Annual Progress Report (APR)

2023 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 2023

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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 M8/A8, M74, M73 and M80/A80. There is also substantial cross-boundary travel with neighbouring local authority areas, particularly Glasgow, South Lanarkshire, Falkirk, and West Lothian, for employment, education, and leisure activities. The main source of air pollution within 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 comprising ten real-time automatic monitoring stations measuring Nitrogen Dioxide (NO_2) and fine Particulate Matter (PM_{10} and $PM_{2.5}$) as well as a comprehensive network of 81 passive diffusion tubes monitoring NO_2. Our monitoring locations, 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. During the reporting period of 2022 measured concentrations of NO_2 across monitoring sites, both automatic and passive diffusion tube monitoring all complied comfortably with the annual mean statutory objective. In addition, no exceedances of the short-term NO_2 objective were noted. Similarly, for PM_{10} and $PM_{2.5}$ all statutory air quality objectives were met at the automatic monitoring sites in 2022. Measured concentrations of all NO_2, PM_{10} and $PM_{2.5}$ remained broadly consistent with measured concentrations from 2021. Reasons for this could be the ongoing legacy of working from home and reduced traffic levels because of the Covid-19 pandemic.

In 2022 we were successful in obtaining funding from the Scottish Government to upgrade some of our automatic monitoring equipment. Consequently, following a robust procurement exercise we purchased eight new NO_x analysers which were installed in existing air monitoring locations in North Lanarkshire.

The process of revoking the Croy Air Quality Management Area (AQMA) was also completed in 2022.

A major focus of the work in 2022 was the update of the Council's Air Quality Action Plan (AQAP). This involved the creation of a Steering Group comprising internal and external stakeholders and several meetings to devise new action plan measures aimed at the continued improvement of air quality in North Lanarkshire. Themes within the AQAP include the promotion of active travel and public transport, a review of all monitoring locations especially arounds schools in North Lanarkshire, as well as North Lanarkshire leading by example in measures aimed at improving air quality and tackling climate change. These new action plan measures will be the main focus of work in 2023. We will also continue to run our two Eco Stars schemes, for taxi and fleet operators and run workshops to raise awareness and encourage membership of the schemes.

North Lanarkshire Council manages and leads a partnership which includes South Lanarkshire Council and East Dunbartonshire to focus on reducing Vehicle Emissions and Vehicle Idling offences this work is funded by a Grant from the Scottish Government. In the past financial year 2022/23 North Lanarkshire (NL) has conducted 9 vehicle emission testing days with Police Scotland which saw 150 to 200 vehicles tested and awareness raised with drivers around ensuring vehicles are serviced regularly and engine is maintained. In addition, 2022/23 saw over 155 vehicle idling patrols carried out at locations in NL where vehicle idling was considered contributing to poorer air quality at certain times, including schools at drop off and pick up times, taxi ranks, bus terminals and general idling hotspots identified across the authority from complaints received. 378 warnings to drivers were issued during these patrols where the driver was requested to turn their vehicle engine off and subsequently did so.

As has been reported previously there are several major developments planned in the North Lanarkshire Council area over the coming years. City Deal projects including the Pan Lan access to Ravenscraig routes, and the East Airdrie link Road, as well as the New Monklands Hospital and active travel improvements in Motherwell Town Centre. We continue to strive to ensure air quality is considered at the earliest possible stage in both major and smaller scale developments.

Actions to Improve Air Quality

Despite 2022 still experiencing knock-on effects from the Covid-19 pandemic the Council were still able to complete several projects in line with pledges within the Air Quality Action Plan.

In terms of air quality monitoring – following robust procurement exercises eight new automatic NOx analysers were purchased and installed in existing air monitoring stations, replacing ageing equipment. The Council's air quality maintenance and servicing contract was also re-tendered in 2023. Both were funded through the Scottish Government Air Quality Grant.

The Council's Air Quality Action Plan was also updated in 2022/23 and the Croy AQMA was revoked in line with advice from the Scottish Government and SEPA.

Continuing with active travel initiatives and promotion carried out in recent years in 2022 Scottish Government Air Quality Funding provided a contribution to footpath widening, signage etc. to assist in linking the cycling hire facilities in the Watersports Centre to new cycling infrastructure in Strathclyde Country Park.

The Eco Stars Fleet environmental recognition scheme continued in North Lanarkshire in 2022, and a new Eco Stars scheme was set up for taxi operators. A workshop was also held in conjunction with South Lanarkshire Council for taxi drivers interested in finding out more about the scheme.

In the past financial year 2022/23 North Lanarkshire (NL) has conducted 9 vehicle emission testing days with Police Scotland. On these days of action 150 to 200 vehicles were tested and awareness raised with drivers around ensuring vehicles are serviced regularly and engine is maintained. In the past year over 155 vehicle idling patrols by Environmental Protection Officers were carried out at locations in NL where vehicle idling was considered contributing to poorer air quality at certain times. These locations included schools at drop off and pick up times, taxi ranks, bus terminals and general idling hotspots identified across the authority from complaints received. 378 warnings to drivers were issued during these patrols where the driver was requested to turn their vehicle engine off and subsequently did. North Lanarkshire has raised awareness with vehicle idling around primary schools but will look to build on that work in the coming year.

Local Priorities and Challenges

North Lanarkshire Council will continue to monitor air quality in line with our statutory responsibilities using our extensive network of automatic and passive diffusion tube air monitors. Particular attention will be paid to the newest of our automatic monitoring sites – Ravenscraig and A725 Whifflet to determine air quality levels and emerging trends in the monitoring data. We will also undertake a comprehensive review of all our air monitoring locations to ensure we have appropriate monitoring coverage in areas of relevant public exposure in North Lanarkshire, including our schools.

With the recent publication of the newly updated Air Quality Action Plan 2023-2028 we will begin work on our top five priorities in order that progress can be reported on in the next reporting year. Key priorities contained within the Council's AQAP are as follows:

- We will investigate air quality around schools in North Lanarkshire with a focus on drop-off and pick-up times.
- We will facilitate modal shift from private car use to active travel and public transport.
- We will improve active travel options to NLC hubs.
- As a council we will lead by example in taking measures to reduce air pollution in North Lanarkshire, including decarbonisation of the Council's vehicle fleet.
- We will undertake a comprehensive review of air quality monitoring to optimize resources and coverage across North Lanarkshire.
- We will increase EV infrastructure across North Lanarkshire.

We will continue to run our two Eco Stars schemes – for fleet and for taxi operators. To publicise the schemes and promote membership we will undertake to run workshops for members.

We will decommission the Croy air monitoring station in light of the revocation of the Croy Air Quality Management Area (AQMA) which was completed in 2022. On a similar vein, following discussion with the Scottish Government and SEPA we will revoke the Chapelhall and Coatbridge AQMAs for both NO_2 and PM_{10}.

We will continue to undertake awareness raising initiatives, such as Clean Air Day, both as North Lanarkshire stand-alone initiatives and also with our colleagues in South Lanarkshire or other local authorities.

How to Get Involved

Further information on air quality in North Lanarkshire can be found on the Council's website at http://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 Council during 2022. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place 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

2.1 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 of 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 1.2. 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 . We will revoke the Chapelhall and Coatbridge AQMAs for both NO_2 and PM_{10} during 2023/24 (see monitoring section) in line with the recommendation in the 2022 APR.

Table 1.2 – Declared Air Quality Management Areas

AQMA Name	Pollutants and Air Quality Objectives	City / Town	Description	Action Plan
Chapelhall AQMA	NO_2 annual mean PM_{10} annual mean	Chapelhall	An area encompassing a number of properties at the junction of Main Street and Lauchope Street	http://www.northlanarkshire.gov.uk/pests-and-pollution/pollution/air-quality/air-quality-management-areas
Coatbridge AQMA	NO_2 annual mean PM_{10} annual mean	Coatbridge	Whifflet Street stretching from roundabout at McDonalds to Shawhead roundabout. Extended in 2015 to include Kirkshaws Road	http://www.northlanarkshire.gov.uk/pests-and-pollution/pollution/air-quality/air-quality-management-areas
Motherwell AQMA	PM_{10} annual mean	Motherwell	An area encompassing part of Motherwell Town Centre	http://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 legal 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 authorities are the lead delivery bodies 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 focuses 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 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.

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 existing LEZs structure.

North Lanarkshire Council has no Low Emission Zones established within the Local Authority area.

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 includes 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 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 setting a target of net-zero greenhouse gas emissions by 2030 for North Lanarkshire. The Council's response to climate change and how it will progress towards its target by 2030 is set out in the document Climate Plan Action on Climate Together (ACT) 2030 supported by a list of multi-service actions.

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. In 2022 North Lanarkshire Council began the process of updating the Air Quality Action Plan from the previous version which ran from 2018 – 2021. This updated Action Plan was approved and accepted by the Environment and Climate Change Committee in August 2023.

In addition to the update of the Air Quality Action Plan North Lanarkshire Council has continued to take forward several measures within the previous action plan during the reporting year of 2022 in pursuit of improving local air quality and meeting the air quality objectives within the shortest possible time. Details of the measures outlined in the new Air Quality Action Plan 2023-2023 are outlined in Table 2.2 along with details of the progress

of each of the actions and milestones and key actions. More detail on these measures can be found in the Air Quality Action Plan document which is available on the 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:

- In addition to the Eco Stars Fleet Scheme already in place in North Lanarkshire an Eco Stars Scheme was set up for taxi operators in North Lanarkshire. This was met with a great deal of interest by local taxi operators and a Taxi Operator workshop was held in conjunction with South Lanarkshire Council. This was heavily over-subscribed and consequently further workshops are planned for 2023/24.
- Following approval from the Scottish Government and SEPA the Croy AQMA was revoked in 2022.
- Scottish Government air quality grant funding contributed towards improving walking/cycling infrastructure at Strathclyde Country Park to link existing cycle hire facilities at the Watersports Centre with new cycling infrastructure in the north of the park.
- Following a robust procurement process eight new NOx automatic analysers were purchased to replace ageing equipment in eight of our existing air monitoring stations.
- The North Lanarkshire Air Quality Action Plan was updated following various stages of stakeholder engagement, consultation etc in line with the new Air Quality Policy Guidance PG(23). Engagement was sought from both internal and external stakeholder and interested parties to establish action plan measures aimed at the continual improvement of air quality in North Lanarkshire.
- In financial year 2022/23 North Lanarkshire Council has conducted 9 vehicle emission testing days with Police Scotland. On the testing days an average ranging from 150 to 200 vehicles were tested and awareness raised with drivers around ensuing their vehicles are serviced and maintained on a regular basis. In addition, in 2022/23 over 155 vehicle idling patrols were carried out at locations in North Lanarkshire where vehicle idling was considered to be contributing to poorer air quality at certain times. These locations included schools at drop-off and pick-up times, taxi ranks, bus terminals and general idling hotspots identified across the authority from complaints received. 378 warnings to drivers were issue during these patrols where the driver was requested to turn off their vehicle engine and they subsequently did so.

Progress on the following measures has been slower than expected due to the main focus of work being the update to the Air Quality Action Plan

- Revocation of NO_2 element of Chapelhall and Coatbridge AQMA was not carried out in 2022 because the focus of work was updating the Air Quality Action Plan 2023-2028.
- Bus operator workshop did not go ahead because the Transport Scotland BEAR retrofitting grants were not available.
- Further expansion of the Dispersion Modelling study for areas of North Lanarkshire already covered. This was not carried out due to the focus of work again being the update to the Air Quality Action Plan.

North Lanarkshire Council expects the following measures to be undertaken over the course of the next reporting year:

- We will revoke the AQMAs in Chapelhall and Coatbridge for both NO_2 and PM_{10}.
- A review of all monitoring locations will be undertaken to ensure comprehensive monitoring coverage across North Lanarkshire at relevant locations of receptor exposure, including schools.
- Building on works undertaken in the previous year 2022, air quality grant funding will be used to pay half the costs of creating a new shared use (cycle/walking) route that links with the National Cycle Route (NCR) network.
- The Croy air monitoring station will be decommissioned in 2023/2024 since it is over a year since the AQMA at this location was revoked.
- Necessary equipment upgrades will be carried out on the FIDAS particulate analyser within the Chapelhall AQMA to ensure its optimum accuracy and high levels of data capture.
- It is hoped that in 2023/24 we hope to deliver on the extension of the regional air quality dispersion modelling study to cover the remainder of the North Lanarkshire area. This includes the northern corridor of North Lanarkshire and the east of the district (Shotts, Harthill etc).
- Cycle repair and pump stands will be installed in two of the Council's Country Parks. These will be located at potential commuter routes and will be funded from the Scottish Government Air Quality grant.
- Further Eco Stars workshops for taxis and for bus operators will be carried out to encourage membership of both Eco Stars schemes.
- Subject to Scottish Government grant funding the Council will continue its ongoing Vehicle Emission Testing initiatives and vehicle idling programmes.

Table 1.3 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
1	**Facilitate modal shift from private car use to active travel and public transport including:** (a) Input to the Local Transport Strategy (LTS)	Alternatives to private vehicle use	2024	Planned	No extra funding required.	Publication of LTS	LTS update being progressed.	
	(b) Pre- and post- implementation monitoring of strategic active travel infrastructure projects, including traffic counts, speed and air quality will be undertaken.		2024-2026	Planned	Variety of funding sources. Scottish Government air quality grant funding will be applied for if required.	Collation of evidence from one key active travel intervention	Collation of evidence from one key active travel intervention	Subject to funding
	(c) Complete an audit of public transport across North Lanarkshire, looking at things such as key commuter routes to main centres of employment, out of hours provision and age of fleet		2024/25	Planned	Funding will be sought from Scottish Gov AQ grant to engage a consultant for this work	Completion of initial study and thereafter determine what action may be required	Work scheduled to begin in 2024, subject to funding	Subject to funding

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 deployment of additional monitoring equipment where necessary b) Establish Air Quality Champion Schools in each of our AQMAs, and other relevant areas looking at School Travel Planning and relevant behaviour change campaigns to encourage sustainable travel to/from school for both pupils and staff working in the school	Promoting Travel Alternatives	2023-2028 2023-2028	Planned Planned	Scottish Government Air Quality Grant and other funding sources Funding may be required for projects within the wider brief eg School Travel Planning	Initial review of existing network Further milestones defined after initial review. Review Completion Monitoring before and after interventions to test effectiveness on local air quality	Planned to start late 2023 Planned to start 2023/24	

3	**Improve Active Travel Options to North Lanarkshire Community hubs:** (a) Audit existing infrastructure (b) Publicity campaigns to promote options	Promoting travel alternatives	2023-2028	Planned	Funding to be confirmed by project lead No funding required for publicity campaigns	Report on provision and recommendations for improvements Publicity campaign undertaken and thereafter completion of campaign	Project timeline still to be finalised.	
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 employees of North Lanarkshire. We will also look to introduce a lease scheme for Electric/Ultra Low Emission Vehicles for Council employees		Ongoing Ongoing Ongoing	In progress In progress In progress	N/A N/A NLC budget	N/A Ongoing	Ongoing Ongoing	

