Annual Progress Report (APR)

2020 Air Quality Annual Progress Report (APR) for
North Lanarkshire Council

In fulfilment of Part IV of the
Environment Act 1995

Local Air Quality Management

September 2020

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Executive Summary: Air Quality in Our Area

Air Quality in North Lanarkshire

Scotland's fourth largest (by population) local authority, North Lanarkshire Council is situated in the Central Belt of Scotland. Although traditionally an area associated with heavy industry, this has seen a drastic decline over the past few decades and the local economy in North Lanarkshire now mainly comprises commerce and light industry. By virtue of its geographical location many of Scotland's trunk roads pass through North Lanarkshire, including the M8/A8, M74, M73 and M80/A80. There is substantial cross-boundary travel with neighbouring local authorities, in particular 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 automatic monitoring for Nitrogen Dioxide (NO_2) and fine Particulate Matter (PM_{10} and $PM_{2.5}$), as well as a large network of passive monitoring of NO_2. Our monitoring network is reviewed regularly to ensure it is located in the most appropriate areas. We have recently set up a new automatic monitoring site at Adele Street, Motherwell, and in 2020 we will be setting up a new automatic monitoring sites at Ravenscraig and relocating our Whifflet automatic monitor to a site more representative of exposure. These changes will serve to boost our air quality monitoring in these areas. In 2020 we also aim to purchase a new Particulate Monitor to upgrade one of our existing sites, and also a low cost particulate monitor for short-term air pollution monitoring in North Lanarkshire. Both will be funded through the Scottish Government air quality monitoring grant.

In terms of monitoring results for 2019 all automatic monitoring of NO_2 was below the annual mean and short-term objectives, however all sites experienced low data capture as a consequence of the trial and subsequent installation of new data management and communications software which wasn't fully operational until September 2019. All passive diffusion tubes measured NO_2 below the annual statutory objective with the exception of one site in Cumbernauld Town Centre, however this site is not in an area of concern in terms of relevant exposure. One

other site at Civic Centre, Motherwell measured close to the annual mean objective in 2019. This site is close to the new automatic monitoring site at Adele Street, Motherwell, and so results from both will be closely scrutinised in 2020.

Measured PM_{10} at the automatic monitoring stations have all shown compliance with the annual mean and hourly statutory objectives in 2019 with the exception of one site, at Kirkshaws, Coatbridge. Monitored concentrations at this site have risen substantially over the past year, and on investigation it appears this could be due to temporary facilities and vehicles in the area to support the renovation of adjacent flats. Again this site will receive close scrutiny in 2020.

In terms of $PM_{2.5}$, North Lanarkshire Council now have six sites monitoring $PM_{2.5}$ and all monitored concentrations were below the statutory objective in 2019.

In 2020, following Committee approval the Council will finalise the revocation of the Croy AQMA. This follows sustained compliance with the national air quality objectives, and agreement with the Scottish Government and SEPA.

As is the case every year we will also undertake scrutiny of the air monitoring results on a monthly and annual basis and any issues arising will receive appropriate action. As is now required as part of the Annual Progress Report the Council has undertaken a National Low Emission Framework (NLEF) Stage 1 Screening Appraisal which concluded that the current action plan measures are sufficient and that a LEZ in North Lanarkshire is not appropriate at this time.

Actions to Improve Air Quality

2019 saw a number of successful initiatives and actions undertaken aimed at improving air quality in North Lanarkshire, in line with the pledges within the Council's Air Quality Action Plan. These included running a widespread awareness-raising media campaign with the slogan "Choose Clean Air" involving google advertising, digital bus shelter adverts and the purchase of Choose Clean Air promotional materials for use in school and community events. Part of this also involved rebranding our two mobile labs with Choose Clean Air artwork and vinyl wraps with the same message for a number of the Council's refuse collection vehicles.

Further awareness-raising took place with Clean Air Day when we arranged a day of learning on air quality for approximately 120 first year pupils at Coatbridge High

School. This included air quality lessons, experiments and demonstrations of equipment including the Vehicle Emission Testing (VET) equipment and process we undertake during the VET campaigns we run. We also held a prize artwork competition to design a banner with an air quality message for outside the school. The winning design was made into a banner and displayed at the entrance to the school car park.

Road infrastructure changes including chicanes were introduced on Lauchope Street in Chapelhall, aimed at encouraging through traffic to utilise an alternative route, avoiding the Chapelhall AQMA. The effectiveness of this action will be evaluated in 2020/21 although clearly the reduced traffic as a result of the ongoing Coronavirus pandemic will also have had an impact on air quality in the area.

Much work was also done in 2019 on improving and encouraging sustainable active travel choices. The Motherwell Station to Raith Interchange Active Travel Route was completed with a significant contribution from the Air Quality Action Plan grant. This work involved footpaths upgrade and signage and tied in well with our ongoing Walking and Cycling in Strathclyde Park project being undertaken in conjunction with South Lanarkshire Council. This project saw the Walking/Cycling map and corresponding APP launched in June 2019 and widely distributed to schools, community facilities etc. in areas surrounding the park in both North and South Lanarkshire, where it was enthusiastically received.

As well as the continuation of the Council's Eco Stars environmental fleet recognition scheme the Council, in conjunction with South Lanarkshire Council and our Eco Stars provider, held a workshop for bus operators. The aim of this was to engage with bus operators to encourage the uptake of the bus retrofitting grants available to operators for fleet improvement and to encourage further uptake of bus operators to our Eco Stars scheme.

Local Priorities and Challenges

Over 2020/21 North Lanarkshire Council will continue to monitor air quality using our extensive network of automatic and passive air monitors. We will upgrade one of our automatic air monitoring stations with a new Particulate Monitor, and we will also purchase a low cost sensor for short-term air monitoring. A new automatic monitoring

site will be set up in Ravenscraig and the Whifflet automatic site will be relocated to a site more representative of receptor exposure.

We will finalise the revocation of the Croy AQMA, subject to committee approval, but will continue to monitor in the area for a further year.

Protective Services will continue to have input to major planning and infrastructure projects including the City Deal Pan Lan roads project.

In terms of the Council's Air Quality Action Plan, the following projects will be undertaken in 2020/21:-

- We will work with the Council's fleet and transport section to facilitate the purchase and installation of one rapid charger and two standard chargers which will assist in the Council's ambition to move its fleet to be carbon neutral by 2030.
- The Walking and Cycling in Strathclyde Park map and APP will be further developed to include a Treasure hunt style game involving a series of questions which can only be answered by going on some of the routes. It is hoped to re-launch the APP in early 2021, possibly at the school Spring half-term break.
- The Council's Air Quality Planning Guidance for developers will be updated in 2020 to reflect the most up to date guidance. This will be undertaken in conjunction with our colleagues in Planning and Development Control.
- Scottish Government air quality funding will also enable the Council to purchase some electric bikes for use in North Lanarkshire.
- The North Lanarkshire Eco Stars scheme will continue in 2020/21 funded by the Scottish Government. The aim will be to further increase our membership and number of vehicles included in the scheme.

At the time of writing we are currently in the midst of the ongoing Coronavirus pandemic which may affect our ability to undertake some of the proposed work.

As has been reported in recent years, staffing and finance do continue to be a challenge for North Lanarkshire Council, particularly when running such an extensive

air monitoring network. We will continue to strive to carry out our LAQM responsibilities effectively and efficiently during 2020/21.

How to Get Involved

Further information on air quality in North Lanarkshire can be found on the Council's website at www.northlanarkshire.gov.uk/index.aspx?articleid=2130 or by contacting KildonanPS@northlan.gov.uk

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1. Local Air Quality Management

This report provides an overview of air quality in North Lanarkshire during 2019. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Progress Report (APR) is 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		Date to be achieved by
	Concentration	Measured as	
Nitrogen dioxide (NO_2)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	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
	18 µg/m^3	Annual mean	31.12.2010
Particulate Matter ($PM_{2.5}$)	10 µg/m^3	Annual mean	31.12.2020
Sulphur dioxide (SO_2)	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	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

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Lead	0.25 µg/m^3	Annual Mean	31.12.2008

2. Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority must prepare an Air Quality Action Plan (AQAP) within 12 months, setting out measures it intends to put in place in pursuit of the objectives.

A summary of AQMAs declared by North Lanarkshire Council can be found in Table 2.1. Further information related to declared or revoked AQMAs, including maps of AQMA boundaries are available online at www.northlanarkshire.gov.uk/index.aspx?articleid=8183 and at https://uk-air.defra.gov.uk/aqma/list

We are currently in the process of revoking the Croy AQMA (see monitoring section).

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Pollutants and Air Quality Objectives	City / Town	Description	Action Plan
AQMA Croy	PM_{10} annual mean	Croy	An area encompassing a quarry and surrounding area	www.northlanarkshire.gov.uk/index.aspx?articleid=8183
AQMA Chapelhall	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	www.northlanarkshire.gov.uk/index.aspx?articleid=8183
AQMA Coatbridge	PM_{10} annual mean	Coatbridge	Whifflet Street stretching to the Shawhead roundabout. The AQMA was further extended in 2015 to include Kirkshaws Rd	www.northlanarkshire.gov.uk/index.aspx?articleid=8183
AQMA Motherwell	PM_{10} annual mean	Motherwell	An area encompassing part of Motherwell Town Centre	www.northlanarkshire.gov.uk/index.aspx?articleid=8183

2.2 Cleaner Air for Scotland

Cleaner Air for Scotland – The Road to a Healthier Future (CAFS) is a national cross-government strategy that sets out how the Scottish Government and its partner organisations propose to reduce air pollution further to protect human health and fulfil Scotland's legal responsibilities as soon as possible. A series of actions across a range of policy areas are outlined, a summary of which is available at https://www.gov.scot/Publications/2015/11/5671/17. Progress by North Lanarkshire Council against relevant actions within this strategy is demonstrated below.

2.2.1 Transport – Avoiding travel – T1

All local authorities should ensure that they have a corporate travel plan (perhaps within a carbon management plan) which is consistent with any local air quality action plan. North Lanarkshire Council commissioned a Workplace Travel Survey a few years ago, which involved looking at travel to and from work, as well as travel during work. Progression of this survey to create a Workplace Travel Plan is one of the Council's Action Plan measures however as yet this has not been achieved, due to a lack of staff resources to take this forward in light of competing work pressures. It is hoped that this will be progressed over the next few years although the survey may require to be repeated to take account of the increased levels of home working across the Council as a consequence of the ongoing Coronavirus pandemic.

2.2.2 Climate Change – Effective co-ordination of climate change and air quality policies to deliver co-benefits – CC2

Scottish Government expects any Scottish local authority which has or is currently developing a Sustainable Energy Action Plan to ensure that air quality considerations are covered. In June 2019, shortly after the publication of its new carbon management plan North Lanarkshire council declared a climate emergency committing itself to a zero target by 2030, which was revised in May 2020 to net zero by 2030. It is was an acknowledgement that the total emissions over the period to 2030 should be reduced through accelerating action where possible and the use of carbon budget setting being the most appropriate mechanism for this. This required a new approach to the council's own emission reductions as well as recognising the need for an area based strategy to incorporate the full intent of the Climate Change (Scotland) Act 2009 whilst setting more ambitious targets than those set within Climate Change (Emission Reduction Targets) (Scotland) Act 2019. Targeting

transport emissions is key to the delivery of this ambitious target as within the North Lanarkshire area it accounts for 35% of emissions. This work is very early in its development but is supported by current and future planned activity:

- Pool car use has expanded within the council since 2015 and has contributed to the reduction in the council's footprint. The increased implementation of the smarter working policy to allow home working, supported by the increased capacity and reliability of connections and digital technology, continues to eliminate the need to travel for meetings and other unnecessary journeys through the use of software such as 'Skype for Business'. As the digitalisation programme progresses, it will further support mobile and home working, and other activities within the council such as the Asset Rationalisation Strategy. In light of the ongoing Coronavirus pandemic the use of pool cars has been temporarily suspended due to difficulties in cleaning between users.
- As at 31 December 2019, there were 368 low emission vehicles (including hybrid) in use in North Lanarkshire. The council has entered into a strategic partnership for electric vehicle charging infrastructure with Transport Scotland, Scottish Power Energy Networks and South Lanarkshire Council. The project will see creation of a network of community charging stations at key locations, available for community use, free of charge in the first instance. Other than improving the vehicle charging provision, the council has no direct influence on consumer behaviour however the council have committed to increasing its Low Emission fleet and so are visibly supporting this agenda.
- The Efficient and Cleaner Operations (ECO) Stars Fleet Recognition Scheme which is delivered by councils aims to support organisations who are making changes to their fleet (buses, coaches and goods vehicles) in order to improve their efficiency and emissions by reducing fuel consumption. Scheme members' participation contributes to improvements in air quality, a reduction in overall emissions and to the climate change agenda. The continued promotion of this scheme facilitates the reduction of transport emissions however is reliant on private business participation.

2.2.3 Environmental Fleet Recognition Scheme

In line with CAFS, North Lanarkshire Council continues to run (via the consultancy TRL Ltd) an environmental fleet recognition scheme, known as Eco Stars. At the time of writing this report (July 2020) our scheme consists of 226 members, which equates to 7910 vehicles. In early 2020 the Council, in conjunction with South Lanarkshire Council ran an Eco Stars workshop for bus operators aimed at encouraging membership of Eco Stars and encouraging uptake of the bus retrofitting grant to improve the bus fleet. This workshop was a success with several operators taking advantage of the retrofitting grant and becoming member of Eco Stars. Scottish Government funding has been secured to deliver the Eco Stars scheme for a further year so it is anticipated that our membership will continue to grow and we intend to run another bus workshop in early 2021, subject to any restrictions as a result of the ongoing Coronavirus pandemic.

2.3 National Low Emission Framework (NLEF) Stage 1 Screening Appraisal for North Lanarkshire Council

The NLEF[1], which is now part of the review and assessment process for LAQM reporting in Scotland, contributes to the Cleaner Air for Scotland strategy by aiming to improve local air quality in areas where air quality objectives are exceeded, or likely to be exceeded, primarily due to emissions from transport.

The NLEF is directly linked to Air Quality Action Planning (AQAP) for local authorities with Air Quality Management Areas (AQMAs), and will help to identify actions to improve local air quality within AQMAs. The NLEF appraisal takes the form of a two-stage process, as summarised in Table 2.2:

[1] https://www.gov.scot/publications/national-low-emission-framework/pages/2/

Table 2.2 – NLEF Appraisal Process

Stage		Outcome	Actions Required
1	Screening	• decision on whether to proceed to stage two assessment	• screening process to identify actions that will benefit air quality within the AQMA • screening evidence should form part of the Annual Progress Report, with the decision agreed by Scottish Government and SEPA
2	Assessment	• decision to proceed with introduction of LEZ or identification of alternative transport-related measures required to improve air quality • Stage two assessment report agreed by Scottish Government and SEPA	• NMF approach to support assessment of sources of pollution and options • quantitative impact assessment (based on predicted change in pollutant concentrations) • consideration of consequential impacts (e.g. congestion, export of pollution)

The NLEF Stage 1 Screening Appraisal for North Lanarkshire Council is detailed in Table 2.3. It is the opinion of North Lanarkshire Council that proposed measures are sufficient and there is therefore no need to proceed to a Stage 2 Assessment. Justification that the current action plan measures are sufficient at this time and that a LEZ in North Lanarkshire is not appropriate at this time is detailed in Table 2.3 below.

Table 2.3 – NLEF Stage 1 Screening Appraisal

No.	NLEF Stage 1 Screening Appraisal Question	Appraisal Response
1	What is the name of the declared AQMA(s)?	Chapelhall AQMA Coatbridge AQMA Motherwell AQMA Croy AQMA (currently in process of being revoked)
2	What pollutants are the AQMA(s) declared for?	Chapelhall AQMA – PM_{10}, NO_2 Coatbridge AQMA – PM_{10} Motherwell AQMA – PM_{10}
3	What are the main sources of air pollution, or other factors, contributing to the declaration of the AQMA? *(If the main source is not transport–related no further screening is required).*	For all three AQMAs the main source of air pollution is road traffic emissions
4	Are the declared AQMA(s) (and therefore area(s) of exceedance) restricted in nature geographically to a small area for which a Low Emission Zone (LEZ) would not be appropriate or proportionate (e.g. single streets, road junctions, small town centre)?	Chapelhall AQMA – single road junction Coatbridge AQMA – two roads with two road junctions Motherwell AQMA – AQMA comprises part of town centre. Major road infrastructure changes planned in area over coming few years

No.	NLEF Stage 1 Screening Appraisal Question	Appraisal Response
5	Do the monitored concentrations within the AQMA(s) meet the air quality objective(s)? If yes, for how long has compliance been achieved? If not, what are the extent of the exceedances?	Compliance with the air quality objectives has been achieved for the past few years at all sites. With the gradual expansion of our $PM_{2.5}$ monitoring capacity we are continuing to review compliance and not undertaking any changes to AQMAs at this time (other than Croy), in line with Scottish Government guidance. Our automatic monitoring site at Kirkshaws (within the Coatbridge AQMA) saw an unanticipated exceedance of the annual mean PM_{10} objective in 2019. On investigation it was identified that a transient source (temporary construction vehicles and buildings) were the reason for this exceedance.

No.	NLEF Stage 1 Screening Appraisal Question	Appraisal Response
6	What is the current trend for pollutant concentrations within the AQMA(s) (state the trend for each pollutant declared)?	The levels of PM_{10} in the AQMAs in North Lanarkshire are currently below the statutory objective for all sites, continuing the trend of the past few years. The exception to this is the Kirkshaws AQ monitoring site, which is located within the Coatbridge AQMA. This site has doubled in the past year, to 20 µg/m^3 however we believe this is due to vehicles and generators in the immediate vicinity of the monitor which were in place to facilitate the renovation of adjacent flatted properties. All other PM_{10} monitoring stations have read below the objective. In terms of NO_2 levels within the AQMAs – the annual mean level of NO_2 within the two AQMAs declared for this pollutant (Chapelhall and Coatbridge) has been consistently below the objective for the past few years and this trend has continued in 2019. As a result of a new communications system being put in place which wasn't fully operational until late August 2019 the automatic NO_2 results for 2019 have had low data capture and so have been annualised and should therefore be treated with caution.

No.	NLEF Stage 1 Screening Appraisal Question	Appraisal Response
7	Are there any major planned developments which could impact air quality within or surrounding the AQMA(s)?	Over the coming years a major City Deal Project is due to be undertaken in North Lanarkshire. Namely the Pan Lanarkshire Orbital Transport Corridor (Pan Lan). This comprises three individual projects:- • East Airdrie Link Road (near Chapelhall AQMA) • Ravenscraig Access Infrastructure North (near Motherwell AQMA) • Ravenscraig Access Infrastructure South (near Motherwell AQMA)

No.	NLEF Stage 1 Screening Appraisal Question	Appraisal Response
8	What are the current trends for vehicle movements within the AQMA and surrounding areas?	We do not have formal trend data for vehicle movements in AQMAs in North Lanarkshire at this time. A check was undertaken, however, on the DfT website tool (https://roadtraffic.dft.gov.uk/local-authorities and it was noted that although the results aren't directly relevant for the AQMAs they do indicate a general moderate increasing trend but with inter-annual variations. In the Chapelhall and Coatbridge AQMAs the impact of the recently opened M8 upgrade is still being assessed, particularly on the surrounding local road network. In addition the impact of the introduction of the Chapelhall road works (chicanes etc,) is still being assessed. In Motherwell there is no information available on vehicle movement trends other than anecdotal observations, which would suggest no significant trends in vehicle movements. Preparatory design work is however being undertaken in Motherwell for the Pan Lan Orbital Road which comprises the Ravenscraig Access Roads both North and South. This major infrastructure project will impact on the existing town of Motherwell and its AQMA, and will be reporting on in the coming years as the project develops.
9	Provide evidence showing how the AQAP (and associated plans, programmes and strategies) will deliver significant improvements towards achieving the air quality objective(s) in as short a timescale as possible?	Air quality objectives are being met within the Council's Air Quality Management Areas (AQMAs) and consequently harder action plan measures are not currently appropriate for inclusion. Instead of this our action plan measures are softer with more qualitative outcomes aimed at improving air quality across the wider are of North Lanarkshire, as opposed to merely tackling the individual AQMAs.

