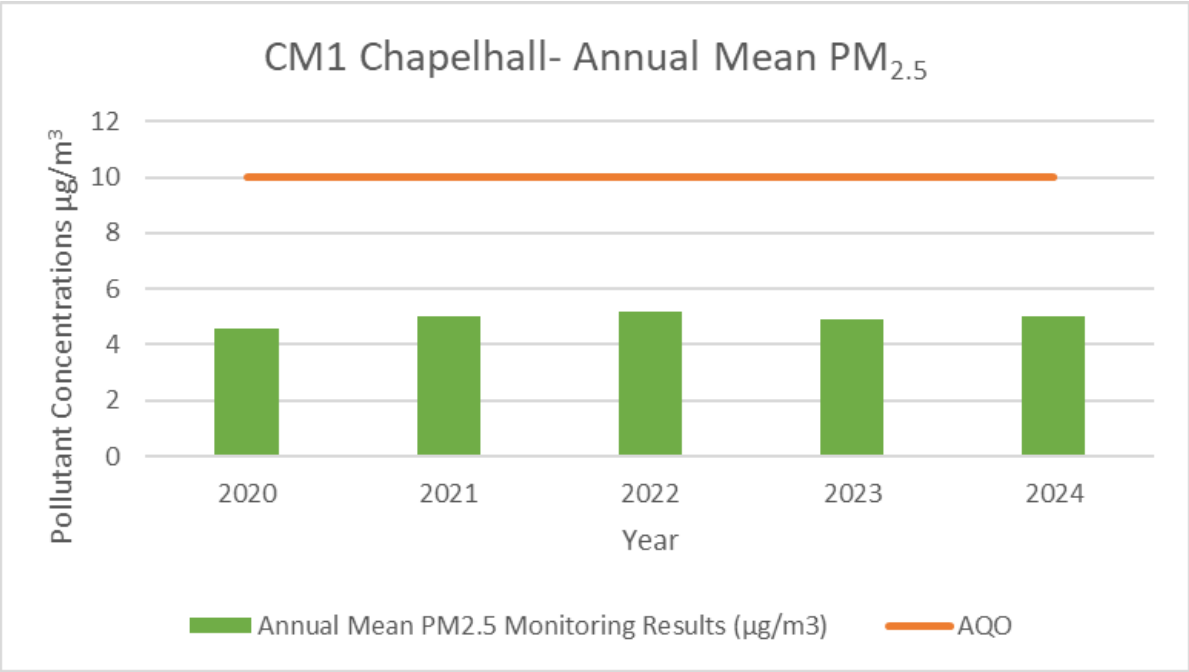

Figure A11 : Annual Mean Concentrations of $PM_{2.5}$ at CM1 Chapelhall

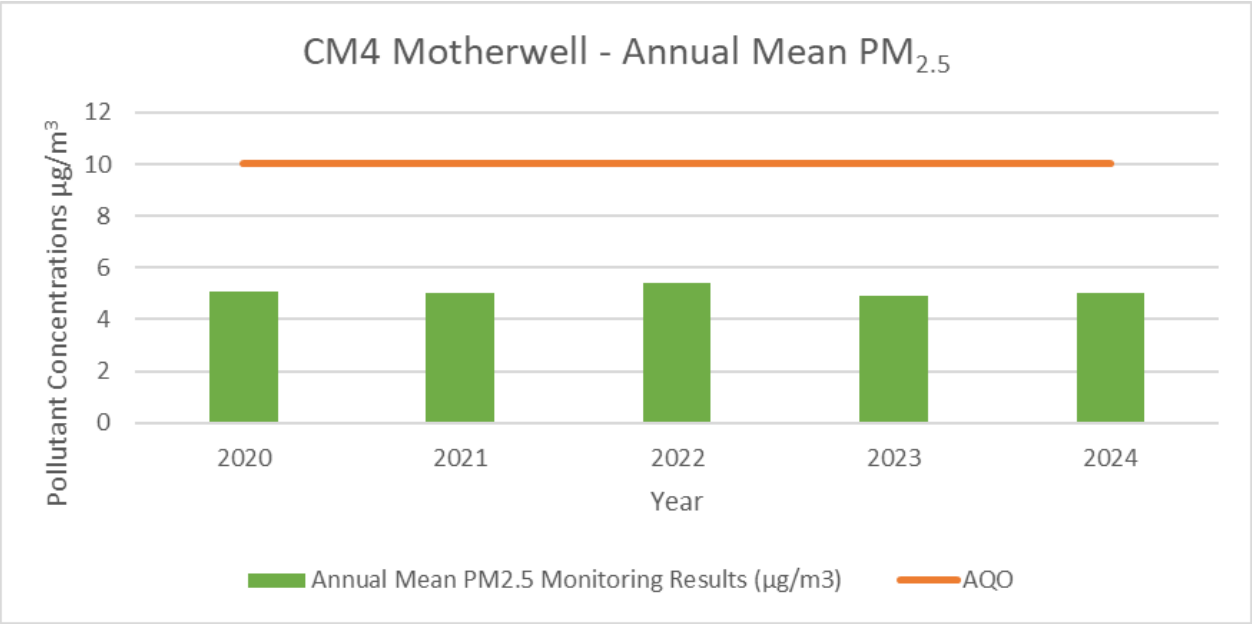

Figure A12 : Annual Mean Concentrations of $PM_{2.5}$ at CM4 Motherwell

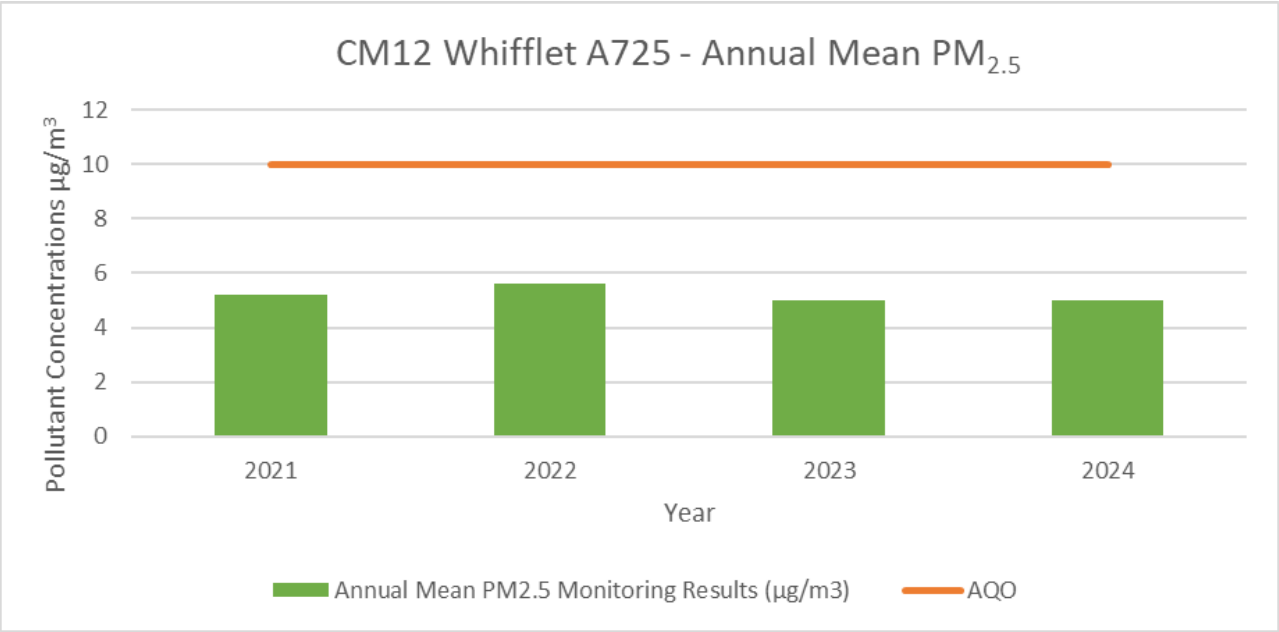

Figure A13 : Annual Mean Concentrations of $PM_{2.5}$ at CM12 Whifflet A725

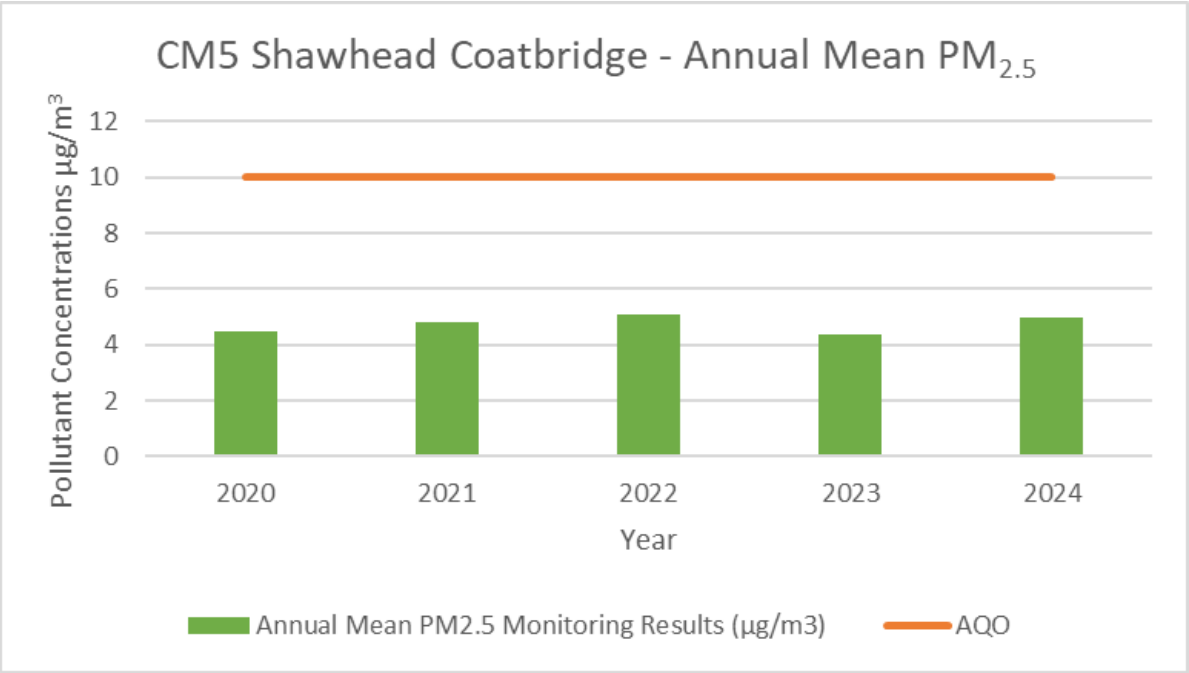

Figure A14 : Annual Mean Concentrations of $PM_{2.5}$ at CM5 Shawhead Coatbridge

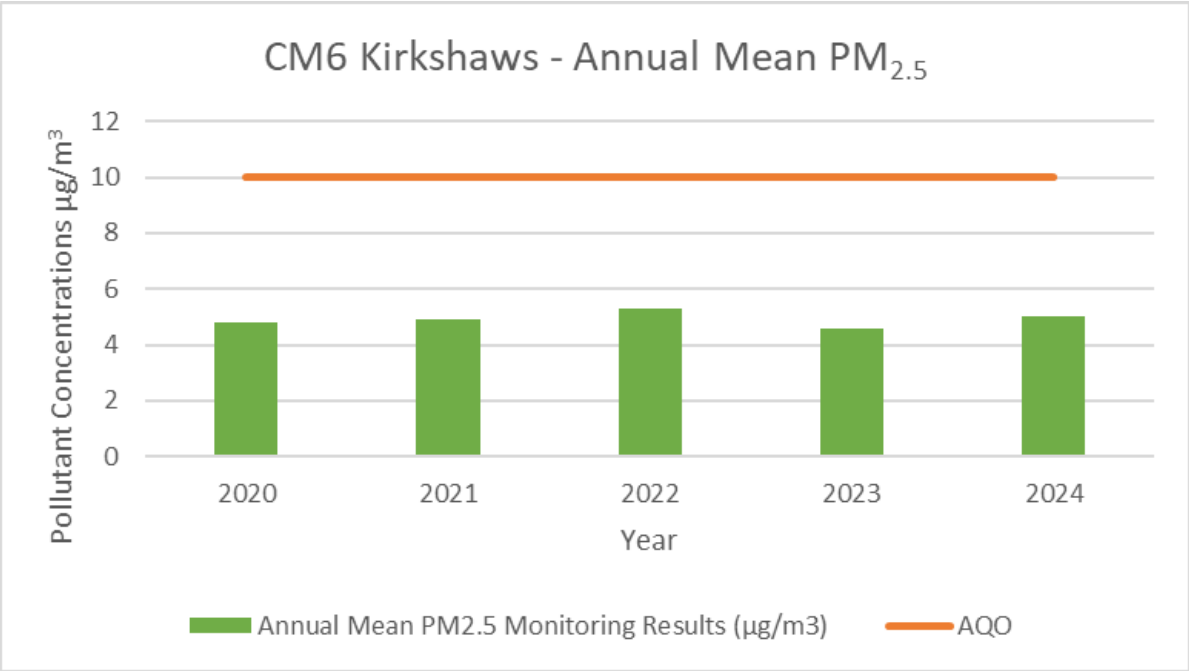

Figure A15 : Annual Mean Concentrations of $PM_{2.5}$ at CM6 Kirkshaws

Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO_2 2024 Monthly 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 <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT1	271514	678040	4.5	11.6	9.0	8.6	1.8	3.3	8.1	8.4	-	8.8	16.9	15.1	8.7	7.2		
DT2	275778	674440	23.8	1.9	14.6	22.9	15.8	25.7	29.4	23.3	29.2	31.8	36.8	22.0	23.1	18.9		
DT3	275642	674271	11.6	22.3	54.8	12.6	47.2	37.9	23.8	26.9	21.0	29.2	28.8	20.8	28.1	23.0		
DT4	275160	676210	15.7	9.4	10.8	3.2	5.3	2.5	5.3	8.5	10.9	12.1	17.0	10.3	9.3	7.6		
DT5	276710	676098	11.1	18.7	11.2	5.0	6.9	4.1	8.8	10.0	15.2	15.1	22.5	15.9	12.0	9.9		
DT6	278470	677901	20.5	10.0	3.0	4.9	9.4	6.8	13.0	16.1	13.7	19.0	31.9	18.3	13.9	11.4		
DT7	269966	670412	12.7	14.7	7.1	5.5	9.8	4.2	10.6	11.5	15.2	16.6	24.6	17.0	12.5	10.2		
DT8	269986	670400	11.3	10.1	7.2	2.6	3.5	3.5	8.5	9.0	13.1	12.8	19.2	11.8	9.4	7.7		
DT9	269071	670889	11.4	8.4	5.6	2.3	4.6	3.6	9.3	6.8	8.8	9.7	15.5	11.9	8.2	6.7		
DT10	268392	669502	16.524.4	14.1	11.9	6.3	8.6	6.1	10.6	10.8	15.4	17.2	24.4	11.7	12.8	10.5		

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 <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT11	268442	669262	13.7	9.4	19.6	3.0	4.0	4.5	8.2	8.4	9.3	10.4	20.1	11.5	10.2	8.3		
DT12	265971	668567	12.0	14.1	6.3	4.1	6.2	5.7	10.1	11.4	9.7	18.5	26.7	15.5	11.7	9.6		
DT13	265198	668204	18.0	9.4	-	5.7	17.3	27.1	12.9	14.1	14.2	21.6	32.8	19.5	17.5	14.4		
DT14	269356	669173	13.0	11.5	6.7	2.5	4.8	3.5	6.9	6.1	9.8	11.6	20.5	14.5	9.3	7.6		