5	**Review of Monitoring Network to optimise resources and coverage across North Lanarkshire**	Policy guidance and control	2023-2025	Planned	Scottish Govt Air Quality grant	Initial review in 2023 for data collection in 2024. Annually reviewed during preparation of APR	Due to start Autumn/Winter 2023	
6	**Ensure air quality and climate change policy actions in North Lanarkshire enjoy a relationship with co-benefits for both areas.** (a) We will work towards the decarbonisation of the NLC fleet. (b) we will increase EV charging infrastructure within council new-build development. c) We will increase EV charging infrastructure across North Lanarkshire	Policy guidance and control	2023-2028 and beyond	In progress	NLC Capital funding bid and other sources	Proportion of fleet decarbonised reported annually. Number of Council houses built with EV included reported annually. Increase in public EV points reported annually	Ongoing Ongoing	This will require significant expenditure and accordingly the rate at which the fleet will move away from existing petrol and diesel vehicles will be determined by the level of internal funding and the funding available from any external source. Currently working with partner local authorities within Glasgow City Region to look at possibility of partnership approach with private sector to accelerate number of charging points available across region
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 of the Procurement Reform (Scotland) Act 2014**		2023-2028 and beyond	In progress	No budget implications	N/A	Ongoing	
8	**Aligning Planning and Air Quality Guidance and Placemaking Targets outlined in CAFS 2**	Policy guidance and control		Ongoing	No funding required	Planning and AQ information reported on	Ongoing	No known barriers to implementation

	(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 that are included in National Planning Framework 4.		Ongoing			annual basis in APR		
9	**Revoke the NO_2 element of the Chapelhall and Coatbridge AQMAs**		2024	Planned	No funding required	Revocation achieved in 2024	Project to begin Winter 2023/Spring 2024	
10	**Continuation, expansion and promotion of Eco Stars Environmental recognition scheme** (a) An Eco Stars taxi operator scheme will be set up in North Lanarkshire in addition to the Eco Stars Fleet Scheme (b) We will promote the NLC Eco Stars scheme to Council contractors and endeavour to ensure they are members	Promoting Vehicle Efficiency	2023	Ongoing	Scottish government air quality grant	Annual membership increase in both fleet and taxi schemes	Ongoing	Continuation of both schemes is dependent on funding from Scot Gov Air Quality grant
11	**Raising awareness including through Clean Air Day, Vehicle Emission Testing and idling campaigns**	Public information	Ongoing	Ongoing	Scottish government air quality grant	CAD event held annually	Ongoing	Dependent on Scottish Government air quality funding
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	2023-2026	In progress	N/A	Delivery of City Deal Projects with relevant AQ input	Ongoing	

2 Air Quality Objectives

3.1 Summary of Monitoring Undertaken

2.1.1 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 2022. Table A.1 in Appendix A shows the details of the sites. National monitoring results are available at www.scottishairquality.scot

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.

2.1.2 Non-Automatic Monitoring Sites

North Lanarkshire Council undertook non- automatic (passive) monitoring of NO_2 at 81 sites during 2022. Table A.2 in Appendix A shows the details of the sites.

A map showing the location of the monitoring sites is 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.

2.1.3 Other Monitoring Activities

No other monitoring activities have been undertaken by North Lanarkshire Council in the reporting year of 2022.

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 2022 and results indicate that there were no exceedances of the annual mean AQS objective for NO_2 at any of the continuous monitoring sites in 2022.

There was a significant decrease in measured concentrations across the whole network in 2020 due to the Covid-19 Pandemic and the various restrictions on activities and Government advice such as working from home where possible leading to dramatic reduction in road traffic movements. The established practice of home and hybrid working has had a continued impact on the method and frequency of travel. Although traffic movements across North Lanarkshire increased in 2021 and 2022, they did not return to pre-pandemic levels which is reflected in the monitoring results. The majority of NO_2 automatic monitoring sites measured very similar levels of NO_2 in 2022 as had been recorded in 2021. Two sites, however, did show 20-30% increase in NO2 levels – CM11 – Adele Street, Motherwell, and CM12 – Whifflet Cross A725. Despite seeing an increase, however, both these sites remained well below the annual mean air quality objective of 40µg/m^3 for NO_2.

The graphs in Figures A1 to A6 in Appendix A show the trend in annual mean NO_2 concentrations at continuous monitoring sites within the AQMAs.

In 2022 NO_2 was also measured through the Council's network of 81 passive diffusion tubes. For diffusion tubes, the full 2022 dataset of monthly mean values is provided in Appendix B. All Diffusion Tube monitoring results for 2022 comply comfortably with the annual mean statutory objective of 40 µg/m^3. Half of the total number of Diffusion Tubes remained approximately the same in 2022 as in 2021, with the remainder almost all decreased and only 5 sites showing an increase on 2021 levels. The highest monitored NO_2 diffusion tube result was DT63 at Central Way Westbound, Cumbernauld however this was well below the statutory objective at 25.4 µg/m^3.

Table A.3 in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40 µg/m^3.

A study carried out on behalf of Defra and the Devolved Administrations[1] identified that exceedances of the NO_2 1-hour mean are unlikely to occur where the annual mean is below 60µg/m^3. There were no measured annual mean concentrations in excess of 60 µg/m^3 in the same period indicating compliance with the 1-hour mean objective across the North Lanarkshire Council Region.

Table A.4 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past five years with the air quality objective of 200µg/m^3, not to be exceeded more than 18 times per year. In terms of the short-term statutory air quality objective for NO_2 – the hourly mean – monitored results indicate that there were no exceedances of the hourly mean objective level at the automatic air monitoring stations in operation in 2022 and during the period 2018 and 2022.

3.2.2 Particulate Matter (PM_{10})

As for NO_2, due to Covid-19 Pandemic restrictions, PM_{10} concentrations at all sites decreased in 2020 and increased again in 2021 but remained below 2019 pre-pandemic concentrations. At the 10 automatic monitoring stations which measure PM_{10} the monitoring results indicate there were no exceedances of the annual mean objective for PM_{10} in 2022. The highest measured concentration was 10.9 µg/m^3 at CM10 Kenilworth Dr, Airdrie, however this site only attained data capture of 65% in 2022. All sites showed a marginal increase in 2022 concentrations compared to 2021. The exception to this was CM11 Adele Street, Motherwell which showed a marginal decrease in concentrations between 2021 and 2022.

The PM_{10} monitoring network was enhanced in 2021 by the commissioning of the two new monitoring sites at Whifflet Cross A725 within the Coatbridge AQMA, and the regional development site at Ravenscraig, north of the Motherwell AQMA.

In May 2023, the Scottish Government issued Local Authorities with a guidance note to explain how PM measurements made with the FIDAS 200 method should be adjusted and reported within APRs and other LAQM reports. The ratified PM_{10} results downloaded from

[1] Local Air Quality Management Technical Guidance (TG22) -DEFRA August 2022

the Scottish Air Quality Database were divided by 0.909 in accordance with the guidance. Applying this adjustment had the effect of raising the PM_{10} concentrations slightly, however all sites remained well below the statutory objective.

Table A.5 and A.6 in Appendix A compare the ratified and adjusted monitored PM_{10} annual mean concentrations for the past five years with the air quality objective of 18µg/m^3.

The graphs in Figures A7 to A12 in Appendix A show the trend in annual mean PM_{10} concentrations (with FIDAS correction) at continuous monitoring sites within the AQMAs.

In terms of the short-term air quality statutory objective for PM_{10}, the monitoring results indicated that there were no breaches of 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 50µg/m^3, not to be exceeded more than seven times per year.

3.2.3 Particulate Matter ($PM_{2.5}$)

North Lanarkshire Council carried out monitoring of $PM_{2.5}$ at ten automatic monitoring sites in 2022. No monitored exceedances of the $PM_{2.5}$ annual mean air quality statutory objective of 10µg/m^3 was noted in 2022. The highest measured $PM_{2.5}$ concentration in 2022 was 5.6 µg/m^3 at CM12 Whifflet Cross A725, and this was still comfortably below the statutory air quality objective.

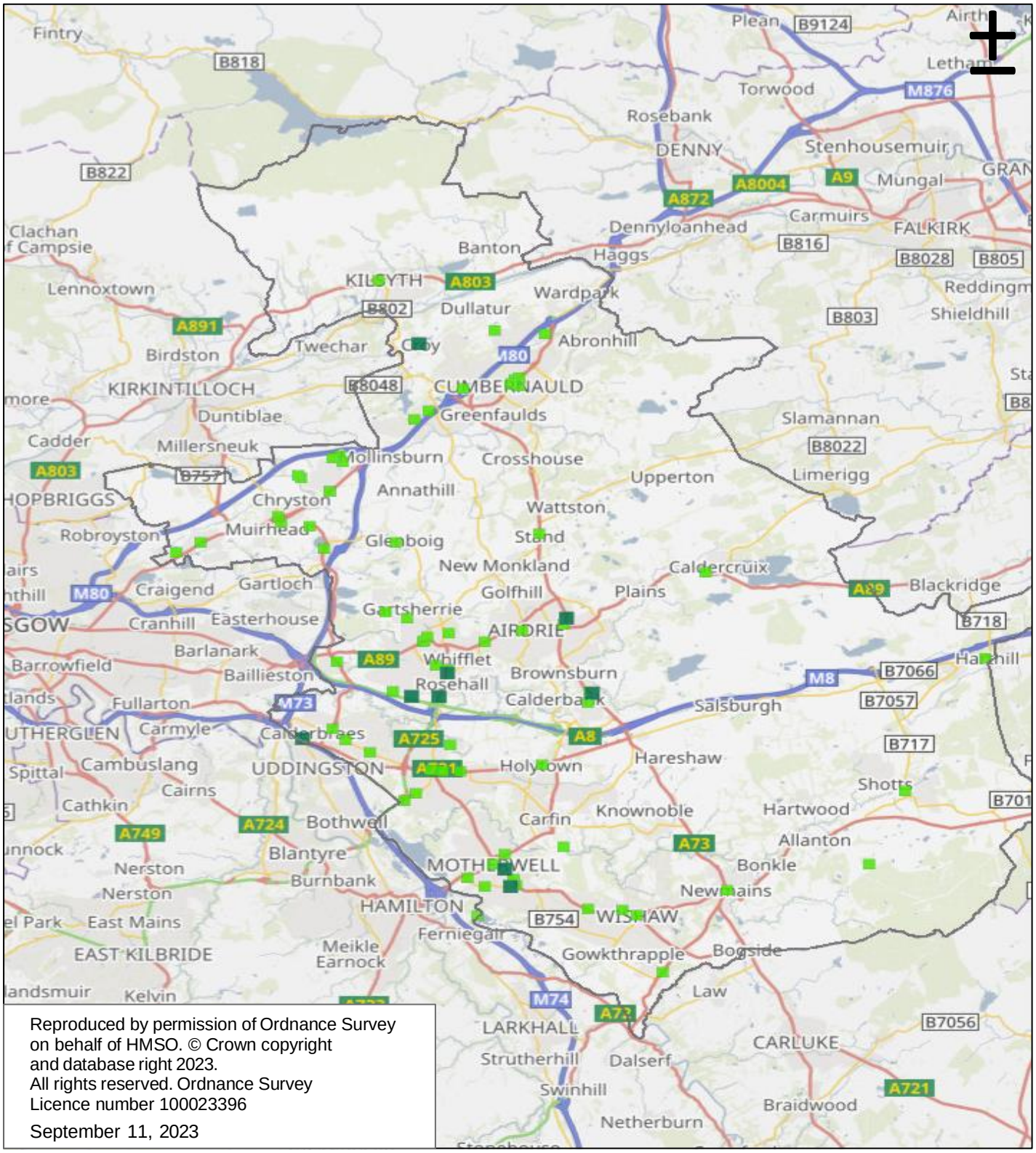
The ratified $PM_{2.5}$ results downloaded from the Scottish Air Quality Database were multiplied by 1.06 in accordance with the guidance.

The graphs in Figures A13 to A18 in Appendix A show the trend in annual mean $PM_{2.5}$ concentrations (with Fidas correction) at continuous monitoring sites within the AQMAs.

Table A.7 in Appendix A compares the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past five years with the air quality objective of 10µg/m^3.

Tables A.8 and A.9 in Appendix A compare the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past five years with the air quality objective of 10µg/m^3.

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



September 11, 2023

Air Quality Monitoring Sites

1:169,323

0 7,000 14,000 28,000 ft

0 1,700 3,400 6,800 m

NLC

NORTH LANARKSHIRE COUNCIL

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 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, 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 1,2-Butadiene concentrations within the Council area in 2021. 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 pollutant would be undertaken to decide on the most appropriate course of action.

3 New Local Developments

3.1 Road Traffic Sources

North Lanarkshire Council Roads and Transportation Team were consulted in relation to changes in traffic flows on roads within North Lanarkshire in 2021 and the following information was reported.

- Narrow congested streets with residential properties close to the kerb – there are no new roads that meet these criteria.
- Busy streets 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
    - A80 Cumbernauld Road – a new access junction off the A80 Cumbernauld Road was created between Buchanan Gate and Hornshill Farm Road, Stepps
- New roads constructed or proposed – other than within new residential developments no new roads have been constructed or are proposed.
- Roads with significantly changed traffic flows – there are no new roads that meet these criteria.
- Roads with new/changed layout – there are no new/changed roads that meet this criteria.
- Bus or coach stations – there are no altered bus/coach stations.

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

- Lancaster Avenue, Chapelhall – eight new traffic islands were installed, as well as a 3.5-metre-wide footway (including 0.5m buffer strip of grass verge)
- Newhouse to Salsburgh – various works including the installation of new 3.6m wide active travel footway, formalisation and reconstruction of all carriageway junction and farm accesses and construction of compliant pedestrian crossings with tactile paving at all dropped crossing points.

- Bank St/Woodside St, Coatbridge – traffic signal optimisation and refurbishment, installation of pedestrian crossing islands, bus stop improvements, footway and carriageway resurfacing, installation of toucan crossing on Woodside Street at Kirkwood Train Station.
- The Loaning, Motherwell – installation of traffic signals at the junction of Ladywell Rd
- A89 Forest Street – installation of uncontrolled crossing, as part of the bus shelter improvements works undertaken on this street.
- Horsley Brae – road alignment and widening. Footways widened and new footway constructed on A71. Traffic signals with controlled pedestrian crossing installed on A71 at Brownlee Road.
- Works detailed in the 2022 APR at A73 Carlisle Rd/South Biggar Road, and at Calderbank, all now completed.
- Speed limit changes have also been introduced at Stirling Road Airdrie, A89 Plains Airdrie and B825 Caldercruix.
- The redevelopment of Motherwell Rail Station, led by Scotrail with funding from Transport Scotland and SPT was completed in Summer 2023. This involved public realm improvements and road layout changes at Muir Street, Motherwell to create more capacity for buses and new arrangements for taxis, drop-off, and disabled parking. This will reduce traffic congestion in this part of Motherwell town centre enabling greater free flow of traffic and provide additional infrastructure for public transport and active travel interchange at Motherwell Train Station.

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 is a £127 million pound project linking the M74 in the south with the M80 on a route through the Ravenscraig site. The Pan Lan will create a new and upgraded transport infrastructure in North Lanarkshire.

Pan Lan comprises three projects, as follows:

East Airdrie Link Road

- Creating a new link road between Newhouse and Stand which will reduce traffic congestion.
- Will link in with the Ravenscraig access infrastructure.
- Will improve air quality in the Chapelhall AQMA by relieving congestion along the A73 and the Chapelhall AQMA.
- 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.
- The current stage is that following a rigorous options appraisal process a preferred route has been selected. The next stage of the project is to develop detailed designs for the preferred option and mitigation plans for potential impacts on the environment, local access, forestry and existing properties.