2.4 Progress and Impact of Measures to address Air Quality in North Lanarkshire Council

North Lanarkshire Council has taken forward a number of measures during the current reporting year of 2019 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. More detail on these measures can be found in the air quality Action Plan relating to each AQMA. Key completed measures are:

- The Council, in conjunction with South Lanarkshire Council and our Eco Stars provider, held a workshop for bus operators in early 2020. The aim of this was to engage with bus operators in the area to encourage uptake of the bus retrofitting grants available to operators for fleet improvement and to encourage uptake of membership of our Eco Stars scheme. We also presented our 200th scheme member with their certificate at the event.
- The Motherwell Station to Raith Interchange Active Travel Route was completed with a significant contribution from the Air Quality Action Plan grant. The works involved footpaths upgrade and signage and it tied in with the ongoing Walking and Cycling in Strathclyde Park project being undertaken in conjunction with South Lanarkshire Council. Waymarkers and signposts were also installed along the Walking and Cycling routes in 2019.
- An awareness-raising campaign on air quality was also undertaken in 2019/20. Under the banner “Choose Clean Air” the Council undertook a media campaign, with digital bus shelter advertising, google advertising and the purchase of promotional material for use in schools. We rebranded our two mobile labs with Choose Clean Air artwork and designed and bought vinyl wraps with the Choose Clean Air message for a number of the Council’s refuse collection vehicles.
- Chicanes were introduced on Lauchope St, in Chapelhall (immediately adjacent to the AQMA), with through traffic encouraged to utilise an alternative route via Lancaster Avenue. The intention of this was to reduce through traffic in the village centre and potential conflict with school children and village retail/amenity users. An appraisal of the effectiveness of this infrastructure is now under way;

- Using Scottish Government grant funding we purchased 3 e-bikes for use in Strathclyde Country Park. Initially these were used by members of staff, however the longer term plan is that they will be included in the complement of bicycles available for hire by the public for use in the park.
- For Clean Air Day we arranged a day of learning on air quality for approximately 120 first year pupils at Coatbridge High School. This included air quality lessons, experiments and demonstrations of equipment. We also ran a prize competition to design a banner with an air quality message for outside the school. Demonstrations were also given to pupils and staff on the Vehicle Emission Testing (VET) equipment and process we undertake during out VET campaigns.

Progress on the following measures has been slower than expected:-

- The Council's Workplace Travel Plan has not been progressed this year. The cessation of the Safe and Sustainable Travel Team as a budgetary decision has meant that currently the lack of staff resources have meant this this has not been progressed. Also, due to the ongoing Coronavirus pandemic and the shift towards home working it is not clear if the original Workplace Travel Survey will be of use, or will need to be repeated.
- Updating planning guidance – funding was not available to undertake this work in 2019, however funding has since been secured so this work will be undertaken in 2020/21 in conjunction with our colleagues in Planning and Development Control.

North Lanarkshire Council expects the following measures to be completed over the course of the next reporting year, subject to the restrictions as a result of the ongoing Coronavirus pandemic:

- The Council is undertaking an ambitious plan to move its fleet to be carbon neutral by 2030 and this would consequently lead to improvements in air quality. A working group has been set up and air quality matters are represented on the group. Part of the initial stages of this plan involves the imminent arrival of an electric refuse collection vehicle (RCV), with North Lanarkshire being among the first Councils in Scotland to take delivery of such a vehicle. The rapid charger for this, along with two additional charging points

is being funded through the Air Quality Action Plan grant and this will be installed in 2020/21.

- 2020/21 will see further development of the Walking & Cycling in Strathclyde Park map and app joint project with NLC and SLC. The aim is to further develop the app to include a short-life competition with questions that can only be answered by going on the routes. Entries will be entered into a prize draw. It is hoped to launch and run the competition in early 2021, possibly at the school half-term break however this will be subject to the restrictions in place due to the ongoing Coronavirus pandemic.
- Due to the success of the Eco Stars bus operator workshop we ran earlier this year we are intending to run a similar event in early 2021, again in conjunction with South Lanarkshire Council to coincide with the retrofitting grant, if available. Subject to Covid19 restrictions. Feedback from this year's workshop was very positive with several bus operators taking advantage of applying for the retrofitting grant, and also signing up to the Councils Eco Stars schemes. We will also continue to run the North Lanarkshire Eco Stars scheme.
- The revocation of the Croy AQMA will be completed in 2020/21. Confirmation of this will be included in the 2021 Annual Progress Report.
- It is planned to purchase more e-bikes for use within the North Lanarkshire area. The exact details are yet to be finalised however it is hoped that this will build on the e-bikes purchased in 2019 and be a further demonstration of the Council's commitment to sustainable travel options.
- A new automatic monitoring stations will be created in 2020 in Ravenscraig, and the existing automatic monitoring site at Whifflet will be relocated to a site more representative of receptor exposure. Both sites will monitor for PM_{10}, $PM_{2.5}$ and NO_2 and will provide an accurate picture of receptor exposure to these pollutants in these areas. As is the case every year a full review will be undertaken of the NO_2 diffusion tubes and the automatic monitoring sites in order to ensure that air quality monitoring is carried out in the most relevant areas for receptor exposure.

Table 2.4 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
1	NLC Vehicle Fleet and Work Journeys • The Council will strive to reduce car journeys for work purposes eg. By teleconferencing. For instances where work travel is necessary the Council's car fleet will be utilised with electricity/hybrid vehicles provided where possible. • Further consideration will be given to reducing the number of private vehicles used for Council business, introducing bus/sustainable transport where possible.	Promoting Travel Alternatives	Workplace Travel Planning	NLC All Depts	2018	2019-2021	NA	Anticipated Reduction in car travel and thus AQ improvements in AQMA	Ongoing	Ongoing	Current pool car fleet consists of 184 cars-breakdown as follows:- 21 electric 5 hybrid 134 petrol 24 diesel A further 20 electric vehicles are being procured through govt grant funding-10 Nissan e-NV200 combi style 7-seater and 10 Nissan e-NV200 80kW Acenta van 40 kWh. We are continuing to promote the cycle to work scheme and pre-Covid car sharing was in place.

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
2	Vehicle Fleet Efficiency • Tracking devices will continue to be fitted to NLC fleet vehicles in order to provide info on managing idling/speeding and unnecessary journeys • Driver Certificate of Professional Competence training will be provided for all Council drivers, including modules on safe and efficient driving • The Council will introduce scheduling of Council vehicles eg. By coordinating school bus/minibus/community transport vehicles	Vehicle Fleet Efficiency/Traffic Management	Driver training and Eco driving aids	NLC Fleet and Transport	2018	2018-2021	NA	Anticipated reductions in NLC vehicle fleet contributions to poor AQ	Ongoing	Ongoing	We currently have 380 vehicles with tracker telematics fitted. This system provides live information on vehicle and driver performance. All drivers covered by the DCPC legislation have now achieved their DCPC training and this programme is ongoing. We are currently looking at the dataset of ASN contracts and our mixed fleet to demonstrate how to achieve optimal routing. The Consortium travel initiative included 333 additional runs moving over 2300 pupils for further education, taking mainstream pupils from school to school for specialist subjects. This was previously carried out externally.
3	Subject to Scottish Govt funding the Council will continue to operate the NLC Eco Stars fleet recognition scheme and use this to engage with certain vehicle sectors on route planning as appropriate to avoid AQMAs	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	NLC Protective Services and external consultant delivering Eco Stars	2018	2018 – 2021	NA	Targeted reduction of certain vehicle sectors in AQMAs leading to reduced emissions in AQMAs	Ongoing	Ongoing	The Eco Stars North Lanarkshire scheme is ongoing, with current membership of 226 members, equating to 7910 individual vehicles. Funding has been secured to continue the Eco Stars scheme throughout 2020/21

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
4	The Council will continue to increase the provision of electric vehicle (EV) charging points, where possible ensuring that they are accessible to both NLC staff and the general public. The Council will engage with other public sector agencies (eg NHS Lanarkshire) to encourage similar provision to ensure adequate coverage of EV charging points across NLC area	Promoting low emission transport	Promotion of EV recharging	NLC/other public bodies in the area	2018 – 2021	2018-2021	NA	Greater facilities for EV should encourage uptake, reducing vehicle emissions in AQMAs	Ongoing	Ongoing	We are currently working with Transport Scotland and Scottish Power Energy Networks (SPEN) to deliver a number of charging hubs across North and South Lanarkshire. The programme for delivery is end of March 2021. We are currently finalising legal agreements and SPEN hope to commence physical works in July, with the first site being at Strathclyde Park. In addition to th.is NLC are currently working towards decarbonisation of our fleet to achieve the commitments outlined in the Programme for Government and to replace fleet with ULEVs by 2025
5	The Council will abide by their statutory duty of sustainable procurement and include vehicle standards in the sustainable section of the sourcing methodology documentation, which will consequently feed through into the specification/award criteria where appropriate	Promoting low emission transport	Public vehicle procurement- prioritising uptake of low emission transport	NLC procurement	2018-19	2018-21	NA	NA	In place	Ongoing	We are currently procuring an electric 26t 100% electric compaction refuse collection vehicle. (A conventional combustion engine RCV vehicle working 7 days per week produces an average of 70 tonnes of CO2 per week, as well as significantly contributing to local air pollution).

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
6	Increasing levels of sustainable travel • The Council will work with agencies such as SPT and Sustrans (among others) to develop and implement measures which will encourage Modal Shift to public transport and active travel • A programme of awareness-raising and promotion initiatives will be progressed around walking and cycling in North Lanarkshire. This will incorporate information on routes to key destinations in the NLC area	Promoting travel alternatives	Intensive active travel campaign and infrastructure	NLC protective Services, Roads, City Deal, external orgns on behalf of NLC	2018/19	2018-21	NA	Unknown	Ongoing Ongoing Ongoing, as required Ongoing	Ongoing 2021 Ongoing Ends Autumn 2020. May re-start in 2021	2019/20 has seen the completion of the Wishaw Station Park and Ride extension work. This has increased the number of spaces by 73 to a total of 147, with disabled spaces increasing from 5 to 19 spaces. Also commissioned the Active Travel Strategy for North Lanarkshire taking in the findings of the sustainable transport studies carried out in 2019. This will be completed in 2021. Awareness-raising – NLC Education are continuing some of the work of the now defunct Safe & Sustainable Travel Team in terms of promoting cycling and walking for essential school journeys. The Council has been running a Cycle-to-Work scheme which enables staff to purchase a bike at a reduced cost through direct payments from their wages. The ongoing Covid19 pandemic may have an impact on the Council's ability to carry out certain projects.

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
7	The Council will engage with SPT and other relevant local authorities to develop common engine standards for all tendered school bus contracts	Promoting sustainable travel	Public vehicle procurement- promoting uptake of low emission vehicles	NLC, SLC, other neighbouring authorities	2018	2018-2021	NA	Improved emissions from buses in AQMAs should improve AQ in AQMA	See comment	Ongoing	NLC had a meeting with SPT to begin a dialogue about this and other projects, in early 2020 however the matter was not subsequently progressed due to the Covid pandemic.
8	The Council will continue to progress their Workplace Travel Plan especially in view of other relevant NLC policies, such as property rationalisation, home working policy etc.	Promoting sustainable travel	Workplace Travel Planning	NLC All services	2018-2021	2019	NA	Unknown	Staff travel survey carried out in 2018	Ongoing	No further progress has been made with the Council's Workplace Travel Plan in 2019/20. The ongoing Covid 19 pandemic, combined with the Council's office rationalisation will mean that the Workplace Travel Survey will need to be repeated to get an up to date picture of staff travel habits. Thereafter a WTP will be drawn up. Timescales for this are unclear at present due to the Covid19 pandemic.
9	The Council will continue to run and publicise Vehicle Emission Testing and Vehicle Idling Enforcement campaigns in areas of known and suspected persistent idling	Traffic management	Anti-idling enforcement/testing vehicle emissions	NLC Protective Services	2018-19		NA		Initiative already in place	Ongoing	Vehicle Emission Testing and Vehicle Idling campaigns have continued to run in 2019/20
10	The Council will introduce car parking on-street enforcement in town centres in North Lanarkshire in order to reduce inappropriate parking in town centres and other areas	Traffic management	Parking enforcement	NLC protective Services/ NLC Roads	2018	2020	NA	Unknown, but aim is to be a deterrent to driving in town centres	Already in place	Ongoing	The Council employed parking enforcement officers in 2018. These officers continue to work in the town centre areas of North Lanarkshire.

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
11	The Council will investigate options for improving bus service provision in North Lanarkshire • Encourage partnership with SPT and bus operators to ensure major new/existing developments are fully connected from the outset • Investigate/implement better bus infrastructure, particularly bus priority measures to encourage greater uptake of bus travel and reduce emissions from buses, helping congestion • Work with bus operators (eg via Eco Stars) to improve emission standards for buses operating in North Lanarkshire and particularly within AQMAs	Transport planning and infrastructure Traffic management Vehicle fleet efficiency	Bus route improvement Bus priority Promoting low emission transport	NLC SPT	2018-19	2019-21	NA	Anticipated reduction in emissions	Delayed due to Covid19 Completed in 2020, further workshop planned for 2021	2021	Improvements to bus infrastructure – bus shelter maintenance agreement with SPT now in place. The A89 bus partnership work has been delayed due to the ongoing Covid situation. North Lanarkshire Council is taking part in Transport Scotland's Transport Transition Planning within the SPT region to look at the process of coming out of transport restrictions. Protective Services along with SLC held bus operator workshop along with Eco Stars to encourage uptake of Eco Stars in bus operators and also to publicise the retrofitting grants available to bus operators for improvements to their fleet.
12	Fully support and input to where possible the planned Strategic Travel Hub for Motherwell, ensuring project objectives include air quality indicators. Part of this will include taking forward the findings of the Motherwell Cycle Hire Feasibility Study recently undertaken for the town	Transport planning and infrastructure	Public transport improvement interchanges, stations and services. Also public cycle hire schemes	NLC City Deal	2018-21	2019-2021	NA	Anticipated reduction in emissions through greater modal shift and sustainable travel in Motherwell AQMA	Ongoing		The Cycle hub scheme is currently on hold while a timeframe and specification for how the hub will be managed is developed.

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
13	The Council will investigate all potential options for the improvement of traffic flow, and therefore air quality through the Chapelhall AQMA	Transport planning and infrastructure	Traffic management	NLC Roads	2019	2020	NA	Anticipated reduction in emissions in Chapelhall AQMA as a result of works	In place, now under evaluation	2019	In 2019 chicanes were introduced on Lauchope Street, with through traffic encouraged to utilise an alternative route via Lancaster Avenue. The intention of this was to reduce through traffic in the village centre. Effectiveness of the new arrangements will be evaluated in 2020/21.
14	The Council will ensure that air quality issues are duly considered for proposed major infrastructure projects which have the potential to impact on the Council's AQMAs	Policy Guidance and Development Control	Air quality planning and policy guidance	NLC planning	2018	2019-21	NA	Unknown	In place	Ongoing	Protective Services are ensuring representation of air quality issues, known or potential, on major infrastructure projects the Council are involved in, including the City Deal projects. Further detail on these is included in section 4.1 of this report.
15	The Council will ensure that all policies in relation to the public Sector Climate Change responsibilities will take due cognisance of air quality implications as appropriate, particularly where there is potential for adverse air quality impacts	Policy guidance and development control	Other policy	NLC planning	2018	2018-19	NA	Unknown	Ongoing	Ongoing	See update in section 2.2.2 of this report
16	The Council will continue to ensure that air quality is appropriately considered in all relevant planning applications and ensure that planning decisions and policy at both strategic and local level will take due cognisance of the Cleaner Air for Scotland (CAFS) Strategy and the Council's Air Quality Action Plan	Policy guidance and development control	Air quality planning and policy guidance	NLC Planning	2018	2019	NA	NA	Ongoing		This is an ongoing policy of the Council.

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
17	The Council will endeavour to ensure the highest quality of air monitoring data is produced in order to provide robust evidence for air quality decision-making. Specifically:-	Public information	Awareness-raising	NLC Protective Services	2018	2019-21	NA	NA	Ongoing		
	• A review, including a GIS-mapping exercise will be undertaken of all NLC operated air quality monitoring sites (automatic and non-automatic) to ensure that monitoring is being carried out at the most appropriate locations in terms of receptor and sources of air pollution									Ongoing	GIS layers of AQMAs have been prepared.
	• The automatic air monitoring unit at Motherwell Civic Centre will be relocated to a more representative location which will enable a comparison of air quality before and after the planned road infrastructure changes and other major developments in the area									Completed 2020	The air monitoring unit at Civic Centre has now been relocated to a more representative site close by at Adele Street, Motherwell
	• In line with new statutory requirements the Council will set up a monitoring network for PM2.5									Ongoing	With the purchase of a further FIDAS particulate monitor in 2019 the network of PM2.5 analysers in North Lanarkshire continues to grow.
	• An updated dispersion modelling exercise will be undertaken of the A73, Monklands and Motherwell areas in order to obtain an accurate picture of air quality levels in North Lanarkshire										

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
18	The Council will ensure that air quality is included within the Council's input to the NHS Lanarkshire Joint Health Protection Plan and carry out work with local health boards to improve awareness of air pollution as a public health issue	Public information	Other	NLC Protective Services NHS Lanarkshire	2018-21	2018-21	NA	NA			Input is provided by NLC to Lanarkshire Health Board as requested when they are updating the plan.
19	The Council commits to working with neighbouring authorities where appropriate on air quality projects to ensure consistency of approach as well as raising awareness of air quality issues among a wider audience	Public information	Joint/partnership working	NLC Neighbouring authorities	2018-21	2018-21	NA	Unknown	Ongoing	Ongoing	2019 saw the publication and launch of the joint North and South Lanarkshire Walking and Cycling in Strathclyde Park map. Joint Bus Operator Workshop held by NLC, SLC and TRL, our Eco Stars provider
20	The Council pledges to carry out awareness-raising of air quality issues with communities and schools. Part of this will involve taking part in National Clean Air Day as well as other relevant air quality initiatives and events	Public information	Awareness raising	NLC protective Services	2018-21	2018-21	NA	Unknown		Ongoing	Large-scale Clean Air Day event held in June 2019 with entire first year group at Coatbridge HS. Involved half-day of lessons on air quality with practical experiments, demonstrations of equipment etc. plus an AQ banner competition.

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
21	Planning Policy • The Council pledges to develop planning policy to reflect the increasing demand/requirement for Electric Vehicle charging points in new public and private development • Planning guidance for developers will be updated to reflect current best practice guidance including guidance on domestic wood burning, commercial heating and biomass.	Policy guidance and development control	Low emissions strategy/air quality planning and policy guidance	NLC planning and Protective Services	2018	2020	NA	NA	In place	Ongoing	Funding has been secured in 2020/21 to update the AQ planning guidance for developers.
22	The Council will undertake a feasibility study into strategic planting of “green wall” structures in relevant areas of North Lanarkshire	NA	NA	NLC/External agency	2018-21	2020-21	NA	Unknown at this time	No progress to date	2021	No comments at this time

3. Air Quality Monitoring Data and Comparison with Air Quality Objectives

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

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

North Lanarkshire Council undertook automatic (continuous) monitoring at 10 sites during 2019. Table A.1 in Appendix A shows the details of the sites. National monitoring results are available at http://www.scottishairquality.scot/

Maps showing the location of the monitoring sites are provided on the www.scottishairquality.scot website. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

3.1.2 Non-Automatic Monitoring Sites

North Lanarkshire Council undertook non- automatic (passive) monitoring of NO_2 at 84 sites during 2019. Table A.2 in Appendix A shows the details of the sites.

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

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)

Table A.3 in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past 5 years with the air quality objective of 40µg/m^3.

The annual mean NO_2 concentrations measured at continuous automatic monitoring sites in 2019 were all significantly below the air quality objective of 40µg/m^3. On comparison with historical monitoring data, cites CM1 and CM5 have recorded a decrease in NO_2 levels from 2018, the lowest recorded levels at these sites within the last five years.