DT15	272391	665824	17.6	13.6	14.6	4.1	10.5	8.5	12.3	14.1	14.9	13.7	21.3	20.3	13.9	11.3		
DT16	271939	663179	20.5	16.4	15.9	3.9	7.5	2.1	12.5	12.8	15.8	13.7	32.9	22.0	14.7	12.0		
DT17	273432	662965	21.1	13.1	9.7	3.7	8.5	11.9	11.0	14.2	13.0	14.1	26.9	19.2	13.9	11.4		
DT18	273293	664120	18.1	13.9	9.9	5.9	1.8	6.8	9.8	9.2	12.7	9.0	26.4	17.6	11.8	9.6		
DT19	272887	664991	-	10.0	14.0	6.9	9.3	10.1	14.4	6.1	20.7	17.3	23.6	28.1	14.6	12.0		
DT20	273042	665176	-	-	-	-	10.8	10.8	13.3	14.8	14.4	14.4	32.4	25.2	17.0	15.0		
DT21	273727	665285	18.7	19.1	7.6	5.2	7.5	9.4	12.8	12.1	12.6	12.1	24.9	21.6	12.9	10.6		
DT22	274819	665005	21.8	1.7	20.7	10.2	16.4	16.5	18.0	16.4	24.1	18.6	24.7	23.8	17.7	14.5		