Ravenscraig Access Infrastructure North

- This project involves plans for access to the north section of the Ravenscraig site and will include the upgrading of 3km of the A723 existing route to provide a dual carriageway and shared footway/cycleway from the New Craig Road junction at Ravenscraig to the M8 at Holytown.
- The latest update on this project is that additional surveys have now taken place and the design of the project is being finalised. Advance works for the construction of the dual carriageway from Ravenscraig Regional Sports Facility to Motherwell and the junction at Airbles Rd/Windmillhill Street are anticipated to being in 2023 with the main works being planned for 2024. Thereafter completion of the dualling of Airbles Road is expected to begin in 2025.

Ravenscraig Access Infrastructure South

- Creating a new road link and pedestrian and cycle paths into Ravenscraig from Airbles Road continuing to the Ravenscraig Regional Sports Facility.
- Network Rail and their appointed contractor have now successfully completed the installation of the new bridge under the West Coast Main Line railway into position

and have now begun advanced works for the new road and foot/cycle ways into Ravenscraig, as well as making improvements to Airbles Road.

In addition to the Pan Lan, City Deal are also involved in the following project.

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. The project relies on PD Stirling Ltd delivering the Mossend International Rail Freight Park. 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 (GCR) 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.

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 be site of the 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. The application for the new hospital has now been submitted for planning permission.

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 on the AQMAs.

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 were diesel or stream trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m – there are no relevant sources in North Lanarkshire
- Locations with large numbers of movements of diesel locomotives – 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 2022.

Industrial installations: new or proposed installations for which an air quality impact assessment has been carried out - none that SEPA are aware of.

Industrial installations: existing installations where emissions have increased substantially, or new relevant exposure has been introduced – none that SEPA are aware of.

Industrial installations: new or significantly changed installations with no previous air quality impact assessment –

- Greengairs Landfill & IBA, Meikle Drumgray Road, Greengairs, Airdrie, ML67TD (PPC/W/0020041), operated by FCC Waste Services Ltd had a variation to their existing authorisation for a landfill activity.
- Warburtons Bellshill MCP, Sholto Crescent, Righead Industrial Estate, Bellshill, North Lanarkshire, ML4 3LX (PPC//B/5001999) operated by Warburtons Ltd had a new permit issued for a combustion plant.
- OSPS Treatment Facility, 6 - 10 Janesmith Street, Etna Industrial Estate, Wishaw, North Lanarkshire, ML2 7XJ (WML/L/SEPA2021-8010), operated by On Site Project Services, new license for waste storage and transfer.

- Building 1, 100 Inchinnan Road, Bellshill, ML4 3JA (WML/L/SEPA2021-8019), operated by Impact Recycling Ltd, new license for waste storage and transfer.

Major fuel depots storing petrol – SEPA responded that they are not aware of any new major fuel storage depots in North Lanarkshire in 2022.

Petrol Stations – SEPA responded that one new petrol station permit was issued in 2022. This was Motherwell Petrol Filling Station, Craigneuk Street, Wishaw, Motherwell, ML1 2NT, operated by Euro Garages Ltd. (PPC/B/50013144).

Poultry Farms – SEPA responded that there were no new poultry farms in North Lanarkshire in 2022.

4.4 Commercial and Domestic Sources

On consulting with SEPA for details of any new commercial and domestic sources they provided the following response.

- Biomass combustion plant – none that SEPA are aware of.
- 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 in North Lanarkshire where domestic solid fuel burning is a relevant 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.

- Landfill sites – SEPA has advise that there are no new landfill sites permitted in North Lanarkshire in 2022 however as detailed in Section 4.3 above - Greengairs Landfill and IBA, Meikle Drumgray Road, Greengairs, Airdrie ML6 7TD (PPC/W/0020041) operated by FCC Waste Services Ltd had a variation to their existing authorisation for a landfill activity.

- Quarries – SEPA responded that they are not aware of any new quarries in 2022 and clarified that they only have limited controls over quarries for emissions to air and therefore will not regulate all quarry sites.
- Unmade haulage roads on industrial sites – none that SEPA are aware of.
- Waste transfer stations – as outlined in section 4.3 above SEPA has notified the following.
    - OSPS Treatment Facility, 6 - 10 Janesmith Street, Etna Industrial Estate, Wishaw, North Lanarkshire, ML2 7XJ (WML/L/SEPA2021-8010), operated by On Site Project Services, new licence for waste storage and transfer.
    - Building 1, 100 Inchinnan Road, Bellshill, ML4 3JA (WML/L/SEPA2021-8019), operated by Impact Recycling Ltd, new licence for waste storage and transfer.
- Other potential sources of fugitive particulate matter emissions – none that SEPA are aware of.

4 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 2022 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 2022

Application Number	Brief Description of Development	AQ Impact	Comments/Further Information
22/00206/FUL	Warehouse, Eurocentral	Not in AQMA	https://eplanning.northlanarkshire.gov.uk/online-applications
22/00305/FUL	Residential development, Newmains	AQ Impact Assessment submitted and accepted. Not in an AQMA	https://eplanning.northlanarkshire.gov.uk/online-applications
22/00413/FUL	Five industrial units, Eurocentral	AQ Impact Assessment submitted and accepted. Not in an AQMA	https://eplanning.northlanarkshire.gov.uk/online-applications
22/00815/FUL	Warehouse, Legbrannock Rd, Newarthill	AQ Impact Assessment submitted and accepted. Not in an AQMA	https://eplanning.northlanarkshire.gov.uk/online-applications
22/00829/FUL	Warehouse and change to existing road, Eurocentral	No AQ Impact Assessment deemed necessary	https://eplanning.northlanarkshire.gov.uk/online-applications

22/00836/FUL	Manufacturing facility, Gartcosh	AQ info submitted as part of EIA. Not in an AQMA	https://eplanning.northlanarkshire.gov.uk/online-applications
22/01478/FUL	Primary school with community facilities on site of former Drumpark primary school	AQ Impact Assessment requested and submitted	https://eplanning.northlanarkshire.gov.uk/online-applications
22/01479/FUL	131 residential units, land N of School St, Coatbridge	AQ Impact Assessment submitted. In/adjacent to Coatbridge AQMA	https://eplanning.northlanarkshire.gov.uk/online-applications
22/01138/FUL	2 industrial units, Newhouse	No AQ Impact Assessment requested. Not in AQMA.	https://eplanning.northlanarkshire.gov.uk/online-applications

5 Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

Conclusions from the 2022 monitoring data presented in this report can be summarised as follows.

- Measured concentrations of NO_2 at all automatic monitoring sites and Diffusion Tube sites all complied comfortably in 2022 with the statutory annual mean objective of 40 µg/m^3. Approximately half of the Diffusion Tube sites remained at the same concentration in 2022 as in 2021, with the remainder apart from 5 sites decreasing slightly in concentration.
- None of the NO_2 automatic monitoring sites exceeded the short-term statutory objective in 2022.
- All PM_{10} monitoring carried out in 2022 measured below the annual mean objective, both uncorrected, and when corrected for the use of FIDAS 200. The results remain similar to recent previous years, which may suggest the measured level of PM_{10} mainly comprises the residual background level of PM_{10} in the area.
- All $PM_{2.5}$ monitoring carried out in North Lanarkshire in 2022 measured below the annual mean objective.
- Following the revocation of the Croy AQMA in 2022 the automatic monitoring station at this location will be decommissioned in 2023/24 and the equipment utilised in another area, representative of relevant public exposure.
- As a result of the continued compliance with the statutory objectives the council will revoke the Chapelhall and Coatbridge AQMAs for both NO_2 and PM_{10}.
- Following the completion of a North Lanarkshire-wide dispersion modelling study it is the council's intention to conduct a comprehensive review of air quality monitoring around schools in North Lanarkshire. This is to ensure adequate coverage of our monitoring resources.

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 Council's Development Management and

Strategic Planning Teams in relation to developments in 2022 and in reviewing Air Quality Impact Assessments that were submitted in support of planning applications in 2022. In considering this we conclude that although there is a high volume 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 mostly because the developments have generally not been located in areas where air quality levels are close to the statutory objectives, mitigation for 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 sensitive receptors.

The Pollution Control and Public Health Team will continue to work with Planning 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 Planning 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 Masterplanning) where possible.

6.3 Proposed Actions

The focus of air quality work in North Lanarkshire in 2023/24 will be as follows:

- We will revoke the AQMAs at Chapelhall and Coatbridge for both NO_2 and PM_{10}.
- We will undertake a comprehensive review of all automatic and diffusion tube monitoring sites across North Lanarkshire. Focusing on areas with relevant public exposure, including our schools we will undertake to ensure appropriate and adequate air quality monitoring across the area.
- We will decommission and remove the Croy air monitoring station since it is now over a year since the Croy AQMA was revoked. We will endeavour to utilise the monitoring equipment within this air station to an alternative relevant monitoring site.
- We will ensure the spend of the Scottish Government air quality monitoring grant awarded to North Lanarkshire for 2023/24 on action plan projects including contributing to the link path to the National Cycle Route adjacent to Strathclyde Country Park, and also the installation of bike repair equipment stands.
- We will continue to run the two North Lanarkshire Eco Stars schemes for fleet operators and taxis. Part of this will involve running Eco Stars workshops aimed at

advising and encouraging membership of the schemes.

- We will continue to work on our own, and in partnership with other local authorities, including South Lanarkshire Council on raising awareness of air pollution and the promotion of active travel options. Part of this will involve undertaking activities on national Clean Air Day.
- The Pollution Control and Public Health Team will continue to act as a consultee for development management, major infrastructure and City Deal planned projects, highlighting air quality where necessary at the earliest possible opportunity in the planning process.
- Subject to Scottish Government Air Quality grant funding we will continue to operate our Vehicle Emission Testing initiatives and vehicle idling programmes.

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} $PM_{2.5}$	YES (Chapelhall AQMA)	Chemiluminescent; FIDAS	20	10	2
CM2	Croy	Special – by quarry	272775	675738	NO_2 PM_{10} $PM_{2.5}$	NO (recently revoked AQMA)	Chemiluminescent FIDAS	30	10	2
CM4	Motherwell	Roadside	275458	656792	NO_2 PM_{10} $PM_{2.5}$	Y (Motherwell AQMA)	FIDAS	20	8	2
CM5	Shawhead, Coatbridge	Roadside	273411	662997	NO_2 PM_{10} $PM_{2.5}$	Y (Coatbridge AQMA)	FIDAS	22	20	2
CM6	Kirkshaws	Roadside	272523	663030	NO_2 PM_{10} $PM_{2.5}$	Y (Coatbridge AQMA)	FIDAS	20	8	2
CM7	New Edinburgh Rd, Uddingston	Roadside	269144	661496	NO_2 PM_{10}	N	Chemiluniescent; FIDAS	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 PM_{10}	N	Chemiluminescent; BAM gravimetric equivalent	30	10	2
CM11	Adele Street, Motherwell	Roadside	275642	656148	NO_2 PM_{10} $PM_{2.5}$	Y (Motherwell AQMA)	Chemiluminescent FIDAS	20	0.75	2
CM12	Whifflet Cross, A725	Roadside	273646	663867	NO_2 PM_{10} $PM_{2.5}$	Y (Coatbridge AQMA)	Chemiluminescent FIDAS	16	20	2
CM13	Ravenscraig Plantation Rd	Roadside	277307	657613	NO_2 PM_{10} $PM_{2.5}$	N	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

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)
DT47	Lay-by in Stand	Roadside	276538	668899	NO_2	N	10	2	N	2.5
DT48	Bus stop, Bron Way, Cumbernauld	Kerbside	275920	674203	NO_2	N	10	2	N	2.5
DT49	Swimming pool, Kilsyth	Kerbside	271514	678040	NO_2	N	50	2	N	2.5
DT50	1791 Cumbernauld Rd, Stepps	Kerbside	265198	668204	NO_2	N	25	2	N	2.5
DT51	131 Cumbernauld Rd, Stepps	Kerbside	265971	668567	NO_2	N	30	2	N	2.5
DT52	Traffic lights A80 Eastbound, Moodiesburn	Kerbside	269966	670412	NO_2	N	30	2	N	2.5
DT53	Traffic lights A80 Westbound Moodiesburn	Kerbside	269986	670400	NO_2	N	10	2	N	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)
DT57	Main St/ Carrick View jn, Glenboig	Urban background	272030	668564	NO_2	N	10	2	N	2.5
DT58	Lochend Rd/Coatbridge Rd, Gartcosh (A752)	Urban background	269828	668354	NO_2	N	20	2	N	2.5
DT59	10-16 Coronation Pl, Mount Ellen	Urban Background	269356	669173	NO_2	N	20	2	N	2.5
DT61	Under bridge Central Way Eastbound, Cumbernauld	Roadside	275778	674440	NO_2	N	10	2	N	2.5
DT62	Central Way A Westbound, Cumbernauld	Roadside	275920	674511	NO_2	N	10	2	N	2.5
DT63	Central Way B Westbound, Cumbernauld	Roadside	275642	674271	NO_2	N	10	2	N	2.5
DT64	Under bridge Central Way, Westbound, Cumbernauld	Roadside	275666	674293	NO_2	N	10	2	N	2.5
DT100	Civic Centre, Motherwell	Roadside	275820	656208	NO_2	Y Motherwell	10	2	N	2.5
DT101	Shields Rd, Motherwell	Roadside	274594	655113	NO_2	N	15	2	N	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)

DT104	Coursington Rd, Motherwell	Urban background	276178	657344	NO_2	N	20	2	N	2.5
DT105	Craigneuk Rd, Carfin	Urban background	277244	658415	NO_2	N	10	2	N	2.5
DT110	New Edinburgh Rd(1), M74, Uddingston	Roadside	272789	675735	NO_2	N	30	2	N	2.5
DT111	New Edinburgh Rd(2), M74, Uddingston	Roadside	272789	675735	NO_2	N	15	2	N	2.5
DT112	New Edinburgh Rd(3), M74, Uddingston	Roadside	272789	675735	NO_2	N	10	2	N	2.5
DT113	Tinkers Lane, Motherwell	Roadside	274305	656466	NO_2	N	20	2	N	2.5
DT114	Main St, Overtown	Kerbside	280370	653072	NO_2	N	15	2	N	2.5
DT115	Plantation Rd/Ravenscraig Spine Rd	Kerbside	277282	657607	NO_2	N	15	2	N	2.5
DT117	Hamilton Rd, Motherwell	Urban background	275091	656986	NO_2	N	20	2	N	2.5
DT121	Flannigan Rd, Bellshill	Urban background	273180	660350	NO_2	N	30	2	N	2.5
DT122	Main St, Mossend	Roadside	274082	660308	NO_2	N	60	2	N	2.5
DT123	Hamilton Rd, Orbiston Bellshill	Kerbside	272687	659512	NO_2	N	20	2	N	2.5
DT124	Scotmid, Tannochside	Kerbside	270073	661870	NO_2	N	20	2	N	2.5
DT125	Main St nr Motherwell Rd, Bellshill	Kerbside	273767	661281	NO_2	N	25	2	N	2.5
DT126	Main St nr Tesco, Bellshill	Kerbside	273541	660339	NO_2	N	2	2	N	2.5
DT129	Newmains Police Station	Roadside	282392	656016	NO_2	N	7	2	N	2.5
DT130	Main St (bottom), Wishaw	Roadside	279118	655327	NO_2	N	5	2	N	2.5

DT131	Brandon Pl, Bellshill	Roadside	272302	659237	NO_2	N	5	2	N	2.5
DT132	Airdrie Rd, Caldercruix	Roadside	281713	667517	NO_2	N	10	2	N	2.5
DT133	Coatbridge 1, Bank Street	Roadside	272887	664991	NO_2	N	2	2	N	2.5
DT134	Coatbridge 2, Whifflet Court	Kerbside	273655	664003	NO_2	Y Coatbridge	10	20	N	2.5