Four new automatic monitoring locations for NO_2 were introduced in 2019. One of these new sites, CM7 (Uddingston, New Edinburgh Road) reported the highest NO_2 annual mean concentration out of all the automatic monitoring sites (24µg/m^3). The automatic NO_2 results have been annualised due to low valid data capture (below 40%). This was due to the trial then subsequent installation of a new data communications system that was purchased for viewing and analysing the monitoring results (Ecoweb). This system was not fully operational until the end of August 2019.

Measured NO_2 concentrations at passive diffusion tube sites in 2019 show, in general, a downward trend compared to the 2018 results. An exceedance of the annual mean objective of 40µg/m^3 of NO_2 was recorded at only one monitoring site – DT61 (Under Bridge, Central Way Eastbound, Cumbernauld). This site is not located in an area of relevant public exposure for the annual mean objective, and has been located to determine indicative hourly mean NO_2 concentrations relevant to the bus station at this location.

The only other locations at which monitoring indicated elevated annual mean NO_2 concentrations (within ~10% of the objective level) were at DT63 (further monitoring in Central Way, Cumbernauld) and at DT100, a roadside monitoring station at Civic Centre, Motherwell. The site at DT100 is located within the Motherwell AQMA.

Measured concentrations at all other passive diffusion tube sites were significantly below the annual mean objective level.

For diffusion tubes, the full 2019 dataset of monthly mean values is provided in Appendix B.

Table A.4 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past 5 years with the air quality objective of 200µg/m^3, not to be exceeded more than 18 times per year. No exceedances of the hourly mean objective level were measured in 2019. There were no measured annual mean concentrations in excess of 60µg/m^3 at non-automatic sites in 2019, indicating that exceedance of the 1-hour mean objective is also unlikely at these sites.

3.2.2 Particulate Matter (PM_{10})

Table A.5 in Appendix A compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past 5 years with the air quality objective of 18µg/m^3.Two new PM_{10} monitoring sites were introduced for 2019 – CM7 (Uddingston, New Edinburgh Rd) and CM10 (Kenilworth Drive, Airdrie).

The annual mean objective level was exceeded at one location – monitoring site CM6, a roadside site in Kirkshaws. This site also recorded a significant increase in the annual mean PM_{10} concentration compared to the previous year, with an increase of over 100%. The previous five years of monitored data for this site show PM_{10} levels to be significantly below the annual mean objective. On investigating the possible reasons for the increase the results for the first half of 2019 indicated a large number of spikes of PM_{10}, peaking in May 2019. The relatively high valid data capture of the site for 2019 would also indicate that the large concentration increase is not an error as a result of limited monitoring throughout the year. On further investigation it was noted that there had been a number of site huts with diesel generators and additional diesel vehicles sited in the car park where the PM analyser was situated. This additional infrastructure was in place for several months in 2019 to facilitate the renovation of an adjacent block of flats. The closest generator to the monitor was approximately 50m away and the usual prevailing wind in the area is SW to W which would divert the generator emissions away from the PM analyser however there would be occasions of little/no wind or when wind was from other directions that the generator emissions would have been picked up by the PM analyser. The flat renovation works were carried out in the first half of 2019 which would tie in with the PM spikes noted.

All other monitoring sites measuring PM_{10} recorded concentrations significantly below the 18µg/m^3 annual mean objective. Similar to those sites measuring NO_2, some of the sites measuring PM_{10} had very low data capture for 2019, and therefore the measurements must be treated with caution.

Table A.6 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past 5 years with the air quality objective of 50µg/m^3, not to be exceeded more than 7 times per year.

The objective level of 50µg/m^3 was exceeded at a number of the sites in 2019, but no site reported this concentration being exceeded more than 7 times in the year.

Automatic monitoring site CM2 (Croy, located near Croy quarry) recorded the most number of exceedances of 50µg/m^3 (three times throughout the year).

3.2.3 Particulate Matter ($PM_{2.5}$)

Table A.7 in Appendix A compares the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past 5 years with the air quality objective of 10µg/m^3.

No exceedances of the annual mean objective for $PM_{2.5}$ were recorded at any of the monitoring sites for 2019. The highest reported concentration was 6.8µg/m^3 at site CM9b (mobile lab at Civic Centre, Motherwell). This site, however, was the only one to have a very low data capture for 2019 (below 40%), therefore the result should be taken with caution. In general, the monitoring sites have recorded a slight increase in $PM_{2.5}$ levels compared to 2018, with the exception of site CM2 (Croy, located near Croy quarry) which reported a similar concentration to the 2018 result.

3.2.4 Sulphur Dioxide (SO_2)

Following a number of 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 standards noted. Monitoring was discontinued at the end of 2017. No monitoring was undertaken for Lead or 1,3-Butadiene concentrations within the Council area in 2018. No significant sources of these pollutants have been identified in the previous round of review and assessment.

4. New Local Developments

4.1 Road Traffic Sources

North Lanarkshire Council Roads and Transportation Team were consulted in relation to changes to traffic flows on roads within the area in 2019, and the following information was reported.

- Narrow congested streets with residential properties close to the kerb – there are no new roads that meet this criteria;
- Busy streets where people may spend one hour or more close to traffic – there are no new roads that meet this criteria;
- Roads with a high flow of buses and/or HGVs – there are no new roads that meet this criteria;
- Junctions – a new road junction has been created in the Craiglynn area of Cumbernauld to facilitate a new retail park that has opened. This area is not within or adjacent to an AQMA and there are no residential receptors in the immediate vicinity;
- New roads constructed or proposed – there are proposals in place to dual the A723 in the north part of Motherwell. Further detail is provided in the narrative below;
- Roads with significantly changed traffic flows – there are no new roads that meet this criteria;
- Bus or coach stations – there are no new bus or coach stations to report.

In addition to the responses above the following projects are deemed to be relevant in terms of road traffic sources.

- North Lanarkshire Council are continuing to carry out further works and monitoring at Chapelhall aimed at reducing the through flow of heavy goods vehicles. Chicanes were introduced on Lauchope Street, with through traffic encouraged to utilise an alternative route via Lancaster Avenue. The intention of this was to reduce through traffic in the village centre and potential conflict with school children and village retail/amenity users. Since their introduction there have been some issues with the chicanes with poor driver behaviour resulting in damage to the infrastructure and vehicles. The situation is being reviewed and the layout reworked in 2020/2021.

- In the 2019 the Council sought to begin the process of altering the junction of the A73 with South Biggar Road. Currently a staggered junction the proposals intended to change the junction to a straight signalled crossroads to facilitate traffic crossing the A73 from Airdrie Town Centre towards the Petersburn area. This is a bus route and buses have traditionally had difficulty getting out of the junction due to the traffic causing additional idling time. Due to the complex ground conditions on site the works are currently undergoing further design works and it is hoped to have these works implemented in 2012/22, subject to the ongoing Covid19 pandemic. This work is being supported by SPT.
- Another project that was identified for action in 2019 has been rolled forward to 2021/22. This involves a different stretch of the A73, at the junction of Brownsburn Rd/Petersburn Rd. This is also a staggered junction and traffic is having difficulty entering the A73. The Council is looking at creating wider lanes with filter lanes and signal controlled crossings to allow greater flow of traffic. Again this work is supported by SPT.
- Changes to the existing road network within and immediately adjacent to the Motherwell AQMA are planned over the next few years. These changes form part of the pan-Lanarkshire orbital route and include the dualling of the A723 in the north of Motherwell to create access from the Ravenscraig development site to the M8 motorway, as well as the dualling of Airbles Road at the southern end of Motherwell which will facilitate access to the Ravenscraig site from the town of Motherwell and also the M74 motorway. Details are provided below.

City Deal Road Infrastructure Projects

Glasgow City Region City 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 aim to 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 £190 million pound project linking the M74 in the south with the M80 in the north on a route through Ravenscraig. Pan Lan will create new and upgraded transport infrastructure in North Lanarkshire. Along with similar works in South Lanarkshire it will support the economic regeneration of the area.
Pan Lan is made up of 3 projects, as follows.

East Airdrie Link Road (EALR)

- 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 in order to optimise traffic flow. Expected to be a new single carriageway road link with pedestrian and cycle ways from north of the M8 (A723/Newhouse Interchange) to the A73, north of Stand
- Current stage is that an online community engagement exercise has been undertaken of the options for the EALR
- Expected timetable for the EALR is to carry out consultation options, followed by an options appraisal for the preferred route in 2020/21 with a view to submitting a planning application in Spring 2022.

Ravenscraig Access Infrastructure North

- North access section involves upgrading 3km of the A723 to provide a dual carriageway and shared footway/cycleway from the New Craig Road junction at Ravenscraig to the M8 at Holytown.
- Current status is that an outline business case has been prepared and the City Deal Team are hoping to appoint a contractor for this work in 2021, with a view to works starting on site in 2022.

Ravenscraig Access South

- Creating a new road link and pedestrian and cycle paths into Ravenscraig from Airbles Road, and continuing to the Ravenscraig Regional Sports Facility. This will include a new road crossing over the West Coast Main Line railway as well as junction and carriageway improvements on Airbles Road at Hamilton Road and Windmillhill Street.
- Current status is that in Autumn 2019 the City Deal team appointed an engineering and landscape design team to develop the detailed proposals for the Ravenscraig access infrastructure south and are working closely with Network Rail to design the road crossing to design the road crossing of the West Coast Main Line railway. Hoping to submit detailed planning application in early 2021.

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 this report.

- Airports – no relevant sources in North Lanarkshire;
- Locations where diesel/steam trains are regularly stationary for 15 minutes – no relevant sources in North Lanarkshire;
- Locations with large numbers of movements of diesel locomotives – no relevant sources in North Lanarkshire;
- Ports for shipping – no relevant sources in North Lanarkshire.

4.3 Industrial Sources

SEPA was consulted for information in relation to industrial sources in North Lanarkshire. The following information was supplied under the Environmental Information Regulations.

- Industrial installations: new or proposed installations for which an air quality assessment has been carried out in North Lanarkshire. During 2019, SEPA responded to the following planning consultations for new/proposed installations for which an AQ assessment was carried out -
    - Energy Recovery Centre and associated Mechanical Treatment Facility, Greengairs Landfill, planning reference 19/01284/FUL,.SEPA reference PCS/168123. An AQ assessment to assess the effects on

Designated Sites has been carried out and is being assessed by Nature.Scot in conjunction with SEPA. The AQ assessment covers the wider area under which includes the landfill site.

- SEPA can advise that we have received a PPC application for the Greengairs facility, called 'Drumgray Energy Recovery Centre', at Meikle Drumgray Road, Greengairs, Airdrie ML6 7TD,.from FCC Recycling (UK) Ltd. The application reference is PPC/A/1187576. The permit has not yet been determined.

- Crematorium proposals, site adjacent to Drumpellier Country Park. Planning reference is19/00538/FUL, SEPA reference PCS/165649. An AQ assessment was carried out and provided in support of the submission.

- Under the terms of Regulation 9 of the EIRs, SEPA has a duty to provide advice and assistance. We advise that the proposed Carnbroe Energy from Waste (EfW) plant is subject to a planning appeal and will inevitably change to a degree. The air quality assessment carried out prior to 2019 will likely require updating following any amendments. Although not a new proposal in 2019, this is ongoing and may be pertinent to your report.

- Industrial installations: new or significantly changed installations with no previous AQ assessment. SEPA have responded herewith. As the 2019 Scottish Pollutant Release Inventory (SPRI) data is undergoing quality checks we are unable to provide information on any SEPA regulated installations where annual emissions have increased. It may be possible to obtain emission data from the operators directly. This information is therefore excepted under Regulation 10(4)(d) of the Environmental Information Regulations 2004. The text of which is reproduced below; (4) A Scottish public authority may refuse a request to make environmental information available to the extent that;- (d) the request relates to material which is still in the course of completion, to unfinished documents or to incomplete data.

The Public Interest Test was carried out in relation to the information to be withheld under Regulation 10(4)(d) of the EIRs. In this case, we recognise that Regulation 10(2)(b) requires SEPA to apply a presumption favour of disclosure. We have considered the public interest in disclosure of the information and considered the effect of releasing the requested information in response to the enquiry and subsequently into the wider public domain. The 2019 SPRI data will be published and available on our web site via https://www.sepa.org.uk/environment/environmental-data/ in September 2020. Please note, 2018 data is currently available via this link.

- During 2019 one substantial permit variation was issued for PPC/W/0020041Greengairs Landfill. A copy of the variation, VN05, is publically available via SEPAs online public register, therefore, in accordance with the terms of Regulation 6(1)(b) of the EIRs, please refer to https://beta.sepa.org.uk/publicregister/search and search the register by permit reference. The variation can be found in the 'Formal Documents' file.

- Industrial installations: new or significantly changed installations with no previous AQ assessment. SEPA have responded as follows.
  We have identified 2 new installations authorised under PPC:

  - PPC/A/1180708 – Bellshill Heathcare Waste Treatment and Transfer Centre, Inchinnan Road, Bellshill Industrial Estate, Bellshill

  - PPC/B/1186372 – Netherton Reserve Power Facility, Wishaw.

- Major fuel depots storing petrol – SEPA responded that there are no major fuel storage depots storing petrol in North Lanarkshire.
- Petrol Stations – information from NLC Trading Standards service has confirmed that there are 50 premises with a Petroleum Licence in North Lanarkshire. The vast majority are retail petrol stations. In addition to this there are 5 non-retail forecourt filling station sites – very few using fuel for own use and a couple of sites that fuel aircraft or boats. During 2019 one new petrol

station was permitted in North Lanarkshire Council, with both Stage I and II Petrol Vapour Recovery PPC/B/1181290, Certas Energy UK Ltd, Cumbernauld Fuel Express, Westfield Rd, Cumbernauld, G68 9AA No PVR permits were surrendered, and sites closed, during 2019.

- Poultry Farms – SEPA confirmed that there are no poultry farms in North Lanarkshire.

4.4 Commercial and Domestic Sources

SEPA confirmed the following information in their response to our request for information on new commercial and domestic sources that they are aware of that could impact on local air quality.

- Biomass combustion plant (individual installations) - SEPA did not identify any new biomass combustion plants.
- Areas where the combined impact of several biomass combustion sources may be relevant – SEPA responded that they are not aware of any such installations in North Lanarkshire.
- Combined Heat and Power (CHP) Plant - The Drumgray Energy Recovery Centre and the Carnbroe facility, as detailed in the response to Q1.
- Areas where domestic solid fuel burning may be relevant – there are no new areas in North Lanarkshire where domestic solid fuel burning is relevant.

4.5 New Developments with Fugitive or Uncontrolled Sources

North Lanarkshire Council in conjunction with information supplied by SEPA , can confirm the following update in terms of new developments with fugitive or uncontrolled sources of particulate matter (PM):-

- Landfill sites – no landfill sites were identified in 2019. SEPA, under the terms of regulation 9 of the Environmental Information Regulations, have advised that in 2019 they were consulted regarding a reclamation and restoration proposal for Greengairs landfill, an existing landfill site, planning reference 19/01096/S42, SEPA reference PCS/168570
- Quarries – SEPA advised that in 2019 they were consulted regarding an EIA for the proposed extraction/restoration of Tomfyne Quarry, Banton, planning reference 19/01472/EIASCO, SEPA reference PCS/168715. SEPA are not aware of any AQ assessments for this proposal.

- Unmade haulage roads on industrial sites – SEPA advised that they issue Paragraph 19 waste management licence exemptions for the reuse of waste material for the construction and/or maintenance of a road. SEPA have identified 2 exemptions below, issued during 2019. It should be noted that the authorisation for the reuse of waste for construction/maintenance may have expired and therefore SEPA cannot confirm if they remain "unmade".

Exemption reference	Operator	Purpose	Site Address
WML/XC/1179832	Frances Henderson	Construction/maintenance of a road	Rockbank Stud Farm, Fields beside interchange of Main St/Airdrie Rd, Airdrie
WML/XC/1185136	Sneddon Transport	Construction of a hardstanding for a parking area	Ninian Road, Brownsburn Industrial Estate, Airdrie, ML6 9SE

- Waste transfer stations – SEPA responded that they have identified one new waste transfer station – Ref. WML/L/1150385, Murfitts Industries Ltd., Motherwell Tyre Facility, Condor Glen, Holytown, Motherwell, ML1 4UY.
- Other potential sources of fugitive particulate emissions - SEPA responded that they are not aware of any other relevant sources of fugitive particulate emissions.

5. Planning Applications

North Lanarkshire Council Planning and Development Management Service were consulted for details of any relevant major planning applications under consideration and planning applications which were granted planning consent in 2019 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 2019

Application Number	Brief Description of Development	AQ Impact	Comments/Further info
19/00011/PPP	Flatted residential development (Conversion of existing shopping centre and car parking area to residential accommodation).	AQIA requested. Close to Coatbridge AQMA.	Further information available at:- https://eplanning.northlanarkshire.gov.uk/online-applications/
19/00124/FUL	Residential development of 638 units with site prep for neighbourhood facility, associated infrastructure, landscaping works	Phase 2 of an existing development. AQIA requested, submitted and conclusions accepted. Not in/near existing AQMA	Further information available at:- https://eplanning.northlanarkshire.gov.uk/online-applications/
19/00274/PPP	Residential development (c. 750 units) incorporating retail/community uses, open space, access, link road	AQIA requested, submitted and conclusions accepted. Not in/near existing AQMA.	Further information available at:- https://eplanning.northlanarkshire.gov.uk/online-applications/
19/01096/S42	Reclamation and restoration operations by importation of non-haz waste materials (s.42 application for the reduction in scale & extent of previously approved landfill operations, with resultant change to conditions of previous permission	Amendment to previous consent. No adverse AQ impact perceived as reducing size of existing previously permitted landfill.Also not in/near AQMA. Planning decision pending. Not in or near an AQMA	Further information available at:- https://eplanning.northlanarkshire.gov.uk/online-applications/
18/001786/PPP	Proposed cinema & mixed-use restaurants/shops at St Mungos Rd, Cumbernauld	Not in/near AQMA. AQIA requested, submitted and conclusions	Further information available at:- https://eplanning.northlanarkshire.gov.uk/online-applications/

		accepted.	
19/01284/FUL	Energy Recovery Centre with associated mechanical pre-treatment facility, incinerator bottom ash processing area, reorganisation of existing landfill infrastructure area, improvements to private access road	SEPA-regulated process so SEPA dealing with any AQ issues. Not in/near AQMA	Further information available at:- https://eplanning.northlanarkshire.gov.uk/online-applications/
19/01213/FUL	Construction of 286 dwellinghouses & associated roads, infrastructure & landscape works	AQ impact assessment included in EIA. Not in/near AQMA	Further information available at:- https://eplanning.northlanarkshire.gov.uk/online-applications/
19/01292/FUL	Construction of a windfarm	No AQIA requested, not necessary	Further information available at:- https://eplanning.northlanarkshire.gov.uk/online-applications/
19/01408/S42	Waste to Heat & Energy Plant, Recycling Facility, Access Road & Associated Works (s.42 application to revise conditions of permission 17/00160/AMD in relation to the phasing of development (EIA development	Renewal of previous permissions granted. SEPA are the regulator for this process. Not in/near AQMA	Further information available at:- https://eplanning.northlanarkshire.gov.uk/online-applications/
19/01506/FUL	Four industrial units to accommodate use classes 5 and 6 with associated yard space, access and landscaping	Location not in/near AQMA. Proposals do not require AQIA	Further information available at:- https://eplanning.northlanarkshire.gov.uk/online-applications/

6. Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

Conclusions from the 2019 monitoring data presented in this report can be summarised as follows:-

- Automatic monitoring of NO_2 in 2019 was all below the annual mean and short-term statutory objectives, however low data capture (<40%) was achieved at all sites. This was as a result of the trialling and subsequent installation of a new data management and communications system for these sites. The new software was fully operational by September 2019. This system has worked well since its installation and will continue to be evaluated in 2020.
- All passive diffusion tubes measured levels of NO_2 that were below the national statutory air quality objective, with the exception of one site in Cumbernauld town centre (DT61). This site is not in an area of relevant public exposure and will remain under review in 2020.
- One diffusion tube measured NO_2 levels within ~10% of the statutory objective level. This site is DT100 at Civic Centre, Motherwell. Measured concentrations at this site will be compared to the new adjacent automatic monitoring site at Adele Street, Motherwell, which was set up in 2019/20.
- Measured concentrations of PM_{10} at the NLC automatic monitoring sites have shown compliance with the annual mean and hourly statutory air quality objective at all sites with the exception of one site, Kirkshaws, within the Coatbridge AQMA. Measured PM_{10} levels at Kirkshaws rose to an annual mean of 20µg/m^3 in 2019. On investigation of this it appears that temporary facilities (including diesel generators) and vehicles to support the renovation of some adjacent flats was sited close to the automatic monitor in the first 6 months of 2019. It is thought that this was responsible for the elevated PM_{10} levels experienced at the Kirkshaws site. Close scrutiny of PM_{10} levels at Kirkshaws will take place in 2020.
- North Lanarkshire Council now monitor $PM_{2.5}$ at 6 sites. No exceedances of the annual mean objective for $PM_{2.5}$ were recorded at any of the monitoring sites in 2019.