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 <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT23	276005	665406	21.9	-	12.6	7.4	-	14.2	15.8	23.4	16.0	24.0	31.3	22.1	18.9	15.5		
DT24	274162	674130	13.1	23.3	6.8	2.3	3.4	2.0	6.7	8.6	19.0	8.0	18.4	17.4	10.8	8.8		
DT25	281713	667517	8.8	6.5	5.1	2.3	5.5	3.5	8.0	7.9	8.6	9.7	17.3	10.6	7.8	6.4		
DT26	278880	664914	-	-	-	-	-	-	-	-	4.7	4.9	15.1	8.5	8.3	5.6		
DT27	277276	665615	22.7	-	11.1	6.3	13.2	11.9	15.2	17.6	16.1	14.6	31.3	29.2	17.2	14.1		
DT28	276538	668899	9.8	11.4	7.6	3.9	5.8	4.9	10.8	10.4	12.1	11.1	19.1	14.1	10.1	8.3		
DT30	270201	664281	12.5	13.3	5.0	5.6	9.3	7.0	8.8	9.4	12.9	13.5	27.8	1.7	10.6	8.7		
DT31	270463	661441	14.7	17.7	10.0	5.6	12.9	11.2	13.2	11.8	10.3	12.7	22.2	18.2	13.4	11.0		
DT32	271259	661016	14.9	15.1	7.1	6.1	9.1	7.4	11.7	8.9	12.1	-	28.2	13.8	12.2	10.0		
DT33	269171	661451	18.5	14.7	15.4	5.1	11.1	14.4	13.4	16.9	16.7	12.2	26.5	23.8	15.7	12.9		
DT34	272687	659512	19.8	15.4	13.9	6.1	11.1	11.8	11.7	10.5	15.1	10.8	25.6	15.4	13.9	11.4		
DT35	273767	661281	19.3	12.4	14.8	5.0	1.6	11.2	11.3	12.7	11.7	10.0	24.2	17.5	12.6	10.4		

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 <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT36	274082	660308	14.4	8.3	10.8	5.4	9.7	5.8	8.5	7.9	13.9	6.5	15.2	14.2	10.1	8.2		
DT37	276635	660569	17.7	10.3	17.9	3.4	13.5	7.1	6.3	9.8	17.4	8.0	13.0	18.3	11.9	9.8		
DT38	277282	657607	8.4	8.2	4.8	3.4	5.9	2.8	5.1	5.0	3.7	5.3	2.1	9.4	5.3	4.4		
DT39	276178	657344	8.0	6.1	-	5.1	3.9	2.2	4.1	3.3	2.9	2.9	8.7	7.3	5.0	4.1		
DT40	275444	657312	10.8	-	-	5.0	9.6	9.2	10.0	9.8	11.5	4.0	5.2	11.9	8.7	7.1		
DT41	275733	656439	12.6	13.2	13.7	6.3	9.2	8.3	13.7	19.4	14.9	8.5	18.0	15.2	12.8	10.5		
DT42	275091	656986	19.7	10.1	11.6	3.7	14.2	12.5	14.8	10.3	15.2	10.0	21.4	18.5	13.5	11.1		
DT43	276792	655242	12.0	1.8	4.9	11.5	4.3	11.0	12.6	9.8	15.9	19.9	17.1	-	11.0	9.0		
DT44	278059	655368	18.1	11.4	12.9	3.4	10.2	12.4	15.9	13.0	8.2	13.3	19.3	18.4	13.0	10.7		
DT45	280370	653072	9.8	5,9	6.8	10.0	6.4	3.6	5.5	5.1	6.6	6.2	9.0	10.9	7.2	5.9		
DT46	279587	655125	-	14.2	11.9	9.7	18.3	15.0	19.5	-	10.1	-	16.2	20.2	15.0	12.3		
DT47	282392	656016	20.2	9.2	-	4.4	18.2	13.8	14.2	12.3	19.9	-	-	24.9	15.2	12.6		