DT135	Grahamshill St, Airdrie	Kerbside	277276	665615	NO_2	N	10	2	N	2.5
DT136	Airdrie 3, Springwells Cres	Roadside	274162	674130	NO_2	N	30	2	N	2.5
DT138	Main St (near shops), Chapelhall	Roadside	278037	662798	NO_2	Y Chapelhall	10	2	N	2.5
DT139	Lauchope St/Main St jn, Chapelhall	Roadside	278178	663111	NO_2	Y Chapelhall	10	2	N	2.5
DT140	Dundyvan rd, Coatbridge	Kerbside	273293	664120	NO_2	N	5	1	N	2.5
DT143	Main St(2), Harthill(nr shops)	Roadside	290482	664386	NO_2	N	10	2	N	2.5
DT144	Lab 1, Constarry Rd, Croy	Roadside	272789	675735	NO_2	N	100	5	Y	2.5
DT145	Lab 2, Constarry Rd, Croy	Roadside	272789	675735	NO_2	N	100	5	Y	2.5
DT146	Lab 3, Constarry Rd, Croy	Roadside	272789	675735	NO_2	N	100	5	Y	2.5
DT147	Bank St, Coatbridge (nearest house)	Roadside	272947	665037	NO_2	N	15	0	N	2.5
DT148	Main St (R22), Chapelhall	Kerbside	278105	663174	NO_2	Y Chapelhall	15	2	N	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)
DT149	Main St (R33), Chapehall	Kerbside	278119	663075	NO_2	Y Chapelhall	15	2	N	2.5
DT150	Eastfield Rd, Cumbernauld	Kerbside	275160	676210	NO_2	N	25	2	N	2.5
DT151	Main St, Holytown	Urban background	276635	660569	NO_2	N	10	2	N	2.5
DT152	Coatbridge Rd (shops), Townhead	Roadside	272391	665824	NO_2	N	10	2	N	2.5
DT153	72 Townhead Rd, Coatbridge	Roadside	271720	666053	NO_2	N	20	2	N	2.5
DT154	Sunnyside Rd, Coatbridge	Roadside	273042	665176	NO_2	N	20	2	N	2.5
DT156	Stirling St, Airdrie	Roadside	276005	665406	NO_2	N	50	2	N	2.5
DT157	31 Station Road, Muirhead	Roadside	268442	669262	NO_2	N	15	2	N	2.5
DT158a	Croftmoraig Ave, Moodiesburn	Kerbside	270281	671715	NO_2	N	15	2	N	2.5
DT158b	Deedes St, Airdrie	Roadside	274819	665005	NO_2	N	7	2	N	2.5
DT159	Glenview Cres, Moodiesburn	Roadside	270391	671505	NO_2	N	10	2	N	2.5
DT160	The Cuillins, Moodiesburn	Roadside	270067	671604	NO_2	N	10	2	N	2.5
DT161	Bridgend Cres, Moodiesburn	Roadside	269071	670889	NO_2	N	1	1	N	2.5
DT162	Auchingeoch Rd, Moodiesburn	Roadside	269022	670979	NO_2	N	2	1	N	2.5
DT163	12 Inchwod Rd, Westfield, Cumbernauld	Roadside	273098	673321	NO_2	N	10	1	N	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)
DT164	12 Leckethill Ct, Westfield, Cumbernauld	Roadside	272634	672994	NO_2	N	10	1	N	2.5
DT165	Kildonan St, Coatbridge	Roadside	273727	665285	NO_2	N	20	2	N	2.5
DT166	22 Cumbernauld Rd, Chryston	Roadside	268392	669502	NO_2	N	10	2	N	2.5
NewDT54	Columba Ct/Old Edinburgh Rd, Viewpark	Roadside	271259	661016	NO_2	N	15	2	N	2.5
NewDT55	Old Edinburgh Rd, Viewpark	Roadside	270463	661441	NO_2	N	15	2	N	2.5
NewDT56	Bargeddie	Roadside	270201	664281	NO_2	N	10	2	N	2.5
NewDT102	Windmillhill St (1), Motherwell	Roadside	275738	656400	NO_2	Y Motherwell	50	1	N	2.5
NewDT103	Windmillhill St(2), Motherwell	Roadside	275733	656439	NO_2	Y Motherwell	20	1	N	2.5
NewDT116	Airbles Rd (Electric Bar), Motherwell	Roadside	274814	656147	NO_2	N	15	5	N	2.5
NewDT118	Merry St/Dalziel St, Motherwell	Roadside	275444	657312	NO_2	N	15	5	N	2.5
NewDT119	Shawhead Roundabout, Coatbridge	Kerbside	273432	662965	NO_2	Y Coatbridge	30	2	N	2.5
NewDT120	Kirkshaws Rd, Coatbridge	Roadside	271939	663179	NO_2	Y Coatbridge	10	2	N	2.5
NewDT127	Matalan, Wishaw	Kerbside	278059	655368	NO_2	N	10	2	N	2.5

NewDT128	Wishaw Cross/Stewarton St, Wishaw	Roadside	279587	655125	NO_2	N	30	2	N	2.5
NewDT137	Main St, Village, Cumbernauld	Roadside	276710	676098	NO_2	N	10	2	N	2.5
NewDT141	Station Rd, Shotts	Roadside	286840	656978	NO_2	N	20	2	N	2.5
NewDT142	Stane Gdns, Shotts	Roadside	287954	659620	NO_2	N	20	2	N	2.5
NewDT157a	Swing Park, Castlecary	Roadside	278470	677901	NO_2	N	30	2	N	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.

Table A.3 – Annual Mean NO_2 Monitoring Results ($\mu g/m^3$)

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2022 (%) [2]	2018	2019	2020	2021	2022
CM1-Chapelhall	Roadside	Automatic	99.6%	99.6%	27.7	21.7	18.0	14.8	13.8
CM2 - Croy	Special-by quarry	Automatic	99.5%	99.5%	17.5	19	12.0	10.0	9.6
CM4-Menteith Rd, Motherwell	Roadside	Automatic	88.9%	88.9%	-		12.6	10.8	10.3
CM5-Shawhead, Coatbridge	Roadside	Automatic	99.6%	99.6%	20.7	20.3	16.0	14.2	13.5
CM6-Kirkshaws, Coatbridge	Roadside	Automatic	99.9%	99.9%	18.3	20.3	13.0	13.6	13
CM7-New Edinburgh Rd, Uddingston	Roadside	Automatic	99.6%	99.6%	-	24.4	17.0	16.6	15.1
CM10-Kenilworth Dr, Airdrie	Roadside	Automatic	99.9%	99.9%	-	16.9	14.0	11.9	12.2
CM11-Adele St, Motherwell	Roadside	Automatic	44%	44%	-	-	-	9	10.8
CM12-Whifflet Cross A725	Roadside	Automatic	83.2%	83.2%	-	-	-	13.9	17.2
CM13 – Ravenscraig Plantation Road	Roadside	Automatic	97.6%	75%	-	-	-	-	5.9
DT47-Lay by in Stand	Roadside	Diffusion Tube	100%	100%	21.7	21.4	14.7	14.0	11.8
DT48-bus stop, Bron Way, Cumbernauld	Kerbside	Diffusion Tube	92%	92%	27.3	25.7	17.8	16.9	15.7
DT49- Swimming Pool, Kilsyth	Kerbside	Diffusion Tube	100%	100%	22.5	18.3	11.2	13.0	12.8
DT50-1791 Cumbernauld Rd, Stepps	Kerbside	Diffusion Tube	100%	100%	21.9	20.2	12.4	16.0	11.5
DT51- 131 Cumbernauld Rd, Stepps	Kerbside	Diffusion Tube	100%	100%	27.4	21.0	14.6	16.8	13.4
DT52 – Traffic lights A80 Eastbound, Moodiesburn	Kerbside	Diffusion Tube	100%	100%	25.4	22.6	14.6	14.2	12.5
DT53-traffic lights A80 Westbound, Moodiesburn	Kerbside	Diffusion Tube	100%	100%	22.9	18.3	10.5	11.1	9.8
DT57-Main St/Garrick View, Glenboig	Urban background	Diffusion Tube	100%	100%	18.1	16.6	-	12.8	9.5

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2022 (%) [2]	2018	2019	2020	2021	2022
DT58-Lochend Rd/Coatbridge Rd (previously called DT54, changed in 2018)	Urban background	Diffusion Tube	100%	100%	25.8	22.9	9.8	17.9	14.7
DT59-10-16 Coronation Pl, Mount Ellen	Urban background	Diffusion Tube	100%	100%	19.8	17.7	14.3	12.5	10.8
DT61-under Central Way, Eastbound, Cumbernauld	Roadside	Diffusion Tube	100%	100%	43.6	40.5	12.6	27.2	23.7
DT62-Central Way Westbound (A), Cumbernauld	Roadside	Diffusion Tube	100%	100%	39.0	32.9	25.8	24.2	19.8
DT63-Central Way Westbound (B), Cumbernauld	Roadside	Diffusion Tube	100%	100%	45.7	37.5	17.9	26.6	25.4
DT64-Under Central Way, Westnound, Cumbernauld	Roadside	Diffusion Tube	100%	100%	32.2	28.7	21.2	21.8	18.7
DT100 – Civic Centre, Motherwell	Roadside	Diffusion Tube	100%	100%	36.9	36.9	15.6	22.1	18.9
DT101- Shields Rd, Motherwell	Roadside	Diffusion Tube	92%	92%	24.9	20.1	22.4	14.8	13.5
DT104-Coursington Rd, Motherwell	Urban background	Diffusion Tube	100%	100%	10.5	10.5	10.2	7.7	5.9
DT105-Craigneuk Rd, Carfin	Urban background	Diffusion Tube	100%	100%	16.4	12.6	11.5	10.3	8.2
DT110-New Edinburgh Rd(1), Uddingston	Roadside	Diffusion Tube	100%	100%	33.8	28.9	20.2	23.9	18.8
DT111-New Edinburgh Rd(2), Uddingston	Roadside	Diffusion Tube	100%	100%	30.4	31.1	22.2	19.0	20.3
DT112-New Edinburgh Rd,(3), Uddingston	Roadside	Diffusion Tube	100%	100%	32.3	28.6	20.3	23.4	19.5
DT113-Tinkers Lane, Motherwell	Roadside	Diffusion Tube	100%	100%	22.0	17.9	14.1	14.4	11.9
DT114-Main St, Overtown	Kerbside	Diffusion Tube	100%	100%	17.7	15.0	14.1	9.9	8.5
DT115-Plantation Rd, Ravenscraig, Motherwell	Kerbside	Diffusion Tube	100%	100%	15.4	13.8	10.7	8.2	7.4
DT117-Hamilton Rd, Motherwell	Urban background	Diffusion Tube	92%	92%	27.4	26.8	18.6	19.5	16.4

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2022 (%) [2]	2018	2019	2020	2021	2022
DT121-Flannigan Grove, Bellshill	Urban background	Diffusion Tube	100%	100%	20.3	20.2	13.8	15.4	12.1
DT122-Main St, Mossend	Roadside	Diffusion Tube	100%	100%	27.5	24.0	17.1	15.2	11.4
DT123-Hamilton Rd, Orbiston, Bellshill	Kerbside	Diffusion Tube	100%	100%	23.9	21.4	16.7	17.1	14.3
DT124-Scotmid, Tannochside	Kerbside	Diffusion Tube	100%	100%	29.5	23.5	15.7	16.3	13.0
DT125-Main St/Motherwell Rd, Bellshill	Kerbside	Diffusion Tube	100%	100%	24.4	18.8	15.2	15.5	13.2
DT126-Main St, near Tesco delivery rd, Bellshill	Kerbside	Diffusion Tube	100%	100%	20.4	21.4	14.6	15.1	12.2
DT129-Newmains Police Station	Roadside	Diffusion Tube	100%	100%	27.7	27.3	17.7	21.5	17.9
DT130- Main St, Wishaw (bottom)	Roadside	Diffusion Tube	100%	100%	17.1	15.8	12.5	11.1	9.8
DT131- Brandon Pl, Bellshill	Roadside	Diffusion Tube	100%	100%	19.4	14.6	14.1	16.4	12.0
DT132 – Airdrie Rd, Caldercruix	Roadside	Diffusion Tube	83%	83%	16.8	15.8	10.2	9.9	9.4
DT133- Bank St (1), Coatbridge	Roadside	Diffusion Tube	100%	100%	30.4	30.1	17.5	23.5	17.0
DT134- Whifflet Ct (2), Coatbridge	Kerbside	Diffusion Tube	92%	92%	19.8	20.4	12.8	15.4	13.0
DT135 -Grahamshill St, Airdrie	Kerbside	Diffusion Tube	100%	100%	29.3	28.3	22.1	27.1	17.4
DT136- Airdrie 3, Springwell Cres	Roadside	Diffusion Tube	100%	100%	21.1	17.9	11.0	14.5	10.9
DT138- Main St, Chapelhall (nr shops)	Roadside	Diffusion Tube	100%	100%	22.7	23.1	12.3	16.7	13.7
DT139- Lauchope St/Main St, Chapelhall	Roadside	Diffusion Tube	100%	100%	29.4	28.1	18.1	22.8	21.1
DT140 – Dundyvan Rd, Coatbridge	Kerbside	Diffusion Tube	100%	100%	21.7	23.2	14.8	20.9	13.6

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2022 (%) [2]	2018	2019	2020	2021	2022
DT143- Main St(2), Harthill (nr shops)	Roadside	Diffusion Tube	100%	100%	17.8	15.4	11.6	11.6	9.9
DT144-Lab 1, Constarry Rd, Croy	Roadside	Diffusion Tube	100%	100%	17.9	16.7	9.5	9.7	9.9
DT145-Lab 2, Constarry Rd, Croy	Roadside	Diffusion Tube	100%	100%	20.4	16.4	9.9	10.4	10.5
DT146- Lab 3, Constarry Rd, Croy	Roadside	Diffusion Tube	100%	100%	22.9	15.8	11.6	9.5	11.2
DT147- Bank St, Coatbridge (nearest house)	Roadside	Diffusion Tube	100%	100%	28.5	27.4	13.7	20.2	16.0
DT148- Main St, Chapelhall, R32	Kerbside	Diffusion Tube	100%	100%	31.2	28.0	17.6	20.6	19.1
DT149- Main St, Chapelhall, R33	Kerbside	Diffusion Tube	100%	100%	26.9	29.1	17.2	20.7	16.4
DT150- Eastfield Rd, Cumbernauld	Kerbside	Diffusion Tube	92%	92%	19.2	18.7	11.2	11.8	10.9
DT151- Main St, Holytown	Urban background	Diffusion Tube	100%	100%	24.3	17.5	12.0	14.0	13.2
DT152- Coatbridge Rd, (Townhead shops)	Roadside	Diffusion Tube	100%	100%	28.6	30.3	20.7	20.3	14.3
D153- 72 Townhead Rd, Coatbridge	Roadside	Diffusion Tube	92%	92%	20.9	19.5	13.1	17.3	13.4
DT154- Sunnyside Rd, Coatbridge	Roadside	Diffusion Tube	92%	92%	24.7	27.4	18.3	21.5	18.0
DT156- Stirling Rd, Airdrie	Roadside	Diffusion Tube	100%	100%	30.9	28.4	18.9	26.0	16.0
DT157- Station Rd, Muirhead	Roadside	Diffusion Tube	100%	100%	34.1	22.3	14.4	19.1	12.7
DT158a- Croftmoraig Cres, Moodiesburn	Roadside	Diffusion Tube	100%	100%	18.4	17.8	11.2	11.4	10.5
DT158b- Deedes St, Airdrie	Roadside	Diffusion Tube	100%	100%	29.5	30.3	22.0	23.4	19.6
DT159- Glenview Cres, Moodiesburn	Roadside	Diffusion Tube	100%	100%	17.7	18.4	11.1	12.2	11.2