- Following another year of below-objective monitored PM_{10} levels at the Croy AQMA, and with the approval of the Scottish Government and SEPA the process of revoking the Croy AQMA is now under way. Monitoring will continue at the site for a further year following the revocation.

6.2 Conclusions relating to New Local Developments

North Lanarkshire Council has taken due cognisance of the outcome of consultation with the Council's Development Management and Strategic Planning Teams and in reviewing air quality impact assessments that were submitted in support of planning applications in 2019. The Council has consequently concluded that there are no significant issues in relation to new local developments. This is due to the proposed developments not being located in areas where air quality levels are close to the statutory objective and/or the developments themselves did not present air quality issues to surrounding sensitive receptors. The Pollution Control Team at North Lanarkshire Council will continue to work with development management and strategic planning colleagues to identify any future developments that may present air quality issues, and take any action deemed appropriate.

6.3 Proposed Actions

The focus of air quality work in North Lanarkshire in 2020 will be as follows:-

- A new automatic monitoring station will be set up in 2020 in Ravenscraig, close to an areas that is being developed for housing over the coming years and close to the new Ravenscraig access road. This will also be of use in future years in comparing pollution levels before and after the proposed changes to the road infrastructure as part of the Pan Lan projects.
- In addition to this, the automatic monitoring site at Whifflet in the Coatbridge AQMA, is being relocated to an area closer to the road and more representative of receptor exposure. The Croy AQMA will be revoked in 2020 however the automatic air monitor will remain in place at the site for a further year.
- Our network of NO_2 diffusion tubes and automatic monitoring stations will continue to operate and we will undertake a review of sites to ensure

appropriate air quality monitoring is in place across North Lanarkshire in line with government guidance.

- Further work will take place in conjunction with South Lanarkshire Council on the Strathclyde Park Walking and Cycling Map and App, with the development of a “Treasure Hunt” style competition which will be launched in Spring 2021, subject to the restrictions in place with the ongoing Covid 19 pandemic.
- A new Particulate Monitor will be purchased in 2020 using Scottish Government grant funding. This will replace one of our ageing BAM PM_{10} analysers in an existing air station. We also hope to purchase a low cost particulate monitor for use in short-term air pollution monitoring in North Lanarkshire.
- With funding from the Scottish Government air quality action plan grant we will contribute to the purchase of one rapid charger and two other chargers for use with the new electric refuse collection vehicle (RCV) as well as the Council’s other electric vehicles. We will also continue to attend the working group on the decarbonisation of the Council’s vehicle fleet and assist where possible to ensure synergy with air quality policies and legislation.
- We will endeavour to update our Air Quality Planning Guidance for developers to reflect current best practice and guidance. This will be done in conjunction with the Planning and Development Control team.
- Following the success of the Eco Stars Workshop for bus operators that we held in early 2020 it is our intention to once again run an Eco Stars workshop in conjunction with South Lanarkshire Council. This is likely to take place in early 2021 to coincide once again with the bus operators retrofitting grant, subject to Covid 19 restrictions.
- The Council will also purchase a number of ebikes for use within North Lanarkshire, to add to the 3 ebikes that were purchased in 2019 using air quality funding (this again will be subject to restrictions in place with the ongoing Covid 19 pandemic).

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?	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}; $PM_{2.5}$	Y	FIDAS	20	10	2
CM2	Croy	Special – by quarry	272775	675738	PM_{10} ; NO_2	Y	Chemiluminescent; FIDAS	30	10	2
CM3	Whifflet (Coatbridge)	Urban background	273674	663927	NO_2 ; PM_{10}	Y	Chemiluminescent; TEOM	20	30	2
CM4	Menteith Rd, Motherwell	Roadside	275458	656792	NO_2 ; PM_{10}	Y	FIDAS	20	8	2
CM5	Shawhead (Coatbridge)	Roadside	273411	662997	NO_2 ; PM_{10} ; $PM_{2.5}$	Y	Chemiluminescent; FIDAS	22	20	2
CM6	Kirkshaws (Coatbridge)	Roadside	272523	663030	NO_2 ; PM_{10} ; $PM_{2.5}$	Y	Chemiluminescent ; FIDAS	30	10	2
CM7	New Edinburgh Rd	Roadside	269144	661496	PM_{10} ; NO_2	N	Chemiluminescent ; BAM	30	10	2

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
CM8	Sunnyside Rd, Coatbridge	Roadside	273056	665234	PM_{10} ; NO_2	N	Chemiluminescent ; BAM	30	10	2
CM9a	Cumbernauld (before 2015)	Mobile lab	274117	674020	PM_{10} ; NO_2	N	Chemiluminescent ; TEOM	NA	NA	NA
CM9b	Civic Centre, Motherwell	Mobile lab	275788	656219	PM_{10} ; NO_2	Y	Chemiluminescent ; TEOM	50	15	3
CM10	Kenilworth Dr, Airdrie	Roadside	277837	665837	PM_{10} ; NO_2	N	Chemiluminescent ; BAM	30	10	2

(1) 0 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?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?
DT10	Castle Ct, Castlecary	Roadside	278528	677864	NO_2	N	10	2	N
DT47	Lay by in Stand	Roadside	276538	668899	NO_2	N	10	2	N
DT48	Bus stop Bron Way, Cumbernauld	Kerbside	275920	674203	NO_2	N	10	2	N
DT49	Swimming Pool, Kilsyth	Kerbside	271514	678040	NO_2	N	50	2	N
DT50	1791 Cumbernauld Rd, Stepps	Kerbside	265198	668204	NO_2	N	25	2	N
DT51	131 Cumbernauld Rd, Stepps	Kerbside	265971	668567	NO_2	N	30	2	N
DT52	Traffic lights Eastbound, A8 Moodiesburn	Kerbside	269966	670412	NO_2	N	30	2	N
DT53	Traffic lights Westbound, A8 Moodiesburn	Kerbside	269986	670400	NO_2	N	10	2	N
DT54	Lochend Rd/Coatbridge Rd, Gartcosh A752	Urban background	269828	668354	NO_2	N	20	2	N

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube collocated with a Continuous Analyser?
DT55	Whitelaw Rd End, Glenboig	Urban background	272614	668138	NO_2	N	50	2	N
DT56	Garnqueen Ave, lamp post LHSO, Glenboig	Urban background	271751	668432	NO_2	N	50	2	N
DT57	Main St/Carrick View, Glenboig	Urban background	272030	668564	NO_2	N	10	2	N
DT58	Lochend Rd/Coatbridge Rd, Gartcosh (A752)	Urban background	269828	668354	NO_2	N	20	2	N
DT59	10-16 Coronation Pl, Mount Ellen	Urban background	269356	669173	NO_2	N	10	2	N
DT61	Under bridge, Central Way Eastbound, Cumbernauld	Roadside	275778	674440	NO_2	N	10	2	N
DT62	Central Way A Westbound, Cumbernauld	Roadside	275920	674511	NO_2	N	10	2	N

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube collocated with a Continuous Analyser?
DT63	Central Way B, Westbound, Cumbernauld	Roadside	275642	674271	NO_2	N	10	2	N
DT64	Under bridge Central Way West, Cumbernauld	Roadside	275666	674293	NO_2	N	10	2	N
DT100	Civic Centre, Motherwell	Roadside	275820	656208	NO_2	Y	10	2	N
DT101	Shields Rd, Motherwell	Roadside	274594	655113	NO_2	N	15	2	N
DT102	Emily Drive, Motherwell	Urban Background	275437	655696	NO_2	N	15	2	N
DT103	Kethers Lane, Motherwell	Urban Background	273986	656985	NO_2	N	10	2	N
DT104	Coursington Rd, Motherwell	Urban Background	276178	657344	NO_2	N	20	2	N
DT105	Craigneuk Rd, Carfin	Urban Background	277244	658415	NO_2	N	10	2	N
DT106	Camp St, Motherwell	Urban	275654	656342	NO_2	N	10	2	N

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?
		Background							
DT107	Braehead Farm, Bargeddie	Roadside	270929	663464	NO_2	N	500	50m to A8	N
DT108	MSA Factory, Coatbridge	Roadside	273830	662676	NO_2	N	500	50m to A8	N
DT110	New Edinburgh Rd (1), M74 Uddingston	Roadside	272789	675735	NO_2	N	30	2	N
DT111	New Edinburgh Rd (2), M74 Uddingston	Roadside	272789	675735	NO_2	N	15	2	N
DT112	New Edinburgh Rd (3), M74 Uddingston	Roadside	272789	675735	NO_2	N	10	2	N
DT113	Tinkers Lane, Motherwell	Roadside	274305	656466	NO_2	N	20	2	N
DT114	Main St, Overtown	Kerbside	280370	653072	NO_2	N	15	2	N
DT115	Plantation Rd/Ravenscraig Bypass, Ravenscraig	Kerbside	277282	657607	NO_2	N	15	2	N

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube collocated with a Continuous Analyser?
DT116	Delburn St, Motherwell	Urban background	275981	656111	NO_2	Y	80	2	N
DT117	Hamilton Rd, Motherwell	Urban background	275091	656986	NO_2	N	20	2	N
DT118	Shawhead roundabout (Site changed number in 2017 to newBT119, see later in tabe)	Kerbside	273432	662965	NO_2	Y	30	2	N
DT119	Kirkshaws Rd, Coatbridge	Kerbside	273432	662965	NO_2	Y	30	2	N
DT120	Watsonville, Motherwell	Kerbside	275237	656662	NO_2	Y	10	2	N
DT121	Flannigan Grove, Bellshill	Urban background	273180	660350	NO_2	N	30	2	N
DT122	Main St, Mossend	Roadside	274082	660308	NO_2	N	60	2	N
DT123	Hamilton Rd, Orbiston, Bellshill	Kerbside	272687	659512	NO_2	N	20	2	N

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube collocated with a Continuous Analyser?
DT124	Scotmid, Tannochside	Kerbside	270073	661870	NO_2	N	20	2	N
DT125	Main St nr Motherwell Rd, Bellshill	Kerbside	273767	660281	NO_2	N	25	2	N
DT126	Main St nr Tesco delivery	Kerbside	273541	660339	NO_2	N	2	2	N
DT129	Newmains Police Station	Roadside	282392	656016	NO_2	N	7	2	N
DT130	Main St (bottom),Wishaw	Roadside	279078	655328	NO_2	N	5	2	N
DT131	Brandon Place Bellshill	Roadside	272330	659230	NO_2	N	5	2	N
DT132	Airdrie Rd, Caldercruix	Roadside	281713	667517	NO_2	N	10	2	N
DT133	Coatbridge 1, Bank St	Roadside	272887	664991	NO_2	N	2	2	N
DT134	Coatbridge 2, Whifflet Ct	Kerbside	273655	664003	NO_2	Y	10	20	N
DT135	Grahamshill St, Airdrie	Kerbside	277276	665615	NO_2	N	10	2	N
DT136	Airdrie 3, Springwells Cres	Roadside	274162	674130	NO_2	N	30	2	N

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?
DT137	Auchenkilns, Cumbernauld	Roadside	274164	674130	NO_2	N	30	2	N
DT138	Chapelhall Main St (nr shops)	Roadside	278037	662798	NO_2	Y	10	2	N
DT139	Lauchope St/Main St, Chapelhall	Roadside	278178	663111	NO_2	Y	10	2	N
DT140	Dundyvan Rd,Coatbridge	Kerbside	273293	664120	NO_2	N	5	1	N
DT141	Main St(1), nr shops, Harthill	Kerbside	290652	664493	NO_2	N	10	2	N
DT142	House no. 337, R15, Salsburgh	Roadside	283850	663082	NO_2	N	15	30	N
DT143	Main St(2),nr shops, Harthill	Roadside	290482	664386	NO_2	\n	10	2	N
DT144	Constarry Rd, Croy (Lab 1)	Roadside	272789	675735	NO_2	Y	100	5	Y

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?
DT145	Constarry Rd, Croy (Lab 2)	Roadside	272789	675735	NO_2	Y	100	5	Y
DT146	Constarry Rd, Croy (Lab 3)	Roadside	272789	675735	NO_2	Y	100	5	Y
DT147	Bank St, Coatbridge (nearest house)	Roadside	272947	665037	NO_2	N	15	0	N
DT148	Main St, Chapelhall,R32	Kerbside	278105	663174	NO_2	Y	15	2	N
DT149	Main St, Chapelhall,R33	Kerbside	278119	663075	NO_2	Y	15	2	N
DT150	Eastfield Rd, Cumbernauld	Kerbside	275160	676210	NO_2	Y	25	2	N
DT151	Main St, Holytown	Urban Background	276635	660569	NO_2	N	10	2	N
DT152	CoatbridgeRd (shop), Townhead	Roadside	272391	665824	NO_2	N	10	2	N
DT153	72 Townhead Rd,	Roadside	271720	666053	NO_2	N	20	2	N

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?
	Coatbridge								
DT154	Sunnyside Rd, Coatbridge	Roadside	273042	665176	NO_2	N	20	2	N
DT156	Stirling St, Airdrie	Roadside	276005	665406	NO_2	N	50	2	N
DT157	31 Station Rd, Muirhead	Roadside	268442	669262	NO_2	N	15	2	N
DT158a	Croftmoraig Ave, Moodiesburn	Kerbside	270281	671715	NO_2	N	15N	2	N
DT158b	Deedes St, Airdrie	Roadside	274819	665005	NO_2	N	7	2	N
DT159	Glenview Cres, Moodiesburn	Roadside	270391	671505	NO_2	N	10	2	N
DT160	The Cuillins, Moodiesburn	Roadside	270067	671604	NO_2	N	10	2	N
DT161	Bridgend Cres, Moodiesburn	Roadside	269071	670889	NO_2	N	1	1	N
DT162	Auchingeoch Rd,	Roadside	269022	670979	NO_2	N	2	1	N

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube collocated with a Continuous Analyser?
	Moodiesburn								
DT163	12 Inchwood Rd, Westfield, Cumbernauld	Roadside	273098	673321	NO_2	N	10	1	N
DT164	12 Leckethill Ct, Westfield, Cumbernauld	Roadside	272634	672993	NO_2	N	10	2	N
DT165	Kildonan St, Coatbridge	Roadside	273727	665285	NO_2	N	20	2	N
DT166	22 Cumbernauld Rd, Chryston	Roadside	268392	669502	NO_2	N	10	2	N
NewDT54	Columba Ct/Old Edin Rd, Viewpark	Roadside	271259	661016	NO_2	N	15	2	N
NewDT55	Old Edinburgh Rd Viewpark	Roadside	270463	661441	NO_2	N	15	2	N
NewDT56	Dykehead Rd, Bargeddie	Roadside	270201	664281	NO_2	N	10	2	N
NewDT102	Windmillhill St 1, Motherwell	Roadside	275738	656400	NO_2	Y	50	1	N

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube collocated with a Continuous Analyser?
NewDT103	Windmillhill St 2, Motherwell	Roadside	275733	656439	NO_2	Y	20	1	N
NewDT106	Civic Centre 1	Roadside	275911	656237	NO_2	Y	100	30	Y
NewDT107	Civic Centre 2	Roadside	275911	656237	NO_2	Y	100	30	Y
NewDT108	Civic Centre 3	Roadside	275911	656237	NO_2	Y	100	30	Y
NewDT116	Airbles Rd(Electric Bar),Motherwell	Roadside	274814	656147	NO_2	N	15	5	N
NewDT118	Merry St/Dalziel St, Motherwell	Roadside	275444	657312	NO_2	N	15	5	N
NewDT119	Shawhead roundabout, Coatbridge (long-standing site, re-numbered in 2017 from DT118 to DT119)	Kerbside	273432	662965	NO_2	Y	30	2	N
NewDT120	Kirkshaws Rd, Coatbridge	Roadside	271939	663179	NO_2	Y	10	2	N

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?
NewDT127	Matalan, Wishaw	Kerbside	278059	655368	NO_2	N	10	2	N
NewDT128	Wishaw Cross/Stewarton St, WIshaw	Roadside	279587	655125	NO_2	N	30	2	N
NewDT137	Main St, Village, Cumbernauld	Roadside	276710	676098	NO_2	N	10	2	N
NewDT141	Station Rd, Shotts	Roadside	286840	656978	NO_2	N	20	2	N
NewDT142	Stane gdns, Shotts	Roadside	287954	659620	NO_2	N	20	2	N
NewDT157a	Swing park, Castlecary	Roadside	278470	677901	NO_2	N	230	2	N

(1) 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 not applicable.