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 <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT48	287954	659620	12.4	9.2	7.2	3.4	9.0	9.9	9.3	10.3	10.8	8,7	28.6	15.4	11.2	9.2		
DT49	290482	664386	8.7	7.6	7.1	4.0	9.7	6.0	8.1	7.6	9.2	9.2	13.2	9.2	8.3	6.8		
DT50	278119	663075	23.8	12.5	14.6	4.2	13.4	10.2	13.0	13.1	11.4	10.0	19.7	17.1	13.6	11.1		
DT51	278178	663111	23.4	16.5	-	3.3	9.4	8.4	12.0	12.0	12.6	8.9	20.9	21.8	13.6	11.1		
DT53	272602	663578	-	-	-	-	-	-	-	-	14.9	9.7	18.9	16.1	14.9	10.1		

☒ **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**

☒ **National bias adjustment factor used.**

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

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

Notes:

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

NO_2 annual means exceeding 60 µg/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 North Lanarkshire During 2024

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

Additional Air Quality Works Undertaken by North Lanarkshire Council During 2024

North Lanarkshire Council has not completed any additional works within the reporting year of 2024.

QA/QC of Diffusion Tube Monitoring

North Lanarkshire Council diffusion tubes are analysed by Glasgow Scientific Services (GSS) using the 20% triethanolamine(TEA) in acetone method.

GSS has confirmed that the procedures set out in the Harmonisation Practical Guidance are followed during the analysis. The laboratory is UKAS accredited for the analysis and also participates in the Workplace Analysis Scheme for Proficiency (WASP) Scheme. GSS has reported that the results from the WASP scheme confirm that the laboratory is performing satisfactorily.

The diffusion tubes for the year 2024 were supplied and analysed by Glasgow Scientific Services (GSS). The tubes were prepared using the 20% TEA in water preparation method.

All results have been bias adjusted and annualised (where required). GSS is a UKAS accredited laboratory and participates in the WASP scheme for NO_2 tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO_2 concentrations reported are of a high calibre.

The latest AIR-PT results are as follows:-

- AIR-PT AR059 (September to October 2023) – 100%
- AIR-PT AR063 (January to February 2024) – 75%
- AIR-PT AR064 (April to June 2024) – 100%
- AIR-PT AR065 (July to August 2024) – 100%
- AIR-PT AR066 (September to October 2024) – 100%

Over a rolling five round AIR-PT window, it is expected that 95% of laboratory results should be greater than or equal to +2. If this percentage is substantially lower than 95% for a particular laboratory, within this five-round window, then one can conclude that the laboratory in question may have sources of error within their analytical procedure. The results for the GSS laboratory from the most recent five-round window for 2024 average 95%, which demonstrates satisfactory performance of the laboratory.

The monitoring was carried out in adherence with the 2024 Diffusion Tube Monitoring Calendar.

Diffusion Tube Annualisation

Diffusion tube annualisation was carried out for three diffusion tube monitoring locations in North Lanarkshire in 2024. These were DT20, DT26 and DT53. This is shown in Table C.1 below.

All other diffusion tube monitoring locations within North Lanarkshire recorded data capture of 75% or greater, therefore annualisation was not required.

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

All PM_{10} and $PM_{2.5}$ monitoring within North Lanarkshire is carried out using the FIDAS monitoring technique. All correction factors applied to monitoring data of PM_{10} and $PM_{2.5}$ within North Lanarkshire are detailed in the Annual Statistics Reports.