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2022 (%) [2]	2018	2019	2020	2021	2022
DT160- The Cuillins, Moodiesburn	Roadside	Diffusion Tube	100%	100%	17.6	18.4	10.7	11.3	9.9
DT161- Bridgend Cres, Moodiesburn	Roadside	Diffusion Tube	100%	100%	16.8	15.7	10.4	10.9	10.0
DT162- Auchegeoch Rd, Moodiesburn	Roadside	Diffusion Tube	100%	100%	19.4	18.3	11.6	12.1	9.9
DT163- 12 Inchwood Rd, Westfield, Cumbernauld	Roadside	Diffusion Tube	92%	92%	22.8	21.7	14.2	15.6	12.2
DT164 – 12 Leckethill Ct, Westfield, Cumbernauld	Roadside	Diffusion Tube	92%	92%	19.5	19.0	11.2	9.9	10.0
DT165- Kildonan St, Coatbridge	Roadside	Diffusion Tube	100%	100%	23.4	23.2	14.5	16.3	14.4
DT166 – 22 Cumbernauld Rd, Chryston	Roadside	Diffusion Tube	100%	100%	28.7	26.0	14.7	16.8	14.6
NewDT54 – Columba Ct/Old Edinburgh Rd, Viewpark	Roadside	Diffusion Tube	100%	100%	25.6	23.6	14.0	16.4	13.1
NewDT55 – Old Edinburgh Rd, Viewpark	Roadside	Diffusion Tube	100%	100%	27.6	24.7	13.6	19.3	15.0
NewDT56 – Bargeddie	Roadside	Diffusion Tube	100%	100%	20.6	20.0	12.2	14.1	12.2
NewDT102 – Windmillhill St(1), Motherwell	Roadside	Diffusion Tube	100%	100%	20.4	18.3	14.1	12.1	11.6
NewDT103 – Windmilllhilll St(2), Motherwell	Roadside	Diffusion Tube	100%	100%	25.9	20.7	16.6	15.1	15.0
NewDT 116 – Airbles Rd, (Electric Bar), Motherwell	Roadside	Diffusion Tube	100%	100%	22.3	17.2	13.3	14.3	10.0
NewDT 118 – Merry St/Dalziel St, Motherwell	Roadside	Diffusion Tube	100%	100%	28.3	24.1	17.1	17.6	14.8

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2022 (%) [2]	2018	2019	2020	2021	2022

NewDT119- Shawhead roundabout, Coatbridge	Kerbside	Diffusion Tube	100%	100%	27.8	23.7	18.5	19.7	17.7
NewDT120- Kirkshaws Rd, Coatbridge	Roadside	Diffusion Tube	92%	92%	26.5	24.4	18.9	20.5	16.2
NewDT 127 – Matalan, Wishaw	Kerbside	Diffusion Tube	100%	100%	24.3	26.6	18.9	18.0	14.3
NewDT 128 – Wishaw Cross/Stewarton St, Wishaw	Roadside	Diffusion Tube	100%	100%	26.7	27.9	21.8	22.6	18.2
NewDT137 – Main St, Village, Cumbernauld	Roadside	Diffusion Tube	100%	100%	20.6	22.5	13.9	16.4	15.2
New DT141 – Station Rd, Shotts	Roadside	Diffusion Tube	100%	100%	14.0	12.7	9.6	10.2	8.0
NewDT142 – Stane Gdns, Shotts	Roadside	Diffusion Tube	100%	100%	18.4	16.9	11.8	12.8	10.5
NewDT157a-Swing park, Castlecary, Cumbernauld	Roadside	Diffusion Tube	100%	100%	28.9	25.4	18.5	19.4	16.3

Notes:

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

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

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.

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

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

Table A.4 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
CM1-Chapelhall	Roadside	Automatic	99.6%	99.6%	0(142)	0(112)	0	0	0
CM2-Croy	Special – by quarry	Automatic	99.5%	99.5%	0(93)	0(77)	0(73)	0	0
CM4-Menteith Rd, Motherwell	Roadside	Automatic	88.9%	88.9%	0(125)	0(114)	0(113)	0	0
CM5-Shawhead	Roadside	Automatic	99.6%	99.6%	0(114)	0(113)	0	0	0
CM6-Kirkshaws	Roadside	Automatic	99.9%	99.9%	0(107)	0(114)	0	0	0
CM7-New Edinburgh Rd, Uddingston	Roadside	Automatic	99.6%	99.6%	-	0(87)	0	0	0
CM10-Kenilworth Dr, Airdrie	Roadside	Automatic	99.9%	99.9%	-	0(83)	0	0	0
CM11-Adele St, Motherwell	Roadside	Automatic	44%	44%	-	-	-	0(75.1)	0(83.5)
CM12-Whifflet Cross A725	Roadside	Automatic	83.2%	83.2%	-	-	-	0(71)	0
CM13-Ravenscraig Plantation Road	Roadside	Automatic	97.6%	75%	-	-	-	-	0(47.9)

Notes:

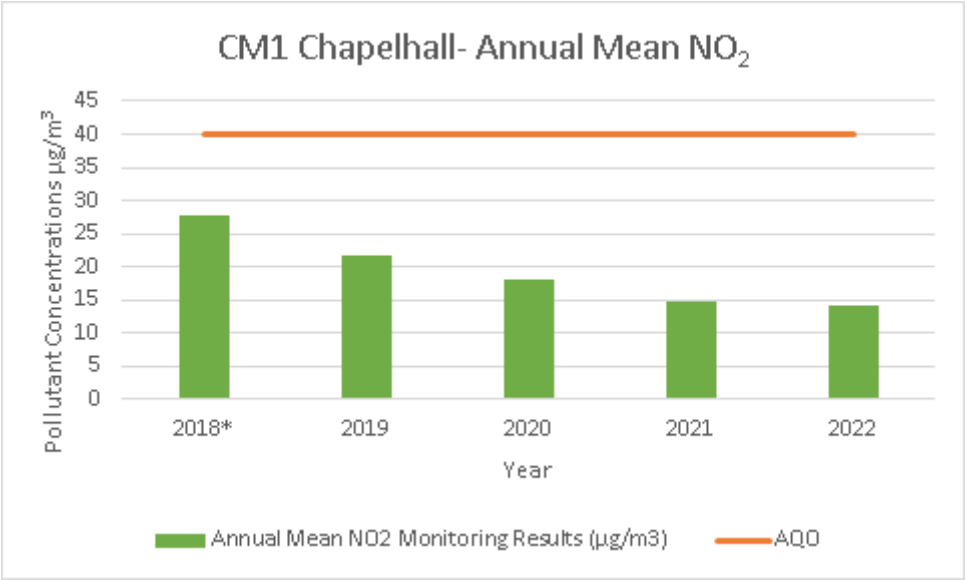
Exceedances of the NO_2 1-hour mean objective (200 µg/m^3 not to be exceeded more than 18 times/year) are shown in bold.

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 A6 below show the trend graphs of measured annual mean NO_2 concentrations over the period 2018-2022 in the three AQMAs.



*Annualised Data

Figure A1: Annual Mean Concentrations of NO_2 at CM1 Chapelhall

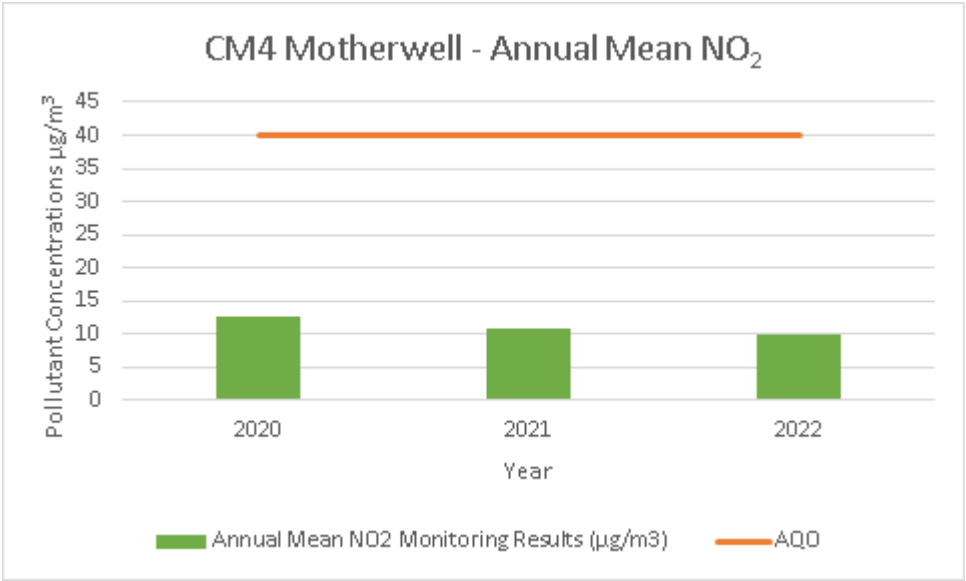


Figure A2: Annual Mean Concentrations of NO_2 at CM4 Motherwell

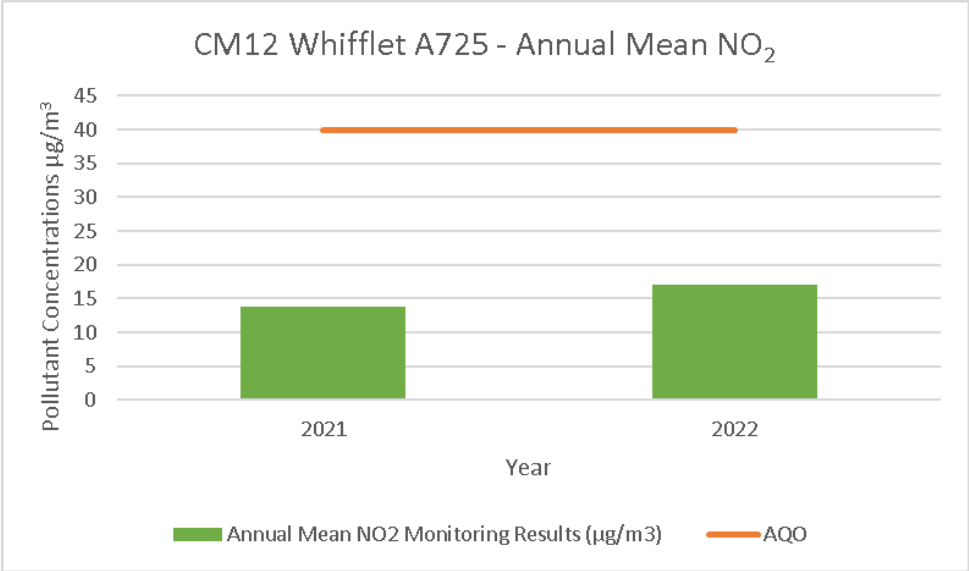


Figure A3: Annual Mean Concentrations of NO_2 at CM12 Whifflet A725

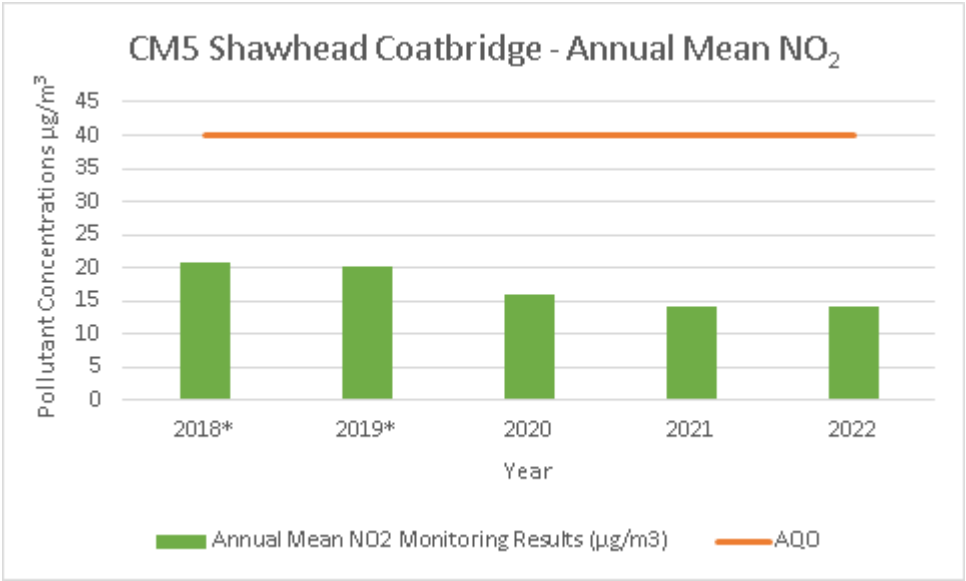


Figure A4: Annual Mean Concentrations of NO_2 at CM5 Shawhead Coatbridge

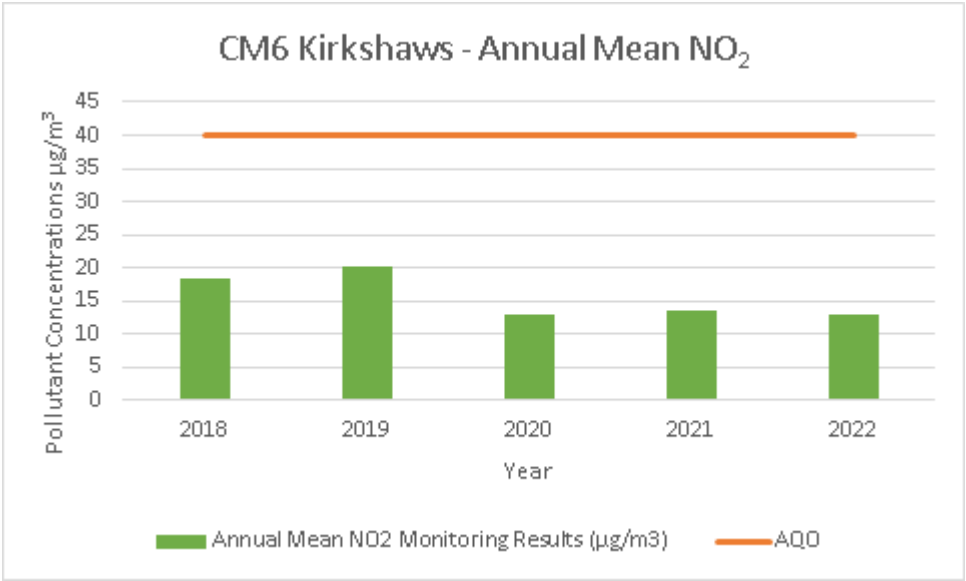


Figure A5: Annual Mean Concentrations of NO_2 at CM6 Kirkshaws Coatbridge

Table A.5 – Annual Mean PM_{10} Monitoring Results (µg/m^3) – non-corrected

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
CM1-Chapelhall	Roadside	100%	100%	10.2	10.0	9.0	9.4	9.9
CM2-Croy	Special – by quarry	100%	100%	12.2	11.0	8.0	8.5	10.6
CM4-Menteith Rd, Motherwell	Roadside	87%	87%	9.7	11.0	9.0	9.6	10
CM5-Shawhead	Roadside	100%	100%	4.9	10.0	8.0	9.1	9.4
CM6-Kirkshaws	Roadside	100%	100%	9.6	10.0(3)	9.0	8.9	9.8
CM7-New Edinburgh Rd, Uddingston	Roadside	99%	99%	-	13.5	9.0	9.5	10.7
CM10-Kenilworth Dr, Airdrie	Roadside	65%	65%	-	12.2	7.8	10.2	10.9
CM11-Adele St, Motherwell	Roadside	82%	82%	-	-	8.0	8.8	7.7
CM12-Whifflet Cross A725	Roadside	100%	100%	-	-	-	9.4	10.2
CM13-Ravenscraig Plantation Road	Roadside	89%	89%	-	-	-	-	8.3

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%).