Table A.3 – Annual Mean NO_2 Monitoring Results

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2019 (%) [2]	NO_2 Annual Mean Concentration (µg/m^3) [3]				
					2015	2016	2017	2018	2019
CM1-Chapelhall	Roadside	Automatic	96.5%	32.2%	33.5	32	33.8	27.7	21.7
CM2 – Croy	Special – by quarry	Automatic	81.2%	33.9%	19.3	20	20.4	17.5	19.0
CM3- Whifflet, Coatbridge	Urban background	Automatic	89.4%	37.4%	-	-	-	-	17.2
CM5 – Shawhead	Roadside	Automatic	80.7%	20.3%	36	30	28.5	20.7	20.3
CM6 – Kirkshaws	Roadside	Automatic	63.3%	15.9%	25	33	22	18.3	20.3
CM7 – New Edinburgh Rd, Uddingston	Roadside	Automatic	89.4%	37.4%	-	-	-	-	24.4
CM8 – Sunnyside Rd, Coatbridge	Roadside	Automatic	84.8%	35.5%	-	-	-	-	22.6
CM10 – Kenilworth Dr, Airdrie	Roadside	Automatic	94.8%	31.7%	-	-	-	-	16.9
DT10 – Castle Ct, Castlecary	Roadside	Diffusion Tube	-	-	28.5	23.3	34.2	-	-
DT47 – Layby in Stand	Roadside	Diffusion Tube	100%	100%	21.4	22.7	21	21.7	21.4
DT48 – Bus stop, Bron Way, Cumbernauld	Kerbside	Diffusion Tube	100%	100%	32.9	29.1	28.9	27.3	25.7
DT49 – Swimming Pool, Kilsyth	Kerbside	Diffusion Tube	92%	92%	18.8	18.3	17.4	22.5	18.3
DT50 – 1791 Cumbernauld Rd, Stepps	Kerbside	Diffusion Tube	92%	92%	24.7	21.9	22.4	21.9	20.2
DT51 – 131 Cumbernauld Rd, Stepps	Kerbside	Diffusion Tube	92%	92%	23.3	23.7	24.7	27.4	21.0
DT52 – traffic lights A80 E,	Kerbside	Diffusion Tube	83%	83%	22	18	17.4	25.4	22.6

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2019 (%) (2)	NO_2 Annual Mean Concentration (µg/m^3) (3)				
					2015	2016	2017	2018	2019
Moodiesburn									
DT53 – Traffic lights A80 W, Moodiesburn	Kerbside	Diffusion Tube	92%	92%	22	20.7	20.9	22.9	18.3
DT54-Coatbridge Rd/Gartcosh Rd, Gartcosh A752	Urban Background	Diffusion Tube	-	-	24.6	21.1	22.8	-	-
DT55 – Whitelaw Rd end, Glenboig	Urban Background	Diffusion Tube	-	-	13.6	12	9.7	-	-
DT56 – Garenqueen Ave, Glenboig	Urban Background	Diffusion Tube	-	-	14.8	12.4	14.3	-	-
DT57–Main St/Garrick View, Glenboig	Urban Background	Diffusion Tube	100%	100%	16.7	15.9	16.2	18.1	16.6
DT58-Lochend Rd/Coatbridge Rd, Glenboig(previously called DT54, changed in 2018)	Urban Background	Diffusion Tube	100%	100%	-	-	-	25.8	22.9
DT59-10-16 Coronation Pl, Mount Ellen	Urban Background	Diffusion Tube	100%	100%	18.8	19.3	17.2	19.8	17.7
DT61 – Under bridge, Central Way E, Cumbernauld	Roadside	Diffusion Tube	100%	100%	**74.3**	**61.5**	**51.3**	**43.6**	**40.5**
DT62 – A Central Way W, Cumbernauld	Roadside	Diffusion Tube	92%	100%	**44.8**	38.1	38.1	39.0	32.9
DT63 0 B Central Way W, Cumbernauld	Roadside	Diffusion Tube	92%	100%	35.4	34.8	26.7	**45.7**	37.5
DT64 – Under	Roadside	Diffusion	100%	100%	-	-	-	32.2	28.7

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2019 (%) [2]	NO_2 Annual Mean Concentration (µg/m^3) [3]				
					2015	2016	2017	2018	2019
bridge W, Cumbernauld		Tube							
DT100 – Civic Centre, Motherwell	Roadside	Diffusion Tube Diffusion Tube	92%	92%	38.9	32.3	-	36.9	36.9
DT101 – Shields Rd,Motherwell	Roadside	Diffusion Tube	100%	100%	24.6	24.4	23.2	24.9	20.1
DT102 –Emily Dr, Motherwell	Urban Background	Diffusion Tube	-	-	11.1	10	10.8	-	-
DT103 – Kethers Lane, Motherwell	Urban Background	Diffusion Tube	-	-	12.8	12.8	15.8	-	-
DT104-Coursington d, Motehrwell	Urban Background	Diffusion Tube	100%	100%	11.6	11.7	11.9	10.5	10.5
DT105-Craigneuk Rd, Carfin	Urban Background	Diffusion Tube	92%	100%	15.6	14.6	13.5	16.4	12.6
DT106-Camp St, Motherwell	Urban Background	Diffusion Tube	-	-	22.6	18.7	18.2	-	-
DT107-Braehead Farm, Bargeddie	Roadside	Diffusion Tube		-	**42.7**	32.2	23.7	-	-
DT108-MSA Factory, Coatbridge	Roadside	Diffusion Tube	-	-	**43.5**	30.5	27.7	-	-
DT110-New Edinburgh Rd(1), Uddingston	Roadside	Diffusion Tube	92%	92%	31.8	33.9	33.7	33.8	28.9
DT111-New Edinburgh Rd(2), Uddingston	Roadside	Diffusion Tube	92%	92%	38.4	29.8	31.7	30.4	31.1
DT112-New Edinburgh Rd(3), Uddingston	Roadside	Diffusion Tube	92%	92%	33.8	30	32.7	32.3	28.6
DT113-Tinkers	Roadside	Diffusion	100%	100%	21.5	19.2	21.8	22.0	17.9

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2019 (%) (2)	NO_2 Annual Mean Concentration (µg/m^3) (3)				
					2015	2016	2017	2018	2019
Lane, Motherwell		Tube							
DT114-Main St, Overtown	Kerbside	Diffusion Tube	92%	100%	17.4	17.8	19.6	17.7	15.0
DT115-Plantation Rd, Ravenscraig	Kerbside	Diffusion Tube	100%	100%	-	-	-	15.4	13.8
DT116-Delburn St, Motherwell	Urban backgound	Diffusion Tube	-	-	27.9	22.8	23.1	-	-
DT117-Hamilton Rd, Motherwell	Urban background	Diffusion Tube	100%	100%	30.2	27.5	30.3	27.4	26.8
DT118-Shawhead roundabour,Coatbridge(site changed to NewDT119 in 2018)	Kerbside	Diffusion Tube	-	-	33.8	28.2	28.2	-	-
DT119-Kirkshaws Rd,Coatbridge(site changed to NewDT120 in 2018)	Kerbside	Diffusion Tube	-	-	34.1	30.9	31.3	-	-
DT120-Watsonville, Motherwell	Kerbside	Diffusion Tube	-	-	17	19.4	14.8	-	-
DT121-Flannigan Gr, Bellshill	Urban Background	Diffusion Tube	100%	100%	18.4	18.7	19.5	20.3	20.2
DT122-Main St, Mossend	Roadside	Diffusion Tube	92%	92%	27.1	26.1	28.2	27.5	24.0
DT123-Hamilton Rd,Orbiston,Bellshill	Kerbside	Diffusion Tube	100%	100%	22.5	23.3	25.2	23.9	21.4
DT124-Scotmid, Tannochside	Kerbside	Diffusion Tube	100%	100%	25.4	25.9	25.6	29.5	23.5
DT125-MainSt/Motherwell Rd, Bellshill	Kerbside	Diffusion Tube	100%	100%	-	-	-	24.4	18.8

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2019 (%) [2]	NO_2 Annual Mean Concentration (µg/m^3) [3]				
					2015	2016	2017	2018	2019
DT126-Main St, nr Tesco delivery, Bellshill	Kerbside	Diffusion Tube	83%	83%	18.2	22.3	19.8	20.4	21.4
DT128-Matalan, Wishaw(site no changed to NewDT127 in 2017)	Kerbside	Diffusion Tube	-	-	24.7	23.5	-	-	-
DT129-Newmains Police Station	Roadside	Diffusion Tube	92%	100%	26.3	27	26.5	27.7	27.3
DT130-Main St(bottom), Wishaw	Roadside	Diffusion Tube	100%	100%	14.8	15	14.4	17.1	15.8
DT131-Brandon Pl, Bellshill	Roadside	Diffusion Tube	100%	100%	-	18.9	19.3	19.4	14.6
DT132-Airdrie Rd, Caldercruix	Roadside	Diffusion Tube	100%	100%	-	-	14.3	16.8	15.8
DT133-Coatbridge 1, Bank St	Roadside	Diffusion Tube	100%	100%	27.7	26.8	33.4	30.4	30.1
DT134-Coatbridge 2, Bank St	Kerbside	Diffusion Tube	100%	100%	20.1	23	23	19.8	20.4
DT135-Grahamshill St, Airdrie	Kerbside	Diffusion Tube	100%	100%	29	33.9	33	29.3	28.3
DT136-Airdrie 3, Springwells Cres	Roadside	Diffusion Tube	100%	100%	13.6	16.8	20.1	21.1	17.9
DT137-Auchenkilns, Cumbernauld	Roadside	Diffusion Tube	-	-	17.9	23.8	24.9	-	-
DT138-Main St, Chapelhall(nr shops)	Roadside	Diffusion Tube	100%	100%	26.9	24.3	25	22.7	23.1
DT139-Lauchope St/Main St,	Roadside	Diffusion Tube	92%	100%	33.8	30.1	39	29.4	28.1

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2019 (%) [2]	NO_2 Annual Mean Concentration (µg/m^3) [3]				
					2015	2016	2017	2018	2019
Chapelhall									
DT140-Dundyvan Rd, Coatbridge	Kerbside	Diffusion Tube	100%	100%	20.4	21.7	23.6	21.7	23.2
DT141-Main St(1), Harthil (nr shops)	Kerbside	Diffusion Tube	-	-	11.8	16.5	14.8	-	-
DT142-House no. 337,R15, Salsburgh	Roadside	Diffusion Tube	-	-	20.4	22	14.4	-	-
DT143-Main St(2), Harthill(nr shops)	Roadside	Diffusion Tube	92%	100%	17	17.8	15.9	17.8	15.4
DT144-Constarry Rd, Croy(Lab 1)	Roadside	Diffusion Tube	92%	100%	14.1	16.8	17.2	17.8	16.7
DT145-Constarry Rd,Croy(Lab 2)	Roadside	Diffusion Tube	92%	100%	14.8	18.2	17	20.4	16.4
DT146-Constarry Rd, Croy(Lab 3)	Roadside	Diffusion Tube	100%	100%	17.9	17	16.7	22.9	15.8
DT147-Bank St, Coatbridge (nearest house)	Roadside	Diffusion Tube	100%	100%	26.3	30.5	31.6	28.5	27.4
DT148-Main St, Chapelhall R32	Kerbside	Diffusion Tube	92%	100%	35.4	28.7	28.8	31.2	28.0
DT149-Main St, Chapelhall, R33	Kerbside	Diffusion Tube	92%	100%	26.8	31.9	31	26.9	29.1
DT150-Eastfield Rd, Cumbernauld	Kerbside	Diffusion Tube	100%	100%	26.1	24.7	20.1	19.2	18.7
DT151-Main St, Holytown	Roadside	Diffusion Tube	92%	100%	19.8	21.6	24.7	24.3	17.5
DT152-Coatbridge Rd (Shops), Townhead	Roadside	Diffusion Tube	92%	92%	32.4	25	28.9	28.6	30.3
DT153-72 Townhead Rd, Coatbridge	Roadside	Diffusion Tube	92%	92%	20.4	25	17.7	20.9	19.5
DT154-Sunnyside	Roadside	Diffusion	75%	100%	28.5	26.8	33.9	24.7	27.4

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2019 (%) [2]	NO_2 Annual Mean Concentration (µg/m^3) [3]				
					2015	2016	2017	2018	2019
Rd, Coatbridge		Tube							
DT156-Stirling St, Airdrie	Roadside	Diffusion Tube	100%	100%	32.9	27.5	33.8	30.9	28.4
DT157-31 Station Rd, Muirhead	Roadside	Diffusion Tube	100%	100%	25.4	22.4	25.6	34.1	22.3
DT158a-Croftmoraig Cres, Moodiesburn	Roadside	Diffusion Tube	100%	100%	-	16.7	17.9	18.4	17.8
DT158b-Deedes St, Airdrie	Roadside	Diffusion Tube	100%	100%	-	27.4	34.4	29.5	30.3
DT159-Glenview Cres, Moodiesburn	Roadside	Diffusion Tube	92%	92%	-	16.1	15.7	17.7	18.4
DT160-The Cuillins, Moodiesburn	Roadside	Diffusion Tube	100%	100%	-	17	15.7	17.6	18.4
DT161-Bridgend Cres, Moodiesburn	Roadside	Diffusion Tube	100%	100%	18.3	14.9	14.6	16.8	15.7
DT162-Auchingeoch Rd, Moodiesburn	Roadside	Diffusion Tube	100%	100%	17.2	17.1	19.5	19.4	18.3
DT163-12 Inchwood Rd, Westfield, Cumbernauld	Roadside	Diffusion Tube	100%	100%	18.9	21.7	22.8	22.8	21.7
DT164-12 Leckethill Ct, Westfield, Cumbernauld	Roadside	Diffusion Tube	100%	100%	31.3	17.8	18.2	19.5	19.0
DT165-Kildonan St, Coatbridge	Roadside	Diffusion Tube	83%	92%	-	-	-	23.4	23.2
DT166-22 Cumbernauld Rd, Chryston	Roadside	Diffusion Tube	100%	100%	-	-	-	28.7	26.0
NewDT54-	Roadside	Diffusion	100%	100%	-	-	22.9	25.6	23.6

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2019 (%) [2]	NO_2 Annual Mean Concentration (µg/m^3) [3]				
					2015	2016	2017	2018	2019
Columba Ct/Old Edin Rd, Viewpark		Tube							
NewDT55 – Old Edinburgh Rd, Viewpark	Roadside	Diffusion Tube	100%	100%	-	-	29.8	27.6	24.7
NewDT56- Dykehead Rd, Bargeddie	Roadside	Diffusion Tube	100%	100%	-	-	20.3	20.6	20.0
NewDT102- Windmillhill St(1), Motherwell	Roadside	Diffusion Tube	100%	100%	-	-	17.9	20.4	18.3
NewDT103- Windmillhill St(2), Motherwell	Roadside	Diffusion Tube	100%	100%	-	-	21.1	25.9	20.7
NewDT106-Civic Centre(1), Motherwell	Roadside	Diffusion Tube	92%	92%	-	-	19.6	20.7	15.8
NewDT107-Civic Centre(2), Motherwell	Roadside	Diffusion Tube	100%	100%	-	-	19.6	19.6	18.2
NewDT108-Civic Centre(3), Motherwell	Roadside	Diffusion Tube	100%	100%	-	-	17	17.9	19.8
NewDT116-Airbles Rd(Electric Bar), Motherwell	Roadside	Diffusion Tube	83%	83%	-	-	17.7	22.3	17.2
NewDT118-Merry St/Dalziel St, Motherwell	Roadside	Diffusion Tube	100%	100%	-	-	27.7	28.3	24.1
NewDT119- Shawhead roundabout, Coatbridge(formerly DT118, changed	Kerbside	Diffusion Tube	92%	100%	-	-	28.2	27.8	23.7

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2019 (%) (2)	NO_2 Annual Mean Concentration (µg/m^3) (3)				
					2015	2016	2017	2018	2019
in 2018)									
NewDT120-Kirkshaws Rd, Coatbridge(formerly DT119, changed in 2017)	Roadside	Diffusion Tube	100%	100%	-	-	31.3	26.5	24.4
NewDT127-Matalan, Wishaw(formerly DT128, changed number in 2017)	Kerbside	Diffusion Tube	100%	100%	-	-	27.1	24.3	26.6
NewDT128-Wishaw Cross/Stewarton St, Wishaw	Roadside	Diffusion Tube	100%	100%	-	-	26.5	26.7	27.9
NewDT137-Main St, Village, Cumbernauld	Roadside	Diffusion Tube	83%	100%	-	-	24	20.6	22.5
NewDT141-Station Rd, Shotts	Roadside	Diffusion Tube	100%	100%	-	-	15	14.0	12.7
NewDT142-Stane Gdns, Shotts	Roadside	Diffusion Tube	92%	100%	-	-	14.8	18.4	16.9
NewDT157a-Swing Park, Castlecary	Roadside	Diffusion Tube	100%	100%	-	-	-	28.9	25.4

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.**

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

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

(3) Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG(16) if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Table A.4 – 1-Hour Mean NO_2 Monitoring Results

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2019 (%) (2)	NO_2 1-Hour Means > 200µg/m^3 (3)				
					2015	2016	2017	2018	2019
CM1	Roadside	Automatic	96.5%	32.2%	-	1	6	0(142)	0(112)
CM2	Special – by quarry	Automatic	81.2%	33.9%	0	0	0(104)	0(93)	0(77)
CM3	Urban Background	Automatic	89.4%	37.4%	-	-	-	-	0(78)
CM5	Roadside	Automatic	80.7%	20.3%	0	0	0(125)	0(114)	0(113)
CM6	Roadside	Automatic	63.3%	15.9%	0	0	0	0(107)	0(114)
CM7	Roadside	Automatic	89.4%	37.4%	-	-	-	-	0(87)
CM8	Roadside	Automatic	84.8%	35.5%	-	-	-	-	0(105)
CM10	Roadside	Automatic	94.8%	31.7%	-	-	-	-	0(83)

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

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

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

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

Table A.5 – Annual Mean PM_{10} Monitoring Results

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2019 (%) (2)	PM_{10} Annual Mean Concentration (µg/m^3) (3)				
				2015	2016	2017	2018	2019
CM1	Roadside	98.4%	98.4%	**18.5**	15.4	12.0	10.2	10.0
CM2	Special – by quarry	99.9%	100%	12.0	13.0	11.3	12.2	11.0
CM3	Urban background	76.4%	32.0%	12.0	12.0	11.4	6.9	13.5
CM4	Roadside	96.7%	96,7%	13.0	13.0	13.0	9.7	11.0
CM5	Roadside	100%	100%	16.0	12.0	14.0	4.9	10.0
CM6	Roadside	96.5%	96.5%	13.0	11.0	9.0	9.6	**20.0**
CM7	Roadside	71.0%	29.6%	-	-	-	-	13.5
CM8	Roadside	0.0%	0.0%	-	-	-	-	-
CM9b	Mobile Lab	95.2%	41.7%	-	-	-	9.2	10.0
CM10	Roadside	86.5%	28.8%	-	-	-	-	12.2

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

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

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

(3) All means have been "annualised" as per LAQM.TG(16), valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Table A.6 – 24-Hour Mean PM_{10} Monitoring Results

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2019 (%) (2)	PM_{10} 24-Hour Means > 50µg/m^3 (3)				
				2015	2016	2017	2018	2019
CM1	Roadside	98.4%	98.4%	-	0(22)	0.0	0(24)	1
CM2	Special-by quarry	99.9%	100.0%	1.0	2(26)	1(35)	0(42)	3
CM3	Urban background	76.4%	32.0%	1.0	0(18)	0(29)	0(27)	0(22)
CM4	Roadside	96.7%	96.7%	0(35)	0.0	0.0	0(23)	2
CM5	Roadside	100%	100%	1(36)	0.0	0.0	0(19)	2
CM6	Roadside	96.5%	96.5%	0.0	0.0	0(26)	0(21)	1
CM7	Roadside	71.0%	29.6%	-	-	-	-	0(21)
CM8	Roadside	0.0%	0.0%	-	-	-	-	-
CM9b	Mobile Lab	95.2%	39.2%	-	-	-	0(18)	1(41.1)
CM10	Roadside	86.5%	28.8%	-	-	-	-	0(21)

Notes: Exceedances of the PM_{10} 24-hour mean objective (50µg/m^3 not to be exceeded more than 7 times/year) are shown in **bold.**

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

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

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

Table A.7 – Annual Mean $PM_{2.5}$ Monitoring Results

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2019 (%) (2)	$PM_{2.5}$ Annual Mean Concentration (µg/m^3) (3)				
				2015	2016	2017	2018	2019
CM1	Roadside	98.4%	98.4%	**-**	**-**	5.0	5.3	6.0
CM2	Special-by quarry	100%	100%	-	-	-	6.0	6.0
CM4	Roadside	96.7%	96.7%	-	-	-	5.4	6.0
CM5	Roadside	100%	100%	-	-	-	5.6	6.0
CM6	Roadside	96.5%	96.5%	-	-	-	5.4	6.0
CM9b	Mobile Lab	95.2%	39.2%	-	-	-	5.4	6.8

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

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

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

(3) All means have been "annualised" as per LAQM.TG(16), valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Appendix B: Full Monthly Diffusion Tube Results for 2019

Table B.1 – NO_2 Monthly Diffusion Tube Results for 2019

Site ID	NO_2 Mean Concentrations (µg/m^3)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean	
													Raw Data	Bias Adjusted (1)
DT47-layby in Stand	19.5	30.1	23.8	24.3	14.2	43.6	12.6	15.7	21.4	17.8	32.5	39.5	24.6	21.4
DT48-bus stop, Bron Way, Cumbernauld	29	48.9	35.7	27.3	20.8	23.7	15.8	20.6	24.1	27.1	38.1	43.8	29.6	25.7
DT49-swimming pool, Kilsyth	29.5	43	18.9	17.6	14.5	17.3	11.3	13.9	15.6	13.5	-	35.9	21.0	18.3
DT50-1791 Cnauld Rd, Stepps	-	28.5	28.5	20.5	17.3	14.2	14.7	15.6	18.4	20.1	32.2	45.5	23.2	20.2
DT51-131 Cnauld Rd, Stepps	-	28.2	28.2	20.8	16.3	11.3	14.8	18.1	20.7	24.6	35	47	24.1	21.0
DT52-traffic lights A80 Eastbound, Moodiesburn	-	30.5	30.5	21.5	19.4	-	15.1	14.8	19.5	24.7	40.4	43.3	26.0	22.6
DT53-traffic lights A80 Westbound, Moodiesburn	-	28	28	16.5	12.7	18.9	13	11.9	16.5	18.7	31.5	35.8	21.0	18.3
NewDT54-Columba Ct/Old Edinburgh Rd, Viewpark	30.8	44.4	28.1	22.7	17.7	20.9	12.9	16.3	19.9	23.3	41.3	47.3	27.1	23.6
NewDT55-Old Edinburgh Rd, Viewpark	34.3	45.5	31.4	20	22.3	14.9	14.5	15.8	24.6	23.9	43.1	50.7	28.4	24.7