Automatic Monitoring Annualisation

As laid out in Section 7 of the LAQM Technical Guidance (TG22), where monitoring data capture is below 75% for the year it is necessary to annualise the data.

Annualisation was required for the NO_2 results from automatic monitoring sites CM1, CM2, CM6, CM7 and CM13.

In accordance with box 7-8 of the TG22 Guidance, three continuous urban background and rural monitoring sites within a radius of 50 miles from the automatic monitoring locations, with at least 85% data capture were selected for the annualisation process.

The annualisation ratio shown in Table C.2 was calculated by first taking the annual mean (Am) of each of the selected sites then dividing that by the period mean (Pm) for the relevant months of data for which the relevant automatic sites recorded data, to obtain a ration between the Am and Pm for each site. The average of these Am/Pm ratios is the annualisation ratio applied to the automatic monitoring results.

Annualisation was required for PM_{10} concentrations from automatic monitoring site CM1 Chapelhall as it had a data capture of 61.4%. Following the same process as outlined above, the process and annualised annual mean are shown in Table C.3

Annualisation was required for $PM_{2.5}$ concentrations from automatic monitoring site CM1 Chapelhall as it had a data capture of 61.4%. Following the same process as outlined above the process and annualised annual mean are shown in Table C.4

Table C1 – Annualisation Summary for Diffusion Tubes (concentrations presented in µg/m^3)

Diffusion Tube ID	Annualisation Factor Bush Estate	Annualisation Factor Glasgow Townhead	Annualisation Factor Peebles	Average Annualisation Factor	Raw Data Simple Annual Mean (µg/m^3)	Annualised Data Simple Annual Mean (µg/m3)
20 – (DT154)	1.0896	1.0646	1.0695	1.0746	17.0	18.3
26 – (New Site!)	0.8995	0.7952	0.7753	0.8233	8.3	6.8
53 – (New site!)	0.8995	0.7952	0.7753	0.8233	14.9	12.3

Table C.2 – Annualisation Summary for Automatic Monitoring of NO_2 (concentrations presented in µg/m^3)

Background Site	Annual Data Capture	Annual Mean (Am)	CM1		CM2		CM6		CM7		CM13	
			Period Mean (P_m)	Ratio (A_m/P_m)	Period Mean (P_m)	Period Mean (P_m)	Ratio (A_m/P_m)	Ratio (A_m/P_m)	Period Mean (P_m)	Ratio (A_m/P_m)	Period Mean (P_m)	Ratio (A_m/P_m)
Bush	100.0	3.4	3.4	0.999	3.4	3.45	0.976	0.999	3.37	0.999	3.4	0.999
Glasgow Townhead	100.0	14.5	14.5	1.000	14.5	14.61	0.993	1.000	14.51	1.000	14.5	1.000
Glasgow Waulkmillglen	100.0	5.6	5.6	0.999	5.6	5.81	0.960	0.999	5.58	0.999	5.6	0.999
Peebles	100.0	3.7	3.7	0.999	3.7	3.77	0.986	0.999	3.71	0.999	3.7	0.999
Average (Ra)			**0.999**		**0.999**		**0.999**		**0.979**		**0.999**	
Raw Data Annual Mean (M)			**24.2**		**9.0**		**11.1**		**15.0**		**5.9**	
Annualised Annual Mean (M x Ra)			**24.2**		**9.0**		**11.1**		**14.7**		**5.9**	

Table C.3 – Annualisation Summary for PM_{10} (concentrations presented in µg/m^3)

Background Site	Annual Data Capture	Annual Mean (A_m)	CM1	
			Period Mean (P_m)	Ratio (A_m/P_m)
Townhead	100.0	5.3	5.3	1.000
Waulkmillglen	100.0	4.9	4.9	1.000
Average (R_a)			**1.000**	
Raw Data Annual Mean (M)			**10.0**	
Annualised Annual Mean (M x R_a)			**10.0**	

Table C.4 – Annualisation Summary for $PM_{2.5}$ (concentrations presented in µg/m^3)

Background Site	Annual Data Capture	Annual Mean (A_m)	CM1	
			Period Mean (P_m)	Ratio (A_m/P_m)
Townhead	100.0	5.3	5.3	0.999
Waulkmillglen	100.0	4.9	4.9	0.999
Average (R_a)			**0.999**	
Raw Data Annual Mean (M)			**5.1**	
Annualised Annual Mean (M x R_a)			**5.1**	

Diffusion Tube Bias Adjustment Factors

North Lanarkshire Council have applied a national bias adjustment factor of 0.82 to the 2024 monitoring data.