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

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
CM1-Chapelhall	Roadside	100%	100%	11.1	11.1	9.4	10.3	10.9
CM2-Croy	Special – by quarry	100%	100%	12.9	12.6	8.4	9.3	11.7
CM4-Menteith Rd, Motherwell	Roadside	87%	87%	10.4	11.5	10.3	10.5	11
CM5-Shawhead	Roadside	100%	100%	8.7	10.9	9	10	10.4
CM6-Kirkshaws	Roadside	100%	100%	9.8	11.4	9.6	9.8	10.7
CM7-New Edinburgh Rd, Uddingston	Roadside	99%	99%	-	11.4	9.2	10.4	11.8
CM10-Kenilworth Dr, Airdrie	Roadside	65%	65%	-	10.3	9.5	10.2	10.1
CM11-Adele St, Motherwell	Roadside	82%	82%	-	-	8.2	9.7	8.5
CM12-Whifflet Cross A725	Roadside	100%	100%	-	-	-	10.4	11.3
CM13-Ravenscraig Plantation Road	Roadside	89%	89%	-	-	-	-	9.1

Notes:

Exceedances of the PM_{10} annual mean objective of 18µg/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%).

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

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
CM1-Chapelhall	Roadside	100%	100%	0(24)	1	0	0	0
CM2-Croy	Special – by quarry	100%	100%	0(42)	3	0(18)	0	2
CM4-Menteith Rd, Motherwell	Roadside	87%	87%	0(23)	2	0	0	0
CM5-Shawhead	Roadside	100%	100%	0(19)	2	0	0	0
CM6-Kirkshaws	Roadside	100%	100%	0(21)	1	0	0	0
CM7-New Edinburgh Rd, Uddingston	Roadside	99%	99%	-	0(21)	0(15)	0(18.3)	0
CM10-Kenilworth Dr, Airdrie	Roadside	65%	65%	-	0(21)	0(23)	0(22.4)	0(29.1)
CM11-Adele St, Motherwell	Roadside	82%	82%	-	-	0(18)	0	0(16.2)
CM12-Whifflet Cross A725	Roadside	100%	100%	-	-	-	0(21.2)	0
CM13-Ravenscraig Plantation Road	Roadside	89%	89%	-	-	-	-	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 7 to 12 below show the trend graphs of measured annual mean PM_{10} concentrations over the period 2018-2022 in the three AQMAs.

N.B. Monitoring Data of PM_{10} and $PM_{2.5}$ has been adjusted in line with the Scottish Government guidance issued May 2023 to adjust all PM data collected by FIDAS 200 instruments to be using factors PM_{10} divided by 0.909 and $PM_{2.5}$ multiplied by 1.06.

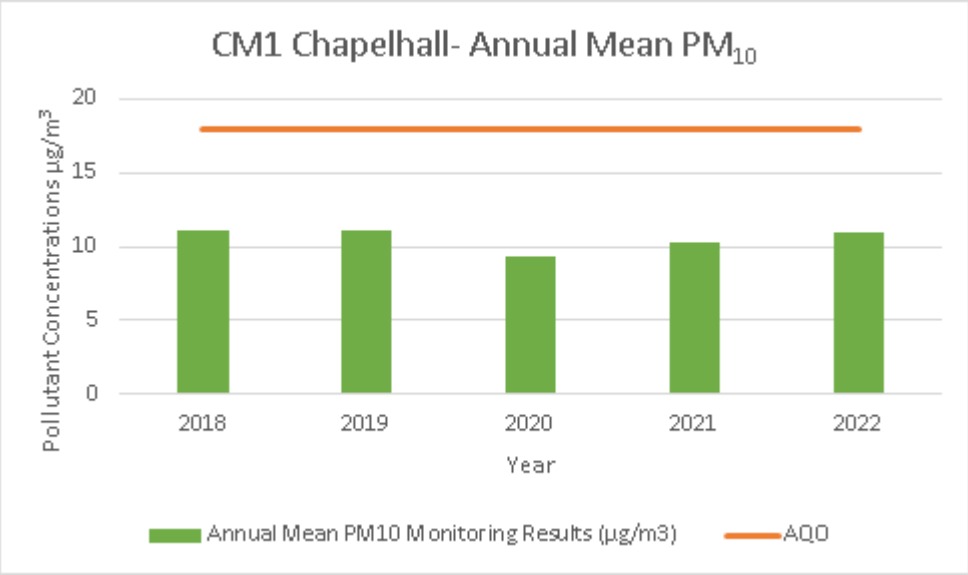


Figure A6: Annual Mean Concentrations of PM_{10} at CM1 Chapelhall

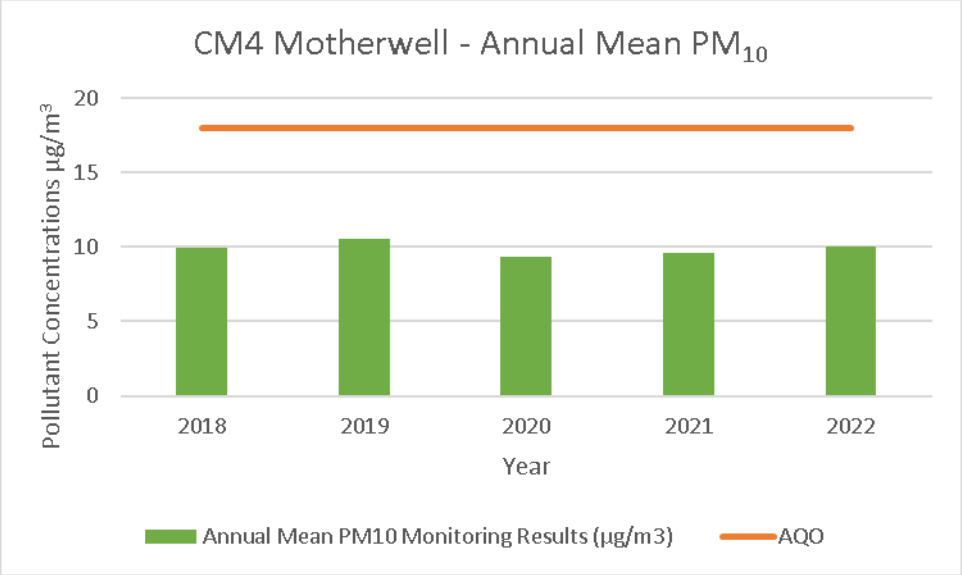


Figure A7: Annual Mean Concentrations of PM_{10} at CM4 Motherwell

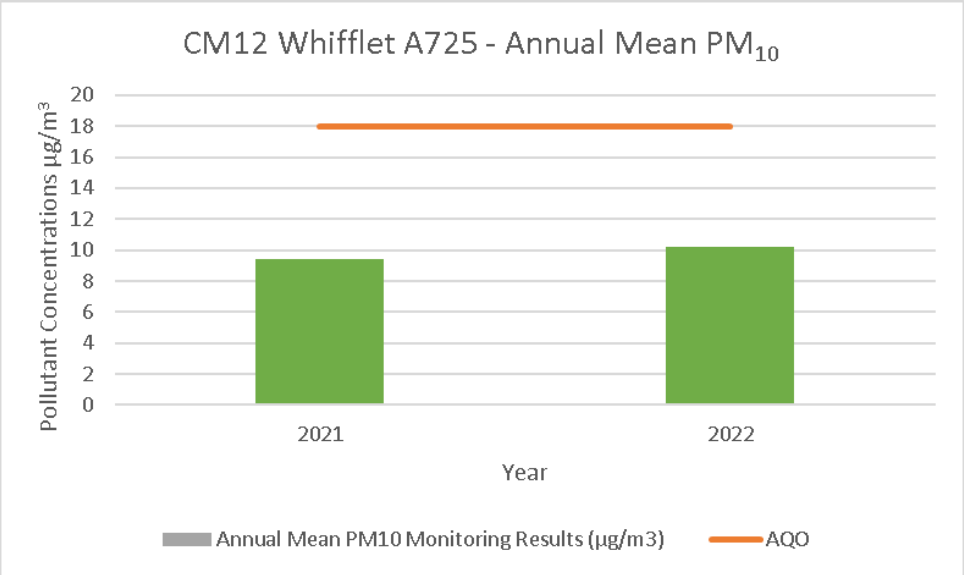


Figure A8: Annual Mean Concentrations of PM_{10} at CM12 Whifflet A725

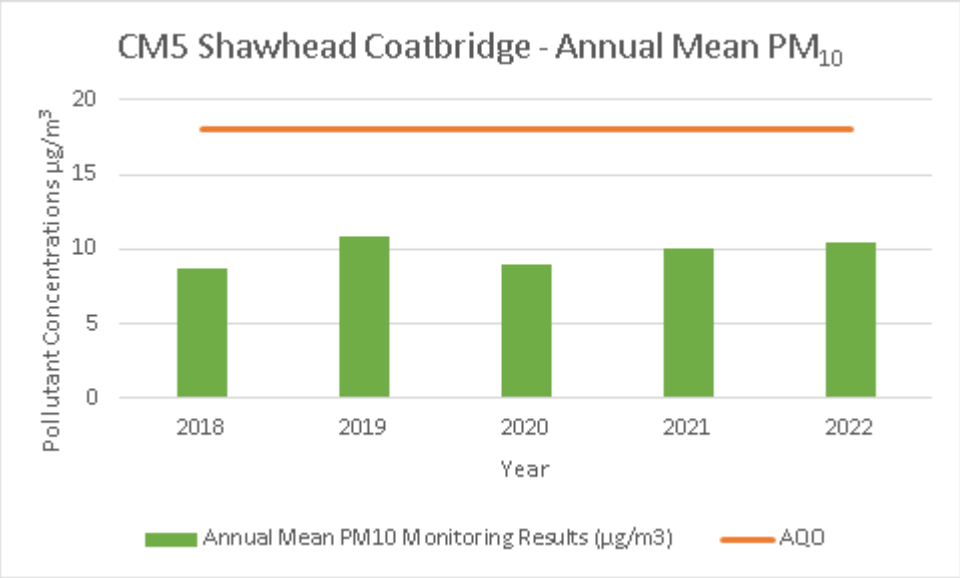


Figure A9: Annual Mean Concentrations of PM_{10} at CM5 Shawhead Coatbridge

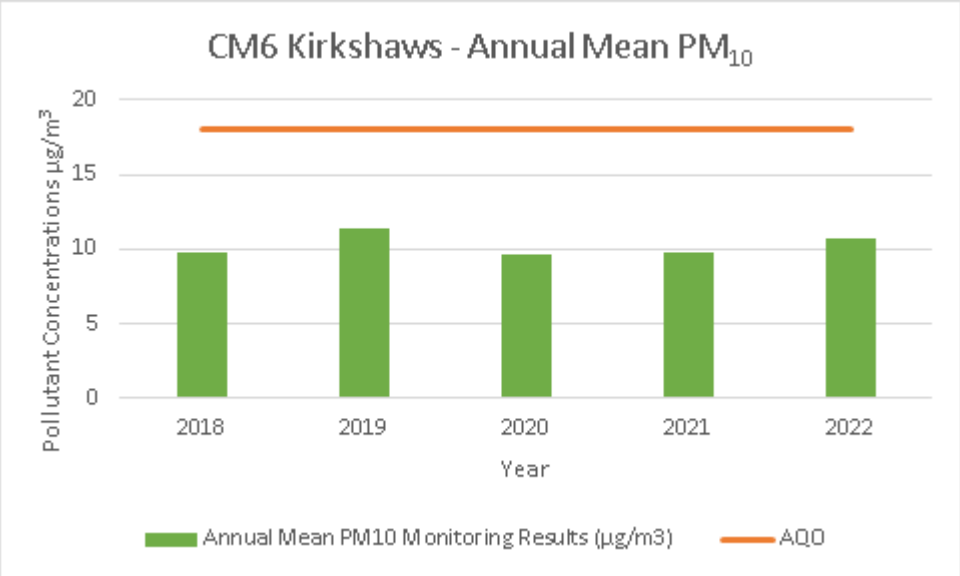


Figure A10: Annual Mean Concentrations of PM_{10} at CM6 Kirkshaws Coatbridge

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

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
CM1-Chapelhall	Roadside	100%	100%	5.3	6.0	5.0	5.0	5.2
CM2-Croy	Special – by quarry	100%	100%	6.0	6.0	4.0	4.9	5.5
CM4-Menteith Rd, Motherwell	Roadside	87%	87%	5.4	6.0	5.0	5.0	5.4
CM5-Shawhead	Roadside	100%	100%	5.6	6.0	5.0	4.8	5.1
CM6-Kirkshaws	Roadside	100%	100%	5.4	6.0	5.0	4.9	5.3
CM7-New Edinburgh Rd, Uddingston	Roadside	99%	99%	-	-	-	5.0	5.2
CM11-Adele St, Motherwell	Roadside	82%	82%	-	-	4.5	5.0	4.3
CM12-Whifflet Cross A725	Roadside	100%	100%	-	-	-	5.2	5.6
CM13-Ravenscraig Plantation Road	Roadside	89%	89%					4.6

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%).

Table A.9 – Annual Mean $PM_{2.5}$ Monitoring Results (µg/m^3) – FIDAS corrected.

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
CM1-Chapelhall	Roadside	100%	100%	5.6	5.9	4.9	5.3	5.6
CM2-Croy	Special – by quarry	100%	100%	5.4	6.7	4.4	5.2	5.8
CM4-Menteith Rd, Motherwell	Roadside	87%	87%	4.9	6.4	5.4	5.3	5.7
CM5-Shawhead	Roadside	100%	100%	4.7	6	4.7	5.1	5.4
CM6-Kirkshaws	Roadside	100%	100%	4.4	6.4	5	5.2	5.6
CM7-New Edinburgh Rd, Uddingston	Roadside	99%	99%	-	-	-	5.2	5.5
CM11-Adele St, Motherwell	Roadside	65%	65%	-	-	4.7	5.3	4.6
CM12-Whifflet Cross A725	Roadside	82%	82%	-	-	-	5.5	5.9
CM13-Ravenscraig Plantation Road	Roadside	100%	100%	-	-	-	-	4.9

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%).

Figures A13 to A18 below show the trend graphs of measured annual mean $PM_{2.5}$ concentrations over the period 2018-2022 in the three AQMAs.