Site ID	NO_2 Mean Concentrations (µg/m^3)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean	
													Raw Data	Bias Adjusted (1)
NewDT56-Dykehead Rd, Bargeddie	34	45.4	20.6	19.1	17.2	10.8	14.1	13.3	18	16.7	31.3	34.9	23.0	20.0
DT57-Main St/Garrick View, Glenboig	31.5	33.5	14.4	15.8	13.6	17.7	10.4	11.6	14.4	12.1	24.2	29.8	19.1	16.6
DT58-Lochend Rd/Coatbridge Rd, Gartcosh A752 (previously called DT54, changed in 2018)	27.6	45.9	29	23.4	20.3	11.3	15.5	20.3	22.2	24.4	38.2	37.4	26.3	22.9
DT59-10-16 Coronation Pl, Mount Ellen	23.9	38.7	19.4	18.1	16	12.8	8.6	11	16	8	33.1	38.8	20.4	17.7
DT61-under bridge, Central Way, East, Cumbernauld	22.6	65.7	55.8	37.4	47.4	33.7	44	44.1	41.4	28	67.9	71.3	46.6	40.5
DT62-Central Way A, Westbound, Cumbernauld	37.4	-	44.3	42.4	36.3	41.5	23.7	36.9	25.3	22.4	49.5	56	37.8	32.9
DT63-Central Way B, Westbound, Cumbernauld	39.1	57.3	-	48.8	42.8	29.2	35.6	43.9	38.1	21.2	43.8	74.5	43.1	37.5
DT64-Under bridge, Central Way, Westbound, Cumbernauld	22.5	47.3	37.3	35.8	35.3	23.7	22.6	29.1	25.4	15.6	45.3	55.9	33.0	28.7

Site ID	NO_2 Mean Concentrations (µg/m^3)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean	
													Raw Data	Bias Adjusted (1)
DT100-Civic Centre, Motherwell	61.7	51.4	40.5	35.2	19.3	-	64.9	26.3	31.4	38.3	58.2	39.5	42.4	236.9
DT101-Shields Rd, Motherwell	42.3	27.7	19.3	12.8	14.9	23.3	16	15.9	18.6	26.6	37.9	21.3	23.1	20.1
NewDT102-Windmillhill St, Motherwell (1)	34.8	30.8	16	12.5	22.4	13.2	12	13.7	16.1	21.5	35	24.4	21.0	18.3
NewDT103-Windmillhill St, Motherwell (2)	30.4	32.2	26.5	24.8	9.4	22.7	15.6	14.3	22	25.2	36	26.7	23.8	20.7
DT104-Coursington Rd, Motherwell	26.7	18.4	15.8	7	8.2	8.8	5.4	5.5	9	10	20.1	9.8	12.1	10.5
DT105-Craigneuk Rd, Carfin	J29.5	13.5	10.1	13.3	11.4	11.6	7.8	9.6	13.1	-	18.9	20.6	14.5	12.6
NewDT106-Civic Centre, Motherwell (1)	9.7	24	24.3	13.2	12.3	16.3	-	15.3	19.2	23.8	17.7	23.5	18.1	15.8
NewDT107-Civic Centre, Motherwell (2)	37.7	22.9	24.5	15	16.5	14.6	10.9	13.4	15.3	24.6	30	26	21.0	18.2
NewDT108-Civic Centre, Motherwell (3)	35.4	26.8	22.9	16	32.6	17.8	12.5	14.4	16.3	24	32.7	21.8	22.8	19.8
DT110-New Edinburgh Rd, Uddingston (1)	61.6	41.2	23.1	33.8	30.3	22.9	25.8	27.4	20.4	-	50.3	28.8	33.2	28.9

Site ID	NO_2 Mean Concentrations (µg/m^3)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean	
													Raw Data	Bias Adjusted (1)
DT111-New Edinburgh Rd, Uddingston (2)	62.4	45.9	32.6	31.6	28.8	23.2	-	30.1	30.9	33.8	41.6	31.7	35.7	31.1
DT112-New Edinburgh Rd, Uddingston (3)	59.7	40.9	24.9	25.4	14.9	25.2	-	25.7	29.2	34.4	55	26.1	32.9	28.6
DT113-Tinkers Lane, Motherwell	38.2	23.7	19.3	15.7	16.1	13.6	12.6	14.9	15.3	26.8	27.3	24	20.6	17.9
DT114-Main St, Overtown	33.1	15.6	-	11.5	9.5	15.5	10.3	11.3	9.1	20.3	33.2	20.2	17.2	15.0
DT115-Plantation Rd/Ravenscraig Bypass	31.8	29.6	20.3	19.2	13.2	9.8	5.2	7.2	11.1	5.3	25.9	11.6	15.9	13.8
NewDT116-Airbles Rd (Electric Bar), Motherwell	25.5	16.1	15.8	14	22.8	17.2	-	9.4	15.6	-	43.9	17.7	19.8	17.2
DT117-Hamilton Rd, Motherwell	43.1	30.6	232.3	47.9	22.3	22.7	22	23.8	23.3	33	40.3	28.9	30.9	26.8
NewDT118-Merry St/Dalziel St, Motherwell	43.2	31.9	31.7	20.5	22.8	31.1	16.5	22.7	22.6	34.2	30.6	24.2	27.7	24.1
NewDT119-Shawhead roundabout, Coatbridge(formerly DT118, changed in 2017)	45	24.9	32	12.5	17.7	16.8	22.5	-	24.2	31.9	34.6	37.4	27.2	23.7

Site ID	NO_2 Mean Concentrations (µg/m^3)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean	
													Raw Data	Bias Adjusted (1)
NewDT120-Kirkshaws Rd, Coatbridge (formerly DT119, changed in 2017)	55.9	39.7	28.3	19.4	14.8	15.4	21.4	21.5	16.7	36.4	40.6	26.1	28.0	24.4
DT121-Flannigan Rd, Bellshill	37.4	27.9	22.7	19.2	27.7	15.9	13	13.1	15.5	24.3	41.2	21.4	23.3	20.2
DT122-Main St, Mossend	45.7	22.9	24.5	-	25.4	20.8	20.3	16.7	23	35.8	47.2	20.9	27.6	24.0
DT123-Hamilton Rd, Orbiston, Bellshill	42.3	17.2	18.8	27.3	22.6	29.3	18.1	15.2	14.1	25.1	43.2	30.3	24.5	21.4
DT124-Scotmid, Tannochside	48.8	36	17.9	25.6	21.6	17.2	16.9	18.1	21.4	29.4	44.3	26.5	27.0	23.5
DT125-Main St/Motherwell Rd, Bellshill	32.2	27.1	17.4	27.2	15.3	21.8	18.6	15	15.3	15.2	34.6	19.5	21.6	18.8
DT126-Main St (nr Tesco), Bellshill	38.2	24.5	21.4	21.4	25.7	15.7	14.1	-	-	26.6	38.1	20.2	24.6	21.4
NewDT127-Matalan, Wishaw	48.9	27.9	38.8	20.7	30.8	32.6	16.4	22.5	21.7	32.7	40.2	33.3	30.5	26.6
NewDT128-Wishaw Cross/Stewarton St, Wishaw	52	34	26.6	31	25.7	22.1	20.4	26.8	26.3	36.1	52.6	31.2	32.1	27.9
DT129-Newmain Police Station	52.1	34.3	17.2	33.6	-	26.9	23.5	19.7	17.5	36.8	54.3	29.5	31.4	27.3

Site ID	NO_2 Mean Concentrations (µg/m^3)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean	
													Raw Data	Bias Adjusted (1)
DT130-Main St (bottom), Wishaw	31.4	17.2	18	14.6	16.1	13.5	10.9	9.6	12.4	21	37.5	16.1	18.2	15.8
DT131-Brandon Pl, Bellshill	37.1	20.4	16.9	15.2	8.7	14.1	12	11.1	12.8	17.2	29.6	6.5	16.8	14.6
DT132-Airdrie Rd, Caldercruix	32.1	16.2	17.6	9.8	34.4	9.3	10.9	14.8	13	23.3	26.8	10	18.2	15.8
DT133-Bank St, Coatbridge 1	59.4	42.1	66.3	25	14.9	17.4	23.3	22.3	25.3	43.7	44.1	31	34.6	30.1
DT134-Coatbridge 2, Whifflet	47	34	23.7	15	14.4	11.9	14.5	16.2	22.2	27.1	31.3	23.9	23.4	20.4
DT135-Grahamshill St, Airdrie	44.8	52.3	40.2	25.1	12.3	26.7	32.1	29.7	17.1	36.3	51.7	21.7	32.5	28.3
DT136-Springwells Cres, Airdrie 3	34.2	24.2	10.8	11.7	28.4	9.2	12.8	10.8	12.8	17.6	29.2	45.1	20.6	17.9
NewDT137-Main St, Village, Cumbernauld	43.6	29.7	21.2	24.8	-	-	17	12	16.5	25.5	38.6	29.7	25.9	22.5
DT138-Main St, Chapelhall, nr shops	47.5	29.8	25.1	19.7	36.2	15.9	17.9	15.1	18.5	23.1	45.3	24.5	26.6	23.1
DT139-Lauchope St/Chapelhall junction	61.3	35.9	40.7	24.6	-	15.3	27.3	25	27.6	28.7	33.3	35.3	32.3	28.1
DT140-Dundyvan Rd, Coatbridge	53.3	36.4	32.9	18.4	20.6	12.4	16.3	12.9	16.6	24.9	44.6	30.9	26.7	23.2
NewDT141-31 Station Rd, Shotts	26.4	13.5	12.5	14.6	17.9	7.6	10.7	7.4	4.5	16.7	30	13.7	14.6	12.7

Site ID	NO_2 Mean Concentrations (µg/m^3)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean	
													Raw Data	Bias Adjusted (1)
NewDT142-Stane Gdns, Shotts	33.7	23.1	19.5	13.7	27.8	-	14.1	14.3	11	16.4	23.2	16.8	19.4	16.9
DT143-Main St(2), Harthil, nr shops	27.6	14.9	18.9	16.6	23.2	12.1	9	12.1	17.2	18.7	24.2	-	17.7	15.4
DT144-Lab 1, Constarry Rd, Croy	31.7	24.2	14.6	17.7	13.1	12.6	12.9	9.4	6.5	-	53.3	15.7	19.2	16.7
DT145-Lab 2, Constarry Rd, Croy	27.4	-	37.6	16.7	17.5	4.8	11.4	10.4	11	19.4	31.6	19.9	18.9	16.4
DT146-Lab 3, Constarry Rd, Croy	32.6	23.8	11.7	19.6	16.8	10.8	13.5	9.7	11.3	16	31.9	20.1	18.2	15.8
DT147-Bank St, Coatbridge (nearest house)	61.5	46.5	34	23.3	14.5	15.7	24	21.4	19.7	36	46.1	34.7	31.5	27.4
DT148-Main St, Chapelhall R32	53.9	42.1	29.3	32.3	15.3	-	29.2	26.7	21.7	26.2	48	29.8	32.2	28.0
DT149-Main St, Chapelhall R33	56.2	48	30.7	24.8	16.4	22.8	22.9	22.4	-	46.9	41.9	34.4	33.4	29.1
DT150-Eastfield Rd, Cumbernauld	36.4	25.4	15.2	21.1	28	13.6	15.1	9.4	13.5	22.3	34.9	22.6	21.5	18.7
DT151-Main St, Holytown	40.6	9.2	21.7	21.2	27.6	13.8	13	9.9	14.9	-	28.6	21	20.1	17.5
DT152-Coatbridge Rd, Townhead, Coatbridge (shops)	-	87.4	38.1	19.7	30.6	15.9	18.4	24	28	41.1	48.8	31.2	34.8	30.3

Site ID	NO_2 Mean Concentrations (µg/m^3)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean	
													Raw Data	Bias Adjusted (1)
DT153-72 Townhead Rd, Coatbridge	-	63.6	23.1	15.5	15.1	8.8	11.4	15.1	17	27.2	31.8	18.2	22.4	19.5
DT154-Sunnyside Rd, Coatbridge	63.1	-	34.5	23.5	-	-	23.4	22.3	21.6	35.7	24.7	34.5	31.5	27.4
DT156-Stirling Rd, Airdrie	58.8	45	34	25.1	25.3	23.2	28.7	28.9	28.8	39.4	28.6	26.2	32.7	28.4
NewDT157a-swing park, Castlecary	44.2	45.4	26.2	29.3	16.6	14.8	25.5	18	20.2	29.6	44.8	35.8	29.2	25.4
DT157-31 Station Rd, Muirhead	34.4	36.1	24.2	20.8	11.7	9.7	11.1	19.7	24.1	44.1	54.2	17.8	25.7	22.3
DT158a-Croftmoraig Cres, Moodiesburn	22.8	25.2	19.2	11	11.1	8.7	17.5	13.9	19.2	35.2	42.1	19.3	20.4	17.8
DT158b-Deedes St, Airdrie	55.6	43.2	38.6	31.5	26.8	25.1	31,7	25.4	31.9	37.5	38.5	32.6	34.9	30.3
DT159-Glenview Cres, Moodiesburn	-	26.5	26.5	18.1	13.1	12.7	7.7	12.1	17.9	21	35.2	41.4	21.1	18.4
DT160-The Cuillins, Moodiesburn	16.5	35.4	35.4	18.3	13.2	9.8	9.4	10.5	12.2	17	38.9	37	21.1	18.4
DT161-Bridgend Cres, Moodiesburn	25.2	23.8	23.8	16.8	11.2	13.4	8.5	8.9	12.1	13	29.3	30.5	18.0	15.7
DT162-Auchingeoch Rd, Moodiesburn	33.1	24.4	24.4	18.7	14.2	14.1	7.9	11	15.5	17.9	34.2	36.9	21.0	18.3

Site ID	NO_2 Mean Concentrations (µg/m^3)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean	
													Raw Data	Bias Adjusted (1)
DT163-12 Inchwood Rd, Westfield, Cumbernauld	36.9	31.9	31.9	29.4	19.8	12.8	8.9	9.7	19	20.6	42.9	36.1	25.0	21.7
DT164-12 Leckethill Court, Westfield, Cumbernauld	39.5	20.3	20.3	18.2	12.7	19.5	8.6	15.7	13.7	17.9	31.8	43.5	21.8	19.0
DT165-Kildonan St, Coatbridge	56.7	30.2	-	12.2	32.1	-	13l6	17.3	21	23.5	38.8	21.8	26.7	23.2
DT166-22 Cumbernauld Rd, Chryston	46.9	29.9	29.9	27.3	22.5	37.1	13.6	8	20.4	28.4	45.2	50	29.9	26.0

(1) See Appendix C for details on bias adjustment

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

Diffusion Tube Bias Adjustment Figures

The national bias adjustment factor spreadsheet 06/20 was used to derive the national bias adjustment factor for diffusion tubes analysed by Glasgow Scientific Services during 2019. Using all sites, the factor was found to be 0.87. Using only those with Good Precision the factor was also 0.87. The factor of 0.87 was used in this assessment. See Figure C.1 below.

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 06/20

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

This spreadsheet will be updated at the end of September 2020
LAQM Helpdesk Website

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

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

Step 1:	Step 2:	Step 3:	Step 4:
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data[2]	If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953

Analysed By[1]	Method (To undo your selection, choose (All) from the pop-up list)	Year[2] (To undo your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[5]	Bias Adjustment Factor (A) (Cm/Dm)
Glasgow Scientific Services	20% TEA in water	2019	R	East Dunbartonshire Council	12	36	32	13.0%	P	0.88
Glasgow Scientific Services	20% TEA in water	2019	R	East Dunbartonshire Council	12	33	27	22.9%	G	0.81
Glasgow Scientific Services	20% TEA in water	2019	R	East Dunbartonshire Council	11	23	19	19.5%	P	0.84
Glasgow Scientific Services	20% TEA in water	2019	KS	Marylebone Road Intercomparison	12	79	65	21.0%	G	0.83
Glasgow Scientific Services	20% TEA in water	2019	R	Glasgow City Council	12	44	35	26.0%	G	0.79
Glasgow Scientific Services	20% TEA in water	2019	R	Glasgow City Council	10	33	30	10.2%	G	0.91
Glasgow Scientific Services	20% TEA in water	2019	R	Glasgow City Council	12	36	30	22.8%	G	0.81
Glasgow Scientific Services	20% TEA in water	2019	KS	Glasgow City Council	12	65	56	16.0%	G	0.86
Glasgow Scientific Services	20% TEA in water	2019	UB	Glasgow City Council	12	29	24	18.5%	G	0.84
Glasgow Scientific Services	20% TEA in water	2019	R	East Ayrshire Council	12	26	24	6.9%	G	0.94
Glasgow Scientific Services	20% TEA in water	2019	R	East Dunbartonshire Council	12	26	26	-2.4%	G	1.02
Glasgow Scientific Services	20% TEA in water	2019		Overall Factor[3] (11 studies)				Use		0.87

Figure C.1 Glasgow Scientific Services – National Average Bias Adjustment Factor 2019

Particulate Matter (PM) Monitoring Adjustment

North Lanarkshire Council monitor PM_{10} using three types of analyser:-

- Beta-attenuation monitor (BAM);
- Tapered Element Oscillating Microbalance (TEOM); and
- FIDAS.

Both BAM and TEOM analysers are maintained by Horiba and undergo regular calibration. The Beta-attenuation monitors (BAMs) used by the Council have a heated inlet which has been found to cause evaporation of some semi-volatile particles thereby reducing the measured PM_{10} concentration. All data have been provided and ratified and gravimetric equivalent by Ricardo Energy and Environment.

The Council's FIDAS particulate analysers are maintained and serviced twice annually by Air Monitors. Again, regular calibration is undertaken of these analysers and the data ratified by Ricardo Energy and Environment.

NO_2 Monitoring Annualisation

The data capture for automatic NO_2 was low (below 40%) at all of the Council's automatic analysers in 2019. As previously outlined in the report this was due to the trialling and subsequent installation of new data management software which was not fully installed until September 2019. As a result of this the annual mean concentrations for NO_2 were annualised in accordance with the technical guidance TG(16).

Table C.1 Automatic Analyser Annualisations 2019

NO_2 Annualisation

Automatic Site	January	February	March	April	May	June	July	August	September	October	November	December	Annual Mean as per Scottish AQ
Glasgow Townhead	41	36	22	21	18	14	13	15	19	25	37	31	24
Walkmillglen	13	14	5	12	6	6	5	4	5	10	24	9	9

Site	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Period Mean as per Scottish AQ	Months available for monitoring year	Monitoring Period	Annualisation Ratio	Annualised Data
CM1-Chapelhall									23	23	27	34	27.0	4	4	0.80	21.7
CM2-Croy								12	15	19	26	23	21.0	5	5	0.91	19.0
CM3-Whifflet, Coatbridge								12	14	17	26	22	19.0	5	5	0.91	17.2
CM5-Shawhead, Coatbridge										26	32	29	29.0	3	3	0.70	20.3
CM6-Kirkshaws, Coatbridge										34	31	26	29.0	3	3	0.70	20.3

CM7-New Edinburgh Rd, Uddingston								16	21	25	37	29	27.0	5	5	0.91	24.4
CM8-Sunnyside Rd, Coatbridge								13	18	22	33	30	25.0	5	5	0.91	22.6
CM10-Kenilworth Dr, Airdrie									18	18	22	26	21.0	4	4	0.80	16.9

PM_{10} Annualisation

Automatic Site	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual Mean as Per Scottish AQ
Glasgow Townhead	12	19	11	21	8	8	8	9	9	9	13	9	11
Waukmillhead	9	15	9	19	6	7	7	7	7	6	8	6	9

Site	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Period Mean as per Scottish AQ	Months Available for Monitoring year	Monitoring Period	Annualisation Ratio	Annualised Data
CM3-Whifflet, Coatbridge								13	11	10	11	9	11.0	5	5	1.22	13.5
CM7-New Edinburgh Rd, Uddingston								10	10	10	14	15	11.0	5	5	1.22	13.5
CM10-Kenilworth									11	10	11	9	10.0	4	4	1.22	12.2

Dr, Airdrie																
CM9-Civic Centre, Motherwell	10	16	10	20	8							12.9	5	5	0.78	10.0

$PM_{2.5}$ Annualisation

Automatic Site	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual Mean as per Scottish AQ
Glasgow Townhead	7	12	6	14	4	4	5	5	5	5	9	6	7
Waulkmillglen	6	10	5	13	4	4	4	4	4	3	6	4	6

Site	Jan	Feb	March	April	My	June	July	Aug	Sept	Oct	Nov	Dec	Period Mean as per Scottish AQ	Months Available for monitoring year	Monitoring Period	Annualisation Ratio	Annualised Data
CM9-Civic Centre, Motherwell	6.5	11.5	6.1	14.1	4.4								8.5	5	5	0.80	6.8

QA/QC of Diffusion Tube Data

The diffusion tubes for the year 2019 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 AIR-PT Scheme (a continuation of the Workplace Analysis Scheme for Proficiency (WASP) for NO_2 tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO_2 concentrations reported are of a high calibre.