The bias adjustment factor for the GSS laboratory and method are listed in the Spreadsheet of Bias Adjustment Factors v.04/25 is 0.82. The National Average Bias Adjustment Factor Spreadsheet is shown in Figure C.1

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

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

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

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

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

Step 1:	Step 2:	Step 3:	Step 4:								
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.								
If a laboratory is not shown, we have no data for this laboratory	If a preparation method is not shown, we have no data for this method at this laboratory	If a year is not shown, we have no data[2]	If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953								
Analysed By[1]	**Method** To undo your selection, choose (All) from the pop-up list	**Year[5]** To undo your selection, choose (All)	**Site Type**	**Local Authority**	**Length of Study (months)**	**Diffusion Tube Mean Conc. (Dm) (µg/m³)**	**Automatic Monitor Mean Conc. (Cm) (µg/m³)**	**Bias (B)**	**Tube Precision[6]**	**Bias Adjustment Factor (A) (Cm/Dm)**	
Glasgow Scientific Services	20% TEA in water	2024	KS	Marylebone Road Intercomparison	11	43	36	21.2%	G	0.82	
Glasgow Scientific Services	20% TEA in water	2024		**Overall Factor[3] (1 study)**				**Use**		0.82	

Figure 16 Glasgow Scientific Services – National Average Bias Adjustment Factor Spreadsheet v.04/25

There are no triplicate co-location sites available within the North Lanarkshire Council monitoring network to enable a local bias correction factor to be calculated. The use of the national bias adjustment factor is consistent with the last 5 years of APR reporting.

A summary of bias adjustment factors used by North Lanarkshire Council over the past five years is presented in Table C.5

Table C.5 – Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	04/25	0.82
2023	National	03/24	0.74
2022	National	03/23	0.87
2021	National	06/22	0.97
2020	National	06/21	0.89

NO_2 Fall-off with Distance from the Road

No diffusion tube NO_2 monitoring locations within North Lanarkshire Council required distance correction during 2024.

QA/QC of Automatic Monitoring

Automatic monitoring of NO_2, PM_{10} and $PM_{2.5}$ is completed using Chemiluminescence (NO_2) and FIDAS (PM_{10} and $PM_{2.5}$) analysers. All data is available in real-time and, following data dissemination, ratified by Ricardo Energy and Environment to AURN Standards.

The air monitoring analysers are set to auto-calibrate every 72 hours.

In addition to this, data management and Local Site Operator (LSO) duties for the automatic monitoring sites is carried out by Ricardo on behalf of the council. This involves the following:-

- Three-weekly LSO visits to the air monitoring stations to undertake visual inspection of sample inlets, baseline checks of analysers, calibration of analysers and routine site communication checks. Also checked are the identification of any faults which are reported to both NLC and the maintenance service provider for their prompt attention.
- Data from the analysers is checked daily and any anomalies/faults identified and rectified at the earliest possible opportunity.

In addition to the LSO duties, the automatic analysers are all subject to twice yearly QAQC checks, carried out on behalf of the council by Ricardo Energy and Environment.

Data checking and management is undertaken daily and hourly data collection carried out, as well as daily checks of automatic calibrations and ambient data. Data is uploaded to the Scottish Air Quality website – www.scottishairquality.scot

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan – A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the LA 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
APR	Annual Progress Report
AURN	Automatic Urban and Rural Network (UK air quality monitoring network)
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
DT	Diffusion Tube
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) 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

North Lanarkshire Council Air Quality Action Plan 2023 – 2028

North Lanarkshire Council Annual Progress Report 2023