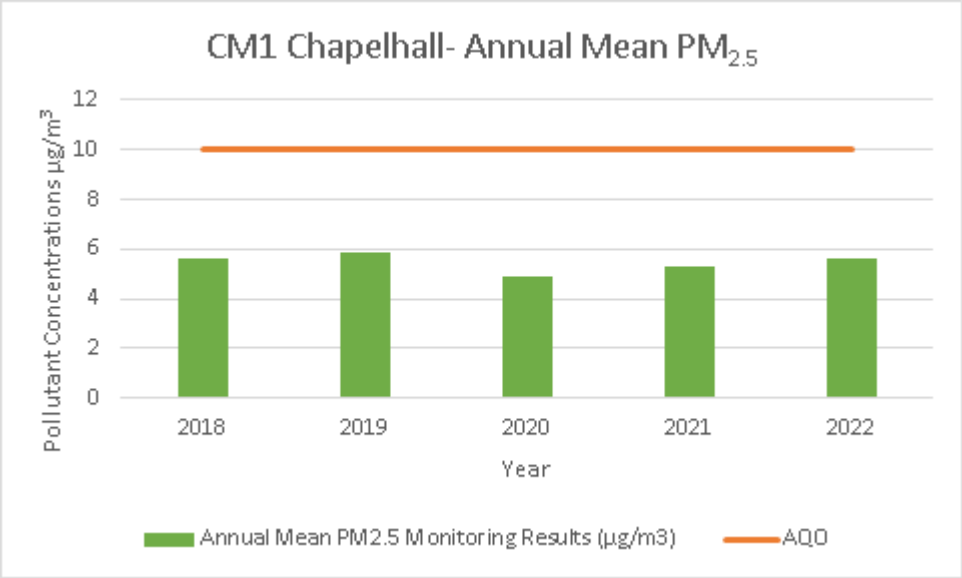


Figure A11: Annual Mean Concentrations of $PM_{2.5}$ at CM1 Chapelhall

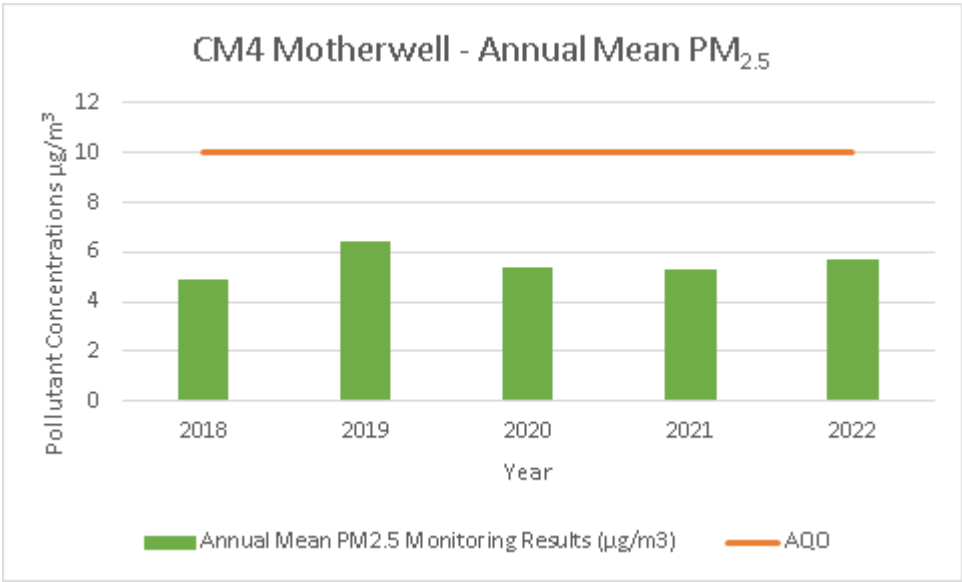


Figure A12: Annual Mean Concentrations of $PM_{2.5}$ at CM4 Motherwell

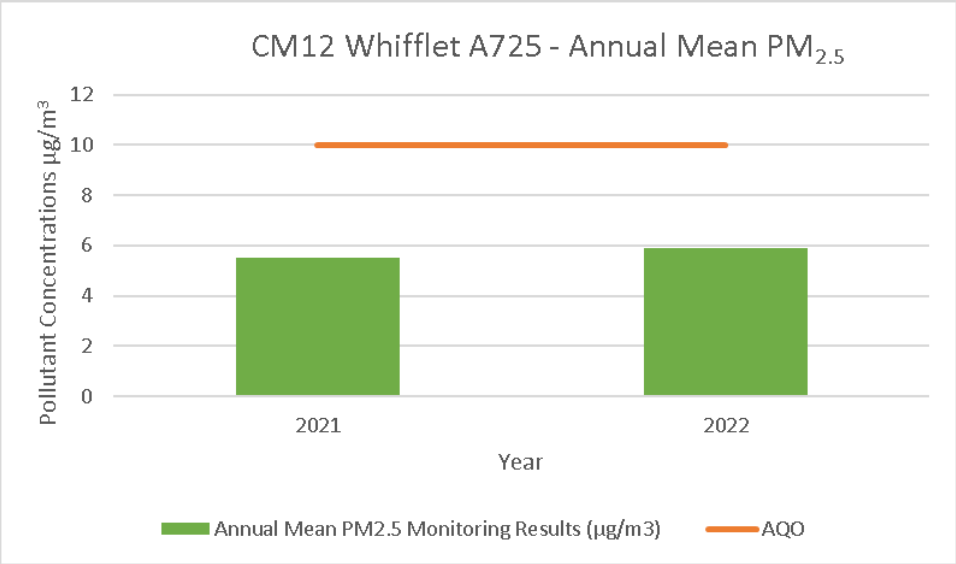


Figure A13: Annual Mean Concentrations of $PM_{2.5}$ at CM12 Whifflet A725

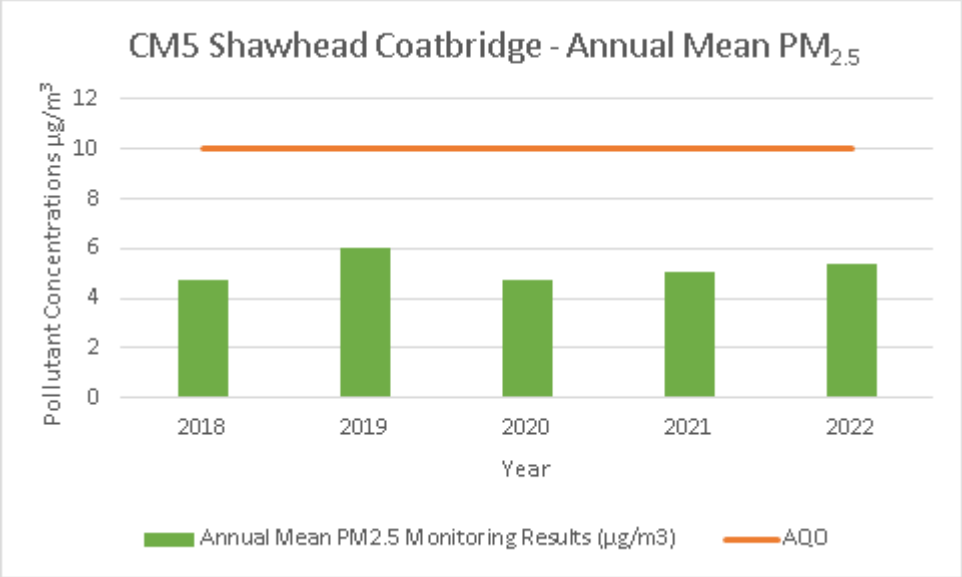


Figure A14: Annual Mean Concentrations of $PM_{2.5}$ at CM5 Shawhead Coatbridge

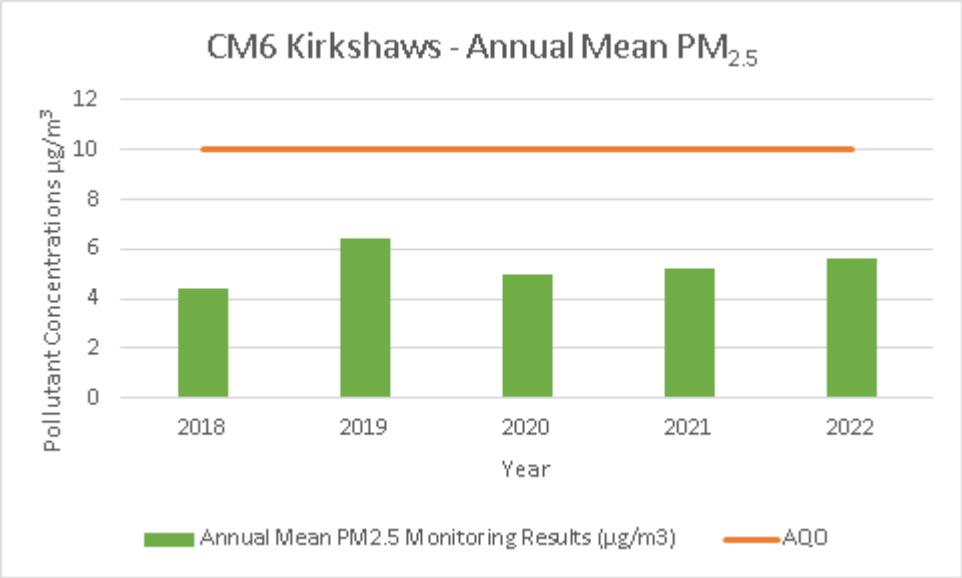


Figure A15: Annual Mean Concentrations of $PM_{2.5}$ at CM6 Kirkshaws Coatbridge

Appendix B: Full Monthly Diffusion Tube Results for 2022

Table B.1 – NO_2 2022 Monthly Diffusion Tube Results (µg/m^3)

Site ID	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Bias Adjusted (1)
DT47-Lay by, Stand	19.1	9.6	7.1	7.4	5.1	6.3	8.4	15.4	13.7	18	35.6	17.3	13.6	11.8
DT48-bus stop, Bron Way, Cumbernauld	27.8	19.7	9.8	10.0	6.0	-	4.6	19.9	18.0	22.8	34.8	24.6	18.0	15.7
DT49-swimming pool, Kilsyth	20.7	9.5	10.0	9.6	3.2	8.0	12.5	15.5	12.0	21.4	31	23.2	14.7	12.8
DT50-1791 Cumbernauld Rd, Stepps	18.3	9.0	5.2	7.7	9.1	11.1	14.0	11.1	12.9	13.9	26.9	19.6	13.2	11.5
DT51-131 Cumbernauld Rd, Stepps	23.2	9.7	8.3	13.0	3.2	10.3	13.2	14.9	12.2	20.2	34.3	22.4	15.4	13.4
DT52-Traffic lights Eastbound A80, Moodiesburn	1.6	1.8	7.6	16.2	6.3	8.2	14.0	9.8	9.2	14.5	32.4	19.6	14.3	12.5
DT53-Traffic lights Westbound A80, Moodiesburn	1.6	9.1	10.8	5.8	3.4	7.0	10.8	9.5	7.1	12.9	28.8	14.4	11.3	9.8
DT57-Main St/Garrick View, Glenboig	13.4	16.3	5.3	9.8	9.8	6.5	7.8	7.8	9.9	9.9	23.6	11.0	10.9	9.5
DT58-Lochend Rd/Coatbridge Rd, Gartcosh	21.9	15.9	15.5	14.3	14.3	9.5	15.0	10.8	12.8	14.7	38.5	19.1	16.9	14.7
DT59-Coronation Pl, Mount Ellen	17.3	8.0	7.3	13.4	13.4	7.3	10.7	11.8	8.0	13.9	25.1	12.4	12.4	10.8
DT61-under Central Way, Eastbound, Cumbernauld	41.7	29.4	18.4	29.2	29.2	28.5	34.4	27.4	30.0	20.4	21.7	16.9	27.3	23.7

DT62-Central Way (A) Westbound, Cumbernauld	34.3	21.1	14.5	23.7	23.7	17.3	19.5	27.7	19.0	18.3	34.8	19.4	22.8	19.8
DT63-Central Way (B) Westbound Cumbernauld	34.8	28.2	29.6	29.8	29.8	24.1	31.1	29.0	25.7	29.9	25.8	32.9	29.2	25.4
DT64-Under Central Way Westbound, Cumbernauld	24.5	16.4	21.3	27.2	27.2	13.0	17.1	13.1	13.7	23.8	40.2	21.1	21.6	18.7
DT100-Civic Centre, Motherwell	30.4	13.4	24.9	24.9	19.9	17.3	18.2	15.0	18.1	17	29.4	31.7	21.7	18.9
DT101-Shields Rd, Motherwell	18.2	-	22.8	14.5	10.9	12.0	10.6	10.7	16.4	11.8	17.7	25.5	15.6	13.5
DT104-Coursington Rd, Motherwell	9.8	4.9	5.0	6.8	6.0	4.4	5.7	10.2	4.3	3.7	6.4	14.4	6.8	5.9
DT105-Craigneuk Rd, Carfin	12.3	6.1	14.1	10.7	6.8	5.0	6.3	8.6	10.2	5.3	10.7	17.5	9.5	8.2
DT110-New Edinburgh Rd(1),Uddingston	29.0	15.8	32.2	1.7	12.5	16.1	16.8	14.9	20.6	21.1	29	34.1	21.6	18.8
DT111-New Edinburgh Rd(2), Uddingston	27.8	12.9	30.9	23.6	17.9	18.2	18.4	21.8	21.6	22.3	27.6	36.4	23.3	20.3
DT112-New Edinburgh Rd(3), Uddingston	29.3	10.6	33.6	23.9	17.0	15.0	18.9	18.8	19.5	20.1	26.6	35.7	22.4	19.5
DT113-Tinkers Lane, Motherwell	20.0	12.6	18.2	13.1	10.7	15.3	10.2	6.3	12.5	7.1	15.6	22.9	13.7	11.9
DT114-Main St, Overtown	13.9	5.8	13.6	9.2	7.3	4.8	7.8	11.4	1.5	10.8	10.1	20.7	9.7	8.5
DT115-Plantation Rd, Ravenscraig, Motherwell	11.1	8.4	11.0	8.8	2.8	5.1	4.7	8.2	7.7	6.8	10.9	16.7	8.5	7.4
DT117-Hamilton Rd, Motherwell	21.9	9.8	25.1	16.2	7.6	10.6	16.2	15.2	19.7	19.9	-	44.8	18.8	16.4
DT121-Flannigan Grove, Bellshill	16.6	6.7	19.4	12.0	4.2	6.9	13.8	7.6	16.7	15.4	19.5	28.2	13.9	12.1
DT122-Main St, Mossend	17.2	8.4	21.1	8.3	3.8	4.9	11.7	8.0	15.1	14.7	15	28.8	13.1	11.4

Site ID	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Bias Adjusted (1)
DT123-Hamilton Rd, Orbiston, Bellshill	23.7	8.9	23.3	8.2	6.8	10.6	13.0	16.6	17.7	16.5	20.5	31.7	16.5	14.3
DT124-Scotmid, Tannochside	22.4	11.6	22.9	9.5	4.5	10.8	11.8	8.9	9.6	17.5	18.8	31.1	15.0	13.0
DT125-Main St/Motherwell Rd, Bellshill	15.9	15.5	22.2	10.2	5.6	9.3	11.7	12.8	14.5	16.7	18.5	28.9	15.2	13.2
DT126-Main St nr Tesco delivery, Bellshill	20.6	10.2	21.8	7.5	5.6	9.0	10.4	8.5	18.8	13.3	18.3	24.5	14.0	12.2
DT129-Newmains Police Station	24.5	11.6	30.0	17.6	9.2	14.6	14.5	23.4	20.1	22.2	28.2	31.4	20.6	17.9
DT130-Main St, Wishaw (bottom)	12.4	5.6	16.1	7.8	8.6	6.2	7.7	11.5	12.6	11.1	12.5	23.6	11.3	9.8
DT131-Brandon Pl, Bellshill	20.3	8.5	18.8	9.3	7.3	12.1	11.1	11.3	16.7	10.1	15.9	23.8	13.8	12.0
DT132-Airdrie Rd, Caldercruix	16.0	9.9	8.9	8.9	11.0	4.9	8.2	9.4	-	-	19.5	11.9	10.9	9.4
DT133-Bank St(1), Coatbridge	27.5	21.6	32.4	10.5	8.4	12.6	2.1	10.8	20.5	23.4	27.1	37.5	19.5	17.0
DT134-Whifflet Ct(2), Coatbridge	26.0	11.5	24.0	5.6	6.5	7.7	10.7	12.4	13.5	-	20.7	25.7	14.9	13.0
DT135-Grahamshill St, Airdrie	34.2	19.0	31.2	13.4	10.4	16.9	19.0	15.9	12.7	25	20.4	22.3	20.0	17.4
DT136-Airdrie 3, Springwell Cr	18.8	8.6	16.3	6.4	3.9	6.8	8.1	6.5	17.8	11.5	12.8	32.4	12.5	10.9
DT138-Main	20.2	9.9	22.6	7.0	6.0	10.7	13.2	16.6	-	15.7	19.1	32.1	15.7	13.7