The latest AIR-PT results were as follows:

- AIR-PT AR028 (September – October 2018) – 100%
- AIR-PT AR030 (January to February 2019) – 100%
- AIR-PT AR031 (April to May 2019) – 100%
- AIR-PT AR033 (July-August 2019) – 100%
- AIR-PT AR034 (September to November 2019) – 50%

Over a rolling five round AIR-PT window, it is expected that 95% of laboratory results should be ≤+2. If this percentage is substantially lower than 95% for a particular laboratory, within this five round window, then one can conclude that the laboratory in question may have sources of error within their analytical procedure.

For the latest five round window 90% of GSS results were ≤+2 therefore the diffusion tube performance over this period has been assessed satisfactory.

The AIR-PT AR034 result of 50% was investigated by the laboratory to the satisfaction of their accreditation body UKAS and no reprocessing was required.

QA/QC of Automatic Monitoring Data

The QA/QC of automatic monitoring sites within North Lanarkshire are managed by Ricardo Energy and Environment. The annual reports produced by Ricardo for each of the monitoring sites are included overleaf.

7. Air Pollution Report

7.1 1st January to 31st December 2019

Air Quality in Scotland

N Lanarkshire Coatbridge Whifflet (Site ID: NL1)

These data have been fully ratified

Only relevant statistics for LAQM are presented in the table. Cells with - indicate no data available or calculated.

Pollutant	NO µg/m³	NO_2 µg/m³	NO_x as NO_2 µg/m³	PM_{10} µg/m³
Number Days Low	-	137	-	116
Number Days Moderate	-	0	-	0
Number Days High	-	0	-	0
Number Days Very High	-	0	-	0
Max Daily Mean	127	54	246	45
Annual Max	349	89	620	172
Annual Mean	12	19	37	11
98th Percentile of daily mean	-	-	-	22
90th Percentile of daily mean	-	-	-	16
99.8th Percentile of hourly mean	-	78	-	-
98th Percentile of hourly mean	117	62	236	26
95th Percentile of hourly mean	61	51	143	22
50th Percentile of hourly mean	3	14	19	9
% Annual data capture	**37.39%**	**37.39%**	**37.39%**	**32.04%**

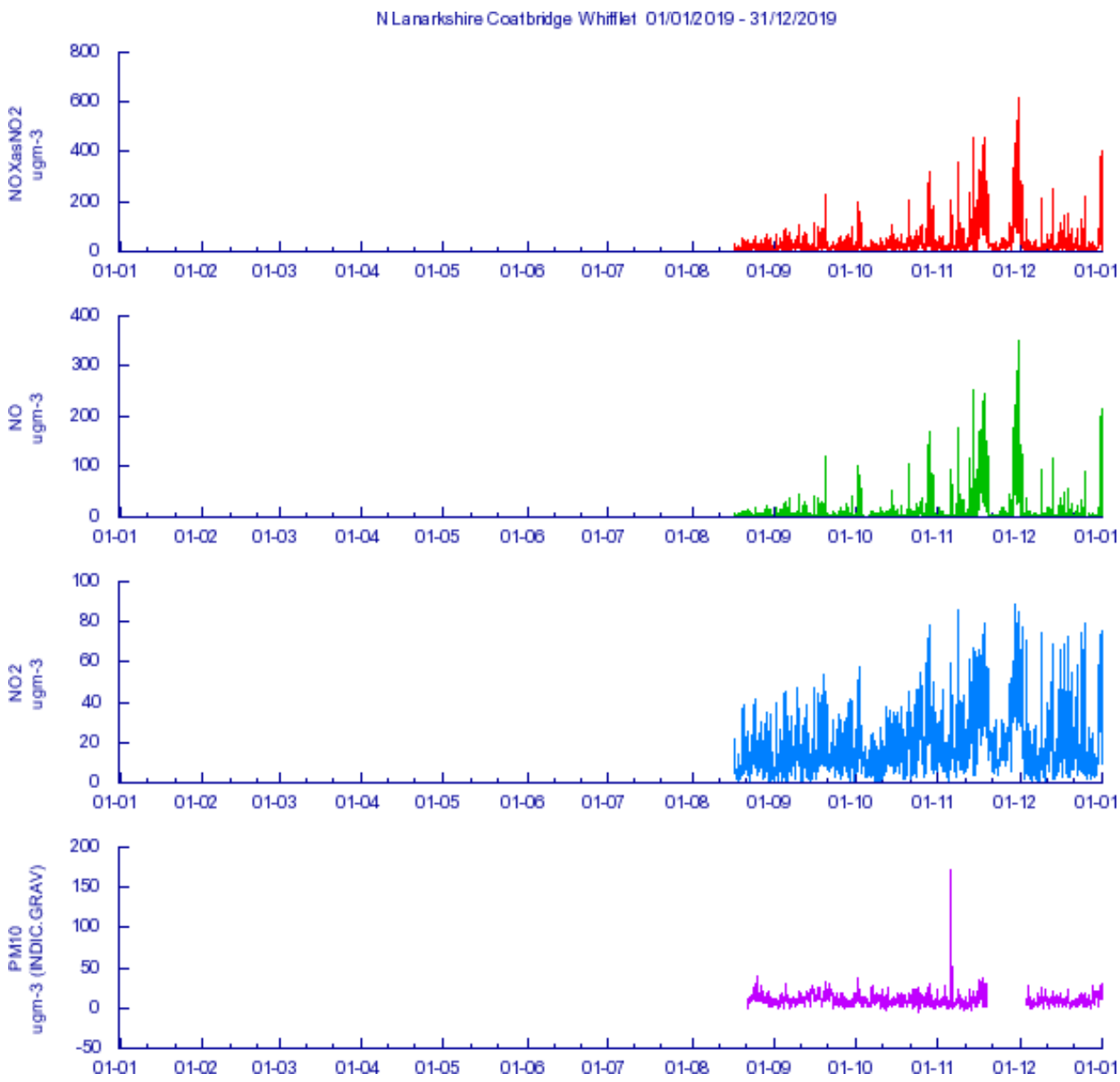
All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO_X mass units are NO_X as NO_2 µg m-3

Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 microgrammes per metre cubed	0	0
PM10 particulate matter (Hourly measured)	Annual mean > 18 microgrammes per metre cubed	0	-
Nitrogen dioxide	Hourly Mean > 200 microgrammes per metre cubed	0	0

Nitrogen dioxide	Annual Mean > 40 microgrammes per metre cubed	0	-

Note: For a strict comparison against the objectives there must be a data capture of 85% or greater throughout the calendar year.

Annual Graph



Air Pollution Report

1st January to 31st December 2019

Air Quality in Scotland

N Lanarkshire Chapelhall (Site ID: NL3)

These data have been fully ratified

Only relevant statistics for LAQM are presented in the table. Cells with - indicate no data available or calculated.

Pollutant	NO µg/m³	NO_2 µg/m³	NO_x as NO_2 µg/m³	PM_{10} µg/m³	PM_{25} µg/m³
Number Days Low	-	118	-	357	358
Number Days Moderate	-	0	-	1	0
Number Days High	-	0	-	0	0
Number Days Very High	-	0	-	0	0
Max Daily Mean	81	62	178	57	31
Annual Max	317	143	629	242	66
Annual Mean	26	27	66	10	6
98th Percentile of daily mean	-	-	-	29	-
90th Percentile of daily mean	-	-	-	18	-
99.8th Percentile of hourly mean	-	112	-	-	-
98th Percentile of hourly mean	126	85	274	34	21
95th Percentile of hourly mean	89	69	207	25	15
50th Percentile of hourly mean	13	22	44	8	4
% Annual data capture	**32.24%**	**32.23%**	**32.23%**	**98.36%**	**98.36%**

Instruments: PM_{10}: FIDAS

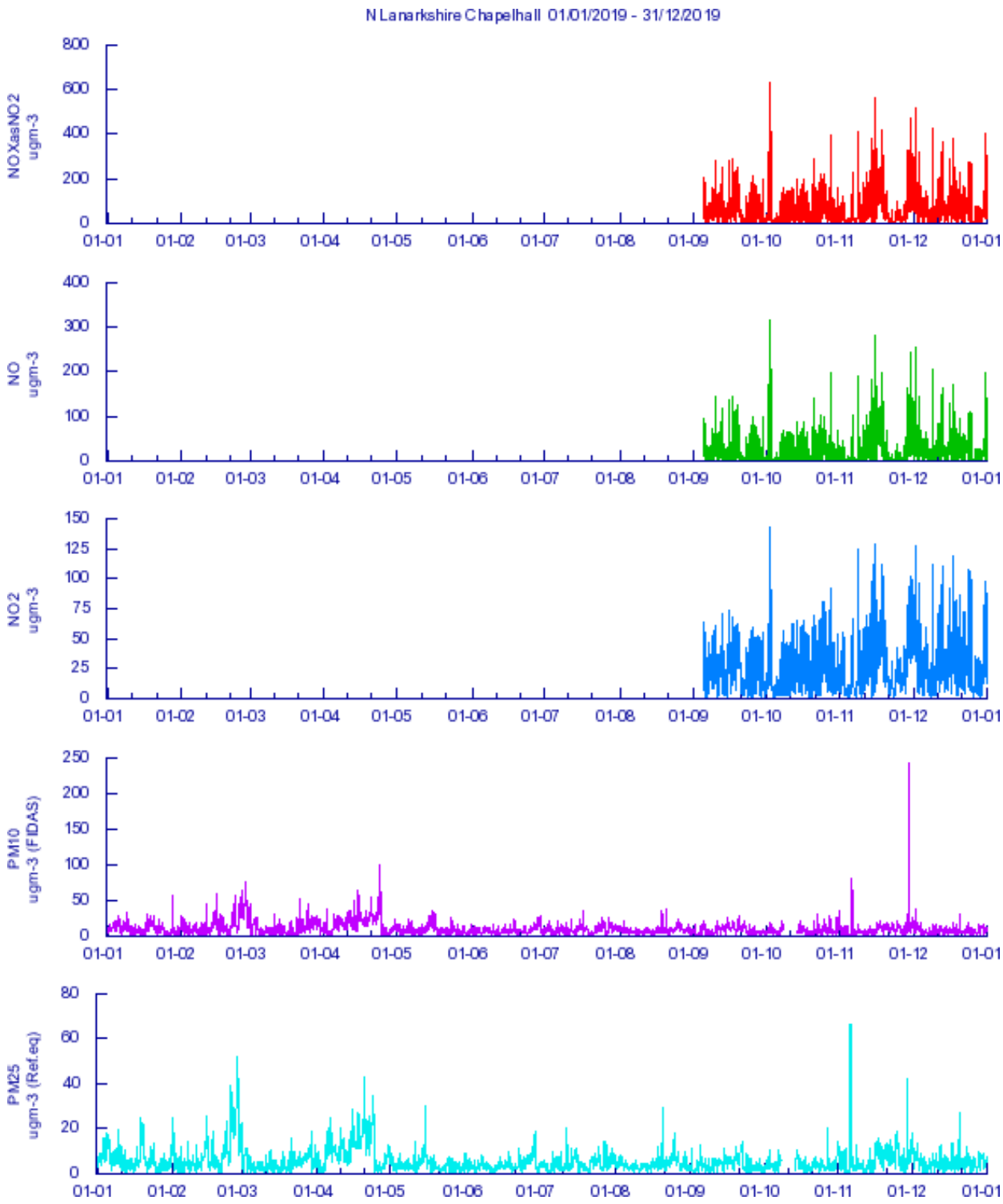
PM_{25}: FIDAS

All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO_X mass units are NO_X as NO_2 µg m-3

Note: For a strict comparison against the objectives there must be a data capture of 85% or greater throughout the calendar year.

Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 microgrammes per metre cubed	1	1
PM10 particulate matter (Hourly measured)	Annual mean > 18 microgrammes per metre cubed	0	-
PM2.5 particulate matter (Hourly measured)	Annual mean > 12 microgrammes per metre cubed	0	-
Nitrogen dioxide	Hourly Mean > 200 microgrammes per metre cubed	0	0
Nitrogen dioxide	Annual Mean > 40 microgrammes per metre cubed	0	-

Annual Graph



Air Pollution Report

1st January to 31st December 2019

Air Quality in Scotland

N Lanarkshire Croy (Site ID: NL4)

These data have been fully ratified

Only relevant statistics for LAQM are presented in the table. Cells with - indicate no data available or calculated.

Pollutant	NO µg/m³	NO_2 µg/m³	NO_x as NO_2 µg/m³	SO_2 µg/m³	PM_{10} µg/m³	PM_{25} µg/m³
Number Days Low	-	125	-	0	362	364
Number Days Moderate	-	0	-	0	2	1
Number Days High	-	0	-	0	1	0
Number Days Very High	-	0	-	0	0	0
Max 15 min SO2	-	-	-	-	-	-
Max Daily Mean	123	52	240	-	84	37
Annual Max	260	91	490	-	474	68
Annual Mean	16	21	44	-	11	6
98th Percentile of daily mean	-	-	-	-	39	-
90th Percentile of daily mean	-	-	-	-	23	-
99.9th Percentile of 15 minute mean	-	-	-	-	-	-
99.8th Percentile of hourly mean	-	77	-	-	-	-
99.7th Percentile of hourly mean	-	-	-	-	-	-
98th Percentile of hourly mean	124	60	237	-	48	26
95th Percentile of hourly mean	73	51	158	-	33	19
50th Percentile of hourly mean	6	16	24	-	8	4
% Annual data capture	**33.90%**	**33.90%**	**33.90%**	**-**	**99.87%**	**99.89%**

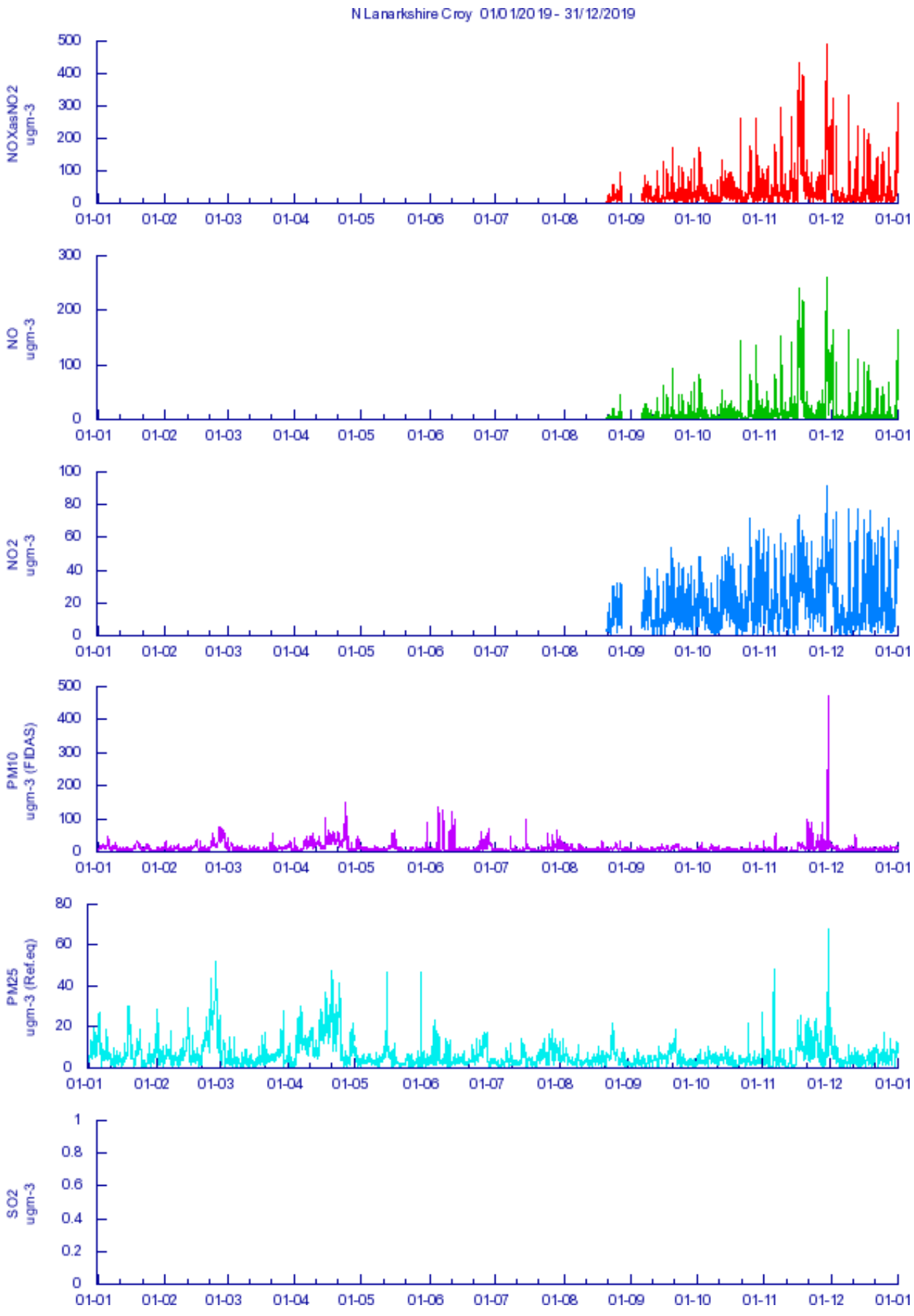
Instruments: PM_{10}: FIDAS PM_{25}: FIDAS

All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO_X mass units are NO_X as NO_2 µg m-3

Note: For a strict comparison against the objectives there must be a data capture of 85% or greater throughout the calendar year.

Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 microgrammes per metre cubed	3	3
PM10 particulate matter (Hourly measured)	Annual mean > 18 microgrammes per metre cubed	0	-
PM2.5 particulate matter (Hourly measured)	Annual mean > 12 microgrammes per metre cubed	0	-
Nitrogen dioxide	Hourly Mean > 200 microgrammes per metre cubed	0	0
Nitrogen dioxide	Annual Mean > 40 microgrammes per metre cubed	0	-
Sulphur dioxide	15 Minute mean > 266 microgrammes per metre cubed	0	0
Sulphur dioxide	Hourly mean > 350 microgrammes per metre cubed	0	0
Sulphur dioxide	Daily Mean > 125 microgrammes per metre cubed	0	0
Sulphur dioxide	Annual mean > 20 microgrammes per metre cubed	0	-
Sulphur dioxide	Winter Mean > 20 microgrammes per metre cubed	0	-

Annual Graph



Air Pollution Report

1st January to 31st December 2019

Air Quality in Scotland

N Lanarkshire Motherwell (Site ID: NL6)

These data have been fully ratified

Only relevant statistics for LAQM are presented in the table. Cells with - indicate no data available or calculated.