St, Chapelhall (nr shops)														
DT139-Lauchope St/Main St, Chapelhall	36.5	16.1	35.0	16.9	11.0	22.4	19.3	24.8	14.3	24.6	32.7	37.9	24.3	21.1
DT140-Dundyvan Rd,Coatbridge	19.9	19.8	25.7	10.1	7.8	6.8	11.1	13.6	9.8	15.3	23	24.7	15.6	13.6
DT143-Main St(2), Harthill (nr shops)	14.0	7.4	13.7	11.6	4.4	8.3	11.4	9.2	14.6	14.4	13	14.9	11.4	9.9
DT144-Lab 1, Constarry Rd, Croy	16.6	8.4	10.8	6.0	3.8	7.7	8.0	11.1	14.3	13.7	10.8	24.7	11.3	9.9
DT145-Lab 2-Constarry Rd, Croy	14.4	6.7	10.4	7.4	3.4	7.4	7.2	13.0	13.4	13.5	18.3	29.1	12.0	10.5
DT146-Lab 3-Constarry Rd, Croy	14.0	9.6	12.4	12.6	4.7	5.9	8.2	15.4	18.1	12.7	16.6	24.1	12.9	11.2
DT147Bank St, Coatbridge (nearest house)	34.4	19.9	13.4	15.3	8.9	9.4	14.3	16.6	19.5	14.7	21.6	32.4	18.4	16.0
DT148-Main St, Chapelhall R32	72.1	12.4	13.9	13.9	6.2	12.2	12.9	20.2	21.1	19.2	25.1	34.1	21.9	19.1
DT149-Main St, Chapelhall R33	29.8	12.7	15.4	9.8	7.5	17.2	16.7	19.7	12.6	23	29.3	32.1	18.8	16.4
DT150-Eastfield Rd, Cumbernauld	14.3	7.2	10.0	8.0	3.8	-	9.3	10.8	15.8	15.4	21.1	22.7	12.6	10.9
DT151-Main St, Holytown	19.0	11.5	10.6	14.4	5.7	9.0	10.2	15.1	23.2	12.9	26.7	23.5	15.2	13.2
DT152-Coatbridge Rd, Townhead	27.6	13.2	11.4	9.8	9.1	14.9	12.6	15.1	8.2	17.6	26.6	30.7	16.4	14.3

(shops)														
DT153-72 Townhead Rd, Coatbridge	14.6	11.4	11.1	17.3	11.6	10.6	10.6	-	13.4	18.5	21.7	29.2	15.5	13.4
DT154-Sunnyside Rd,Coatbridge	18.1	18.8	30.0	20.5	9.0	17.9	12.4	-	19.5	21.2	24.4	35.3	20.6	18.0
DT156-Stirling Rd, Airdrie	22.2	16.4	17.9	13.7	8.8	19.6	10.4	13.7	21.1	22.1	20.5	34.1	18.4	16.0
DT157-Station Rd, Muirhead	25.7	13.1	15.2	8.7	4.8	4.7	11.2	10.9	16.2	11.2	21	32.7	14.6	12.7
DT158a-Croftmoraig Cres, Moodiesburn	6.8	6.8	15.6	7.8	10.6	2.6	11.1	12.5	6.1	16.5	32.3	15.5	12.0	10.5
DT158b-Deedes St, Airdrie	19.5	14.0	15.4	24.7	12.1	19.5	23.5	28.8	27.9	20.7	29.1	35.0	22.5	19.6
DT159-Glenview Cres, Moodiesburn	8.5	8.5	15.9	6.4	7.8	2.0	6.4	12.0	8.0	16.5	30.1	14.3	12.9	11.2
DT160-The Cuillins, Moodiesburn	6.6	6.6	12.2	8.3	7.1	3.3	6.0	14.2	9.6	15.1	32.7	15.1	11.4	9.9
DT161-Bridgend Cr, Moodiesburn	8.5	8.5	12.7	5.3	7.4	1.7	4.3	11.5	8.8	15.8	26.4	11.2	11.5	10.0

Site ID	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Bias Adjusted (1)
DT162-Auchengeoch Rd, Moodiesburn	10.1	10.1	16.2	8.6	14.8	2.6	3.8	8.4	10.5	12.4	29.7	9.7	11.4	9.9
DT163-Inchwood Rd, Westfield,	10.5	10.5	21.2	11.2	14.3	3.7	6.4	-	8.3	18	31.6	18.6	14.0	12.2

Cumbernauld														
DT164-12 Leckethill Ct, Westfield, Cumbernauld	10.8	10.8	14.4	9.5	10.8	4.2	4.9	-	7.5	20	19.4	14.7	11.5	10.0
DT165-Kildonan St, Coatbridge	17.5	15.5	13.2	16.9	16.9	12.5	15.9	15.6	16.5	15.3	12.8	30.5	16.6	14.4
DT166-22 Cumbernauld Rd, Chryston	12.7	12.7	24.4	15.2	13.9	8.0	15.6	14.7	11.6	21.1	34.2	16.7	16.7	14.6
NewDT54-Columba Ct/Old Edin Rd,Viewpark	14.6	14.6	19.1	7.1	18.5	8.0	13.7	12.4	10.2	13.3	30.5	19.0	15.1	13.1
NewDT55-Old Edinburgh Rd,Viewpark	18.0	18.0	23.1	12.8	11.8	8.6	16.8	15.8	17.3	18.8	25.8	20.7	17.3	15.0
NewDT56-Bargeddie	16.4	16.4	18.1	6.1	7.9	10.5	12.7	12.2	10.9	16.7	26.5	14.3	14.1	12.2
NewDT102-Windmillhill St(1),Motherwell	21.6	9.4	18.0	11.1	8.8	8.0	8.2	7.0	13.1	14.1	17.6	23.7	13.4	11.6
NewDT103-Windmillhill St,Motherwell	2.0	20.3	20.9	16.7	11.5	10.2	11.4	20.8	16.5	10.6	20.8	27.5	17.3	15.0
NewDT116-Airbles Rd(Electric Bar)Motherwell	13.8	6.1	15.3	15.3	3.8	6.1	9.7	8.0	14.7	5.7	11	29.0	11.5	10.0
NewDT118-Merry St/Dalziel St, Motherwell	26.6	13.9	17.7	17.7	6.9	13.9	14.8	11.4	20.3	17	17.7	25.6	17.0	14.8
NewDT119-Shawhead roundabout, Coatbridge	35.8	15.2	23.5	18.2	9.4	18.7	17.4	12.2	20.8	18.1	22.2	32.7	20.4	17.7

NewDT120-Kirkshaws Rd,Coatbridge	30.2	13.0	23.0	11.9	7.0	14.3	12.2	-	17.4	20	24.4	31.8	18.7	16.2
NewDT127-Matalan, Wishaw	25.4	8.6	22.8	7.9	5.5	15.2	17.1	13.6	18.8	18.2	23.6	20.3	16.4	14.3
NewDT128-Wishaw Cross/Stewart St	28.4	17.3	29.3	14.3	7.5	17.4	19.6	18.4	21.5	22.8	22.4	32.0	20.9	18.2
NewDT137-Main St,Village,Cumbernauld	19.9	12.8	23.5	1.7	9.3	8.7	8.3	14.5	21.7	15.8	22.7	36.0	17.5	15.2
NewDT141-Station Rd,Shotts	9.5	4.9	13.4	7.9	5.4	4.4	7.2	10.5	13.7	7.9	9	17.0	9.2	8.0
NewDT142-Stane Gdns,Shotts	15.6	10.6	15.2	14.1	5.1	9.3	11.3	9.2	12.8	11.9	11.6	17.7	12.0	10.5
NewDT157a-swing park, Castlecary	25.7	3.5	15.2	13.7	8.0	4.7	11.2	10.9	16.3	27.7	23.5	32.7	18.7	16.3

Notes:

(1) See Appendix C for details on bias adjustment

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

New or Changed Sources Identified Within North Lanarkshire During 2022

North Lanarkshire Council has not identified any significantly new or changed sources relating to air quality within the reporting year of 2022.

Additional Air Quality Works Undertaken by North Lanarkshire Council During 2022

North Lanarkshire Council has not completed any additional works within the reporting year of 2022.

QA/QC of Diffusion Tube Monitoring

The diffusion tubes were analysed by Glasgow Scientific Services (GSS) using the 50% 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 2022 were supplied and analysed by 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 NO2 analysis and the Annual Field Intercomparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO2 concentrations reported are of a high calibre.

The latest AIR-PT results are as follows:

- AIR-PT AR042 (January to February 2021) – 50%
- AIR-PT AR043 (May to June 2021) – 100%
- AIR-PT AR045 (July to August 2021) – 100%

- AIR-PT AR046 (September to October 2021) – No results
- AIR-PT AR049 (January to February 2022) – 100%
- AIR-PT AR050 (May to June 2022) – 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 AIR-PT AR042 results of 50% were investigated by the laboratory to the satisfaction of their accreditation body UKAS and no reprocessing was required.

The results of all round results from 2021 and 2022 were 100% demonstrating satisfactory performance of the laboratory.

The monitoring was largely carried out in adherence with the 2022 Diffusion Tube Monitoring Calendar.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within North Lanarkshire Council recorded data capture of 75% therefore it was not required to annualise any monitoring data.

Diffusion Tube Bias Adjustment Factors

North Lanarkshire Council have applied national bias adjustment factor of 0.87 to the 2022 monitoring data. A summary of bias adjustment factors used by North Lanarkshire Council over the past five years is presented in Table C.1.

The bias adjustment factor for the GSS laboratory and method are listed in the Spreadsheet of Bias Adjustment Factors v.03/23 (Ref.2) is 0.87. This is calculated from the average of the three co-location studies with Good Precision and is consistent with the approach used in previous APRs.

Table C.1 – Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor(1)
2022	National	03/23	0.87
2021	National	06/22	0.97
2020	National	06/21	0.89
2019	National	06/20	0..87
2018	National	03/19	0.92

(1) Adjustment Factor was derived from using the average of the diffusion tubes with Good Precision only

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 03/23

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 2023

LAQM Helpdesk Website

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

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

Step 1: Select the Laboratory that Analyses Your Tubes from the Drop-Down List

If a laboratory is not shown, we have no data for this laboratory.

Step 2: Select a Preparation Method from the Drop-Down List

If a preparation method is not shown, we have no data for this method at this laboratory.

Step 3: Select a Year from the Drop-Down List

If a year is not shown, we have no data[2]

Step 4:

Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution.

Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.

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

Analysed By[1]	Method (To undo your selection, choose (All) from the pop-up list)	Year[5] (To undo your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[6]	Bias Adjustment Factor (A) (Cm/Dm)
Glasgow Scientific Services	20% TEA in Water	2022	R	Glasgow City Council	12	30	27	11.9%	G	**0.89**
Glasgow Scientific Services	20% TEA in Water	2022	R	Glasgow City Council	11	14	19	-24.3%	P	**1.32**
Glasgow Scientific Services	20% TEA in Water	2022	KS	Glasgow City Council	12	41	39	6.6%	G	**0.94**
Glasgow Scientific Services	20% TEA in Water	2022	R	Glasgow City Council	12	16	21	-25.1%	P	**1.33**
Glasgow Scientific Services	20% TEA in Water	2022	UB	Glasgow City Council	12	14	17	-15.8%	P	**1.19**
Glasgow Scientific Services	20% TEA in water	2022	KS	Marylebone Road Intercomparison	12	55	42	28.6%	G	**0.78**
Glasgow Scientific Services	20% TEA in water	2022		**Overall Factor[3] (6 studies)**				**Use**		**1.05**

Figure C.1 – Glasgow Scientific Services - National Average Bias Adjustment Factor Spreadsheet v.03/23

Notes : A local bias adjustment factor of 0.87 has been used to bias adjust the 2022 diffusion tube results. This has been calculated by averaging the bias adjustment factors from three co-location studies with good precision (Average of 0.89, 0.94. 0.78 = 0.87)

NO_2 Fall-off with Distance from the Road

No diffusion tube NO_2 monitoring locations within North Lanarkshire required distance correction during 2022.

QA/QC of Automatic Monitoring

Automatic monitoring of NO_x, PM10 and PM2.5 is completed within North Lanarkshire Council using Chemiluminescence and FIDAS (PM_{10} and $PM_{2.5}$) analysers. All data is available in real-time and, following data dissemination, is ratified by Ricardo Energy and Environment to AURN standards.

The data from the automatic monitoring stations is checked by the Local Site Operator (in-house member of staff).

Live and historic data are available from https://www.scottishairquality.scot

Details of the calibration, servicing etc arrangements for the automatic air stations in North Lanarkshire are as follows.

- Automatic analysers are set up to calibrate themselves every 72 hours.
- All automatic analysers are audited by Ricardo every six months.
- Analysers are serviced by the maintenance contractor for the equipment every six months. Maintenance contracts are in place for the analysers to ensure this. The maintenance contract also covers attending faults as necessary.
- The NLC in-house LSO maintains the air station network in terms of any required filter changes, gas ordering, initial fault-funding and reporting of faults as necessary. They also carry out visual checks on the monitors and ancillary equipment enclosures etc.

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 Report.

Automatic Monitoring Annualisation.

A 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 NO2 results from automatic monitoring site CM11 located at Adele Street, Motherwell as it had a data capture of 44%.

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 CM11, with at least 85% data capture, were selected for the annualisation process.

The annualisation ration 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 CM11 recorded data to obtain a ratio between the AM and PM for each site. The average of these AM/PM ratios is the annualisation ratio applied to the CM11 results.

Similarly, annualisation was required for PM_{10} concentrations from automatic monitoring site CM10 Kenilworth Drive, Airdrie as it had a data capture of 65%. Following the same process as outlined above, the annualised annual mean is shown in Table C.3.

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

Site ID	Annualisation Factor Glasgow Anderston	Annualisation Factor Glasgow Townhead	Annualisation Factor Bush Estate	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
CM11	0.83	0.83	0.87	0.83	13	10.8	

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

Site ID	Annualisation Factor Glasgow Anderston	Annualisation Factor Glasgow Townhead	Annualisation Factor Waulkmillglen Reservoir	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
CM10	1.13	0.98	0.77	0.96	10.5	10.1	

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	Air quality 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
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 2018-2021

North Lanarkshire Council Air Quality Action Plan 2023-2028

North Lanarkshire Council Annual Progress Report 2022