Pollutant		PM_{10} µg/m³	PM_{25} µg/m³
Number Days Low	350		350
Number Days Moderate	2		2
Number Days High	0		0
Number Days Very High	0		0
Max Daily Mean	63		37
Annual Max	137		93
Annual Mean	11		6
98th Percentile of daily mean	32		-
90th Percentile of daily mean	20		-
98th Percentile of hourly mean	39		25
95th Percentile of hourly mean	27		17
50th Percentile of hourly mean	8		4
% Annual data capture	**96.66%**		**96.66%**

Instruments: PM_{10}: FIDAS

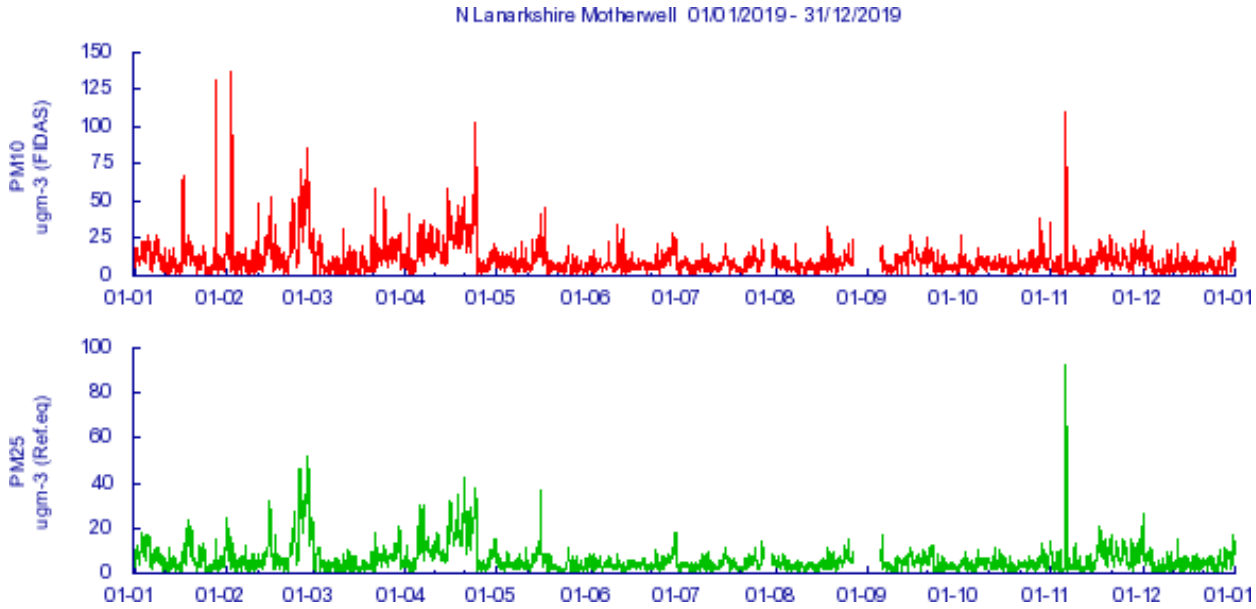
PM_{25}: FIDAS

All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO_X mass units are NO_X as NO_2 µg m-3

Note: For a strict comparison against the objectives there must be a data capture of 85% or greater throughout the calendar year.

Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 micrograms per metre cubed	2	2
PM10 particulate matter (Hourly measured)	Annual mean > 18 micrograms per metre cubed	0	-
PM2.5 particulate matter (Hourly measured)	Annual mean > 12 micrograms per metre cubed	0	-

Annual Graph



Air Pollution Report

1st January to 31st December 2019

Air Quality in Scotland

N Lanarkshire Shawhead Coatbridge (Site ID: NL7)

These data have been fully ratified

Only relevant statistics for LAQM are presented in the table. Cells with - indicate no data available or calculated.

Pollutant	NO µg/m³	NO_2 µg/m³	NO_x as NO_2 µg/m³	PM_{10} µg/m³	PM_{25} µg/m³
Number Days Low	-	75	-	363	365
Number Days Moderate	-	0	-	2	0
Number Days High	-	0	-	0	0
Number Days Very High	-	0	-	0	0
Max Daily Mean	109	65	229	58	35
Annual Max	384	135	717	174	146
Annual Mean	22	29	64	10	6
98th Percentile of daily mean	-	-	-	30	-
90th Percentile of daily mean	-	-	-	17	-
99.8th Percentile of hourly mean	-	113	-	-	-
98th Percentile of hourly mean	146	88	296	34	24
95th Percentile of hourly mean	96	73	212	24	16
50th Percentile of hourly mean	8	24	36	8	4
% Annual data capture	**20.29%**	**20.29%**	**20.29%**	**99.86%**	**99.86%**

Instruments: PM_{10}: FIDAS

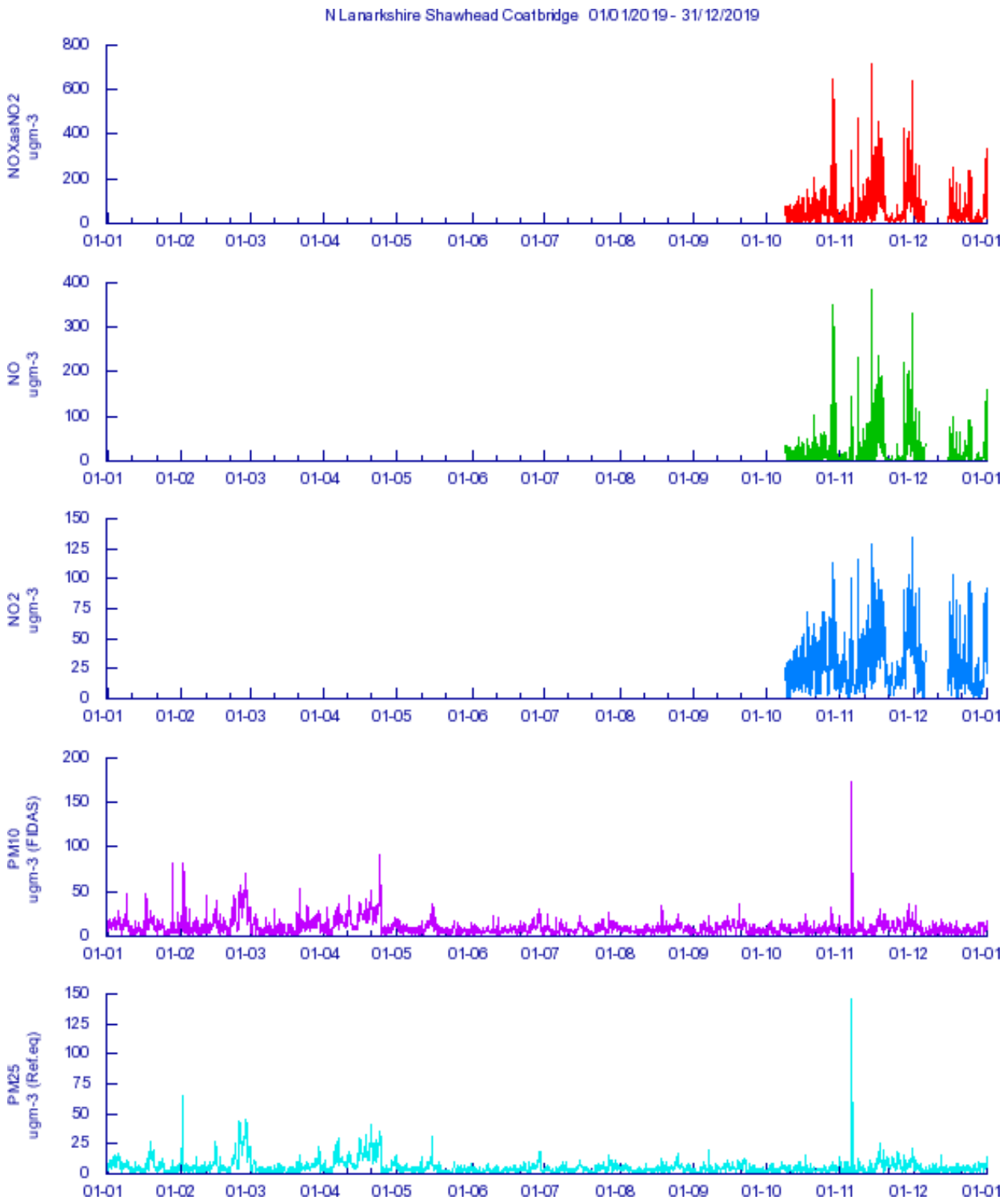
PM_{25}: FIDAS

All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO_X mass units are NO_X as NO_2 µg m-3

Note: For a strict comparison against the objectives there must be a data capture of 85% or greater throughout the calendar year.

Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 microgrammes per metre cubed	2	2
PM10 particulate matter (Hourly measured)	Annual mean > 18 microgrammes per metre cubed	0	-
PM2.5 particulate matter (Hourly measured)	Annual mean > 12 microgrammes per metre cubed	0	-
Nitrogen dioxide	Hourly Mean > 200 microgrammes per metre cubed	0	0
Nitrogen dioxide	Annual Mean > 40 microgrammes per metre cubed	0	-

Annual Graph



Air Pollution Report

1st January to 31st December 2019

Air Quality in Scotland

N Lanarkshire Kirkshaws (Site ID: NL11)

These data have been fully ratified

Only relevant statistics for LAQM are presented in the table. Cells with - indicate no data available or calculated.

Pollutant	NO µg/m³	NO_2 µg/m³	NO_x as NO_2 µg/m³	PM_{10} µg/m³	PM_{25} µg/m³
Number Days Low	-	58	-	350	351
Number Days Moderate	-	0	-	1	0
Number Days High	-	0	-	0	0
Number Days Very High	-	0	-	0	0
Max Daily Mean	130	68	265	53	34
Annual Max	350	132	668	229	191
Annual Mean	26	29	69	10	6
98th Percentile of daily mean	-	-	-	38	-
90th Percentile of daily mean	-	-	-	18	-
99.8th Percentile of hourly mean	-	114	-	-	-
98th Percentile of hourly mean	205	88	395	37	25
95th Percentile of hourly mean	139	75	284	25	17
50th Percentile of hourly mean	4	23	29	8	4
% Annual data capture	**15.89%**	**15.89%**	**15.89%**	**96.46%**	**96.46%**

Instruments: PM_{10}: FIDAS

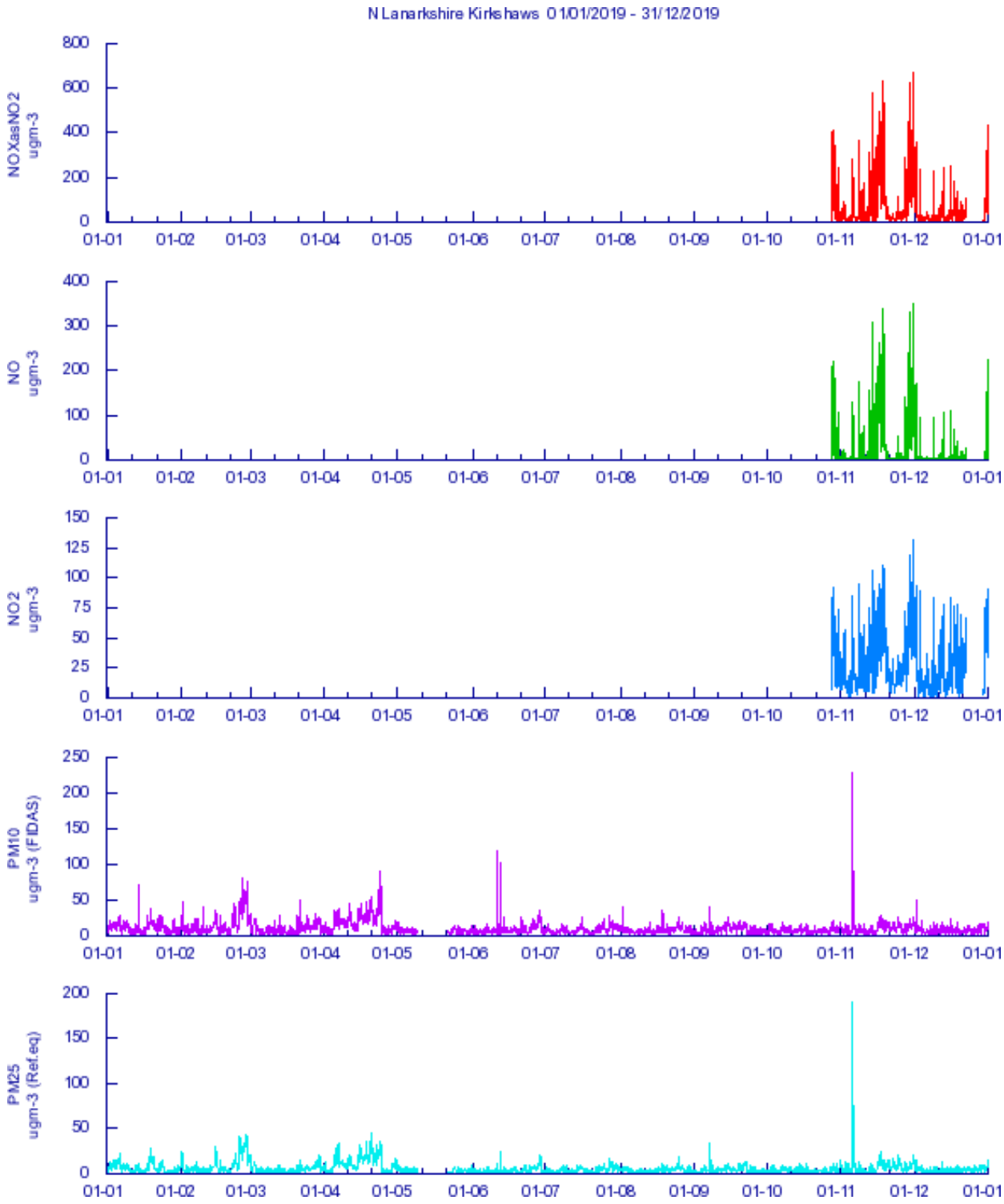
PM_{25}: FIDAS

All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO_X mass units are NO_X as NO_2 µg m-3

Note: For a strict comparison against the objectives there must be a data capture of 85% or greater throughout the calendar year.

Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 microgrammes per metre cubed	1	1
PM10 particulate matter (Hourly measured)	Annual mean > 18 microgrammes per metre cubed	0	-
PM2.5 particulate matter (Hourly measured)	Annual mean > 12 microgrammes per metre cubed	0	-
Nitrogen dioxide	Hourly Mean > 200 microgrammes per metre cubed	0	0
Nitrogen dioxide	Annual Mean > 40 microgrammes per metre cubed	0	-

Annual Graph



Air Pollution Report

Produced by Ricardo Energy & Environment on behalf of North Lanarkshire Council

N Lanarkshire Motherwell Civic Centre

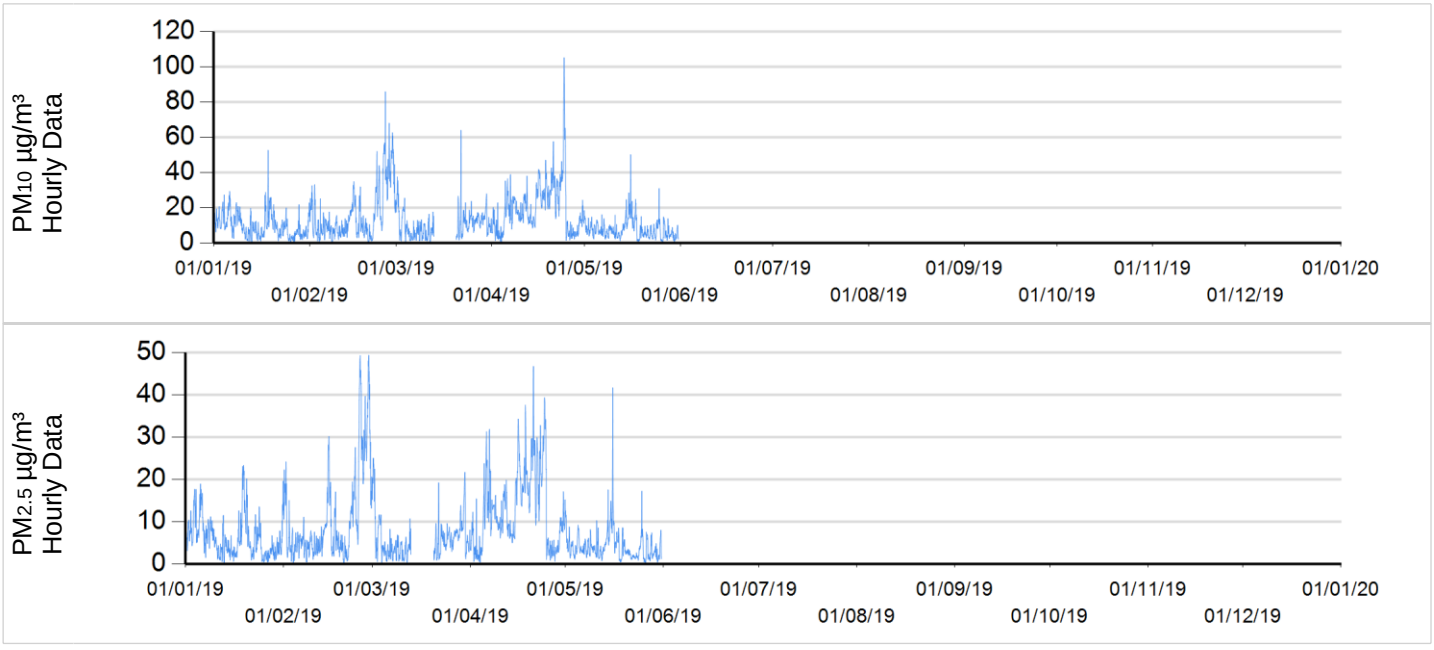
01/01/2019 to 31/12/2019

These data have been fully ratified

Correction Factor for Gravimetric Equivalence applied

	V High (No. of Days)	High (No. of Days)	Mod (No. of Days)	Low (No. of Days)	Max. Hourly Conc.	Max. Daily Conc.	Max. Running 8 Hour Mean	Max. Running 24 Hour Mean	Period Mean Conc.	Period Data Capture (%)
PM_{10} (µg/m³)	0	0	1	141	105	63	89	64	13	39.2
$PM_{2.5}$ (µg/m³)	0	0	2	140	49	37	47	40	8	39.2

	Air Quality Objective	Exceedances	Days
PM_{10}	Daily mean > 50 µg/m³	1	1
PM_{10}	Period mean > annual mean obj 40 µg/m³	No	
$PM_{2.5}$	Period mean > annual mean obj 10 µg/m³ (Scotland)	No	
$PM_{2.5}$	Period mean > annual mean obj 20 µg/m³ (EU)	No	
$PM_{2.5}$	Period mean > annual mean obj 25 µg/m³ (UK)	No	
Note: When comparing site measurements against the air quality objectives data capture should meet or exceed 90% across a calendar year.			



Air Pollution Report

Air Quality in Scotland

1st January to 31st December 2019

N Lanarkshire Airdrie Kenilworth Dr (Site ID: NL013)

These data have been fully ratified

Only relevant statistics for LAQM are presented in the table. Cells with - indicate no data available or calculated.

Pollutant	NO µg/m³	NO_2 µg/m³	NO_x as NO_2 µg/m³	PM_{10} µg/m³
Number Days Low	-	116	-	104
Number Days Moderate	-	0	-	0
Number Days High	-	0	-	0
Number Days Very High	-	0	-	0
Max Daily Mean	84	54	167	30
Annual Max	175	88	336	191
Annual Mean	16	21	46	10
98th Percentile of daily mean	-	-	-	21
90th Percentile of daily mean	-	-	-	17
99.8th Percentile of hourly mean	-	83	-	-
98th Percentile of hourly mean	96	65	209	26
95th Percentile of hourly mean	64	56	150	21
50th Percentile of hourly mean	8	17	29	9
% Annual data capture	**31.68%**	**31.68%**	**31.68%**	**28.81%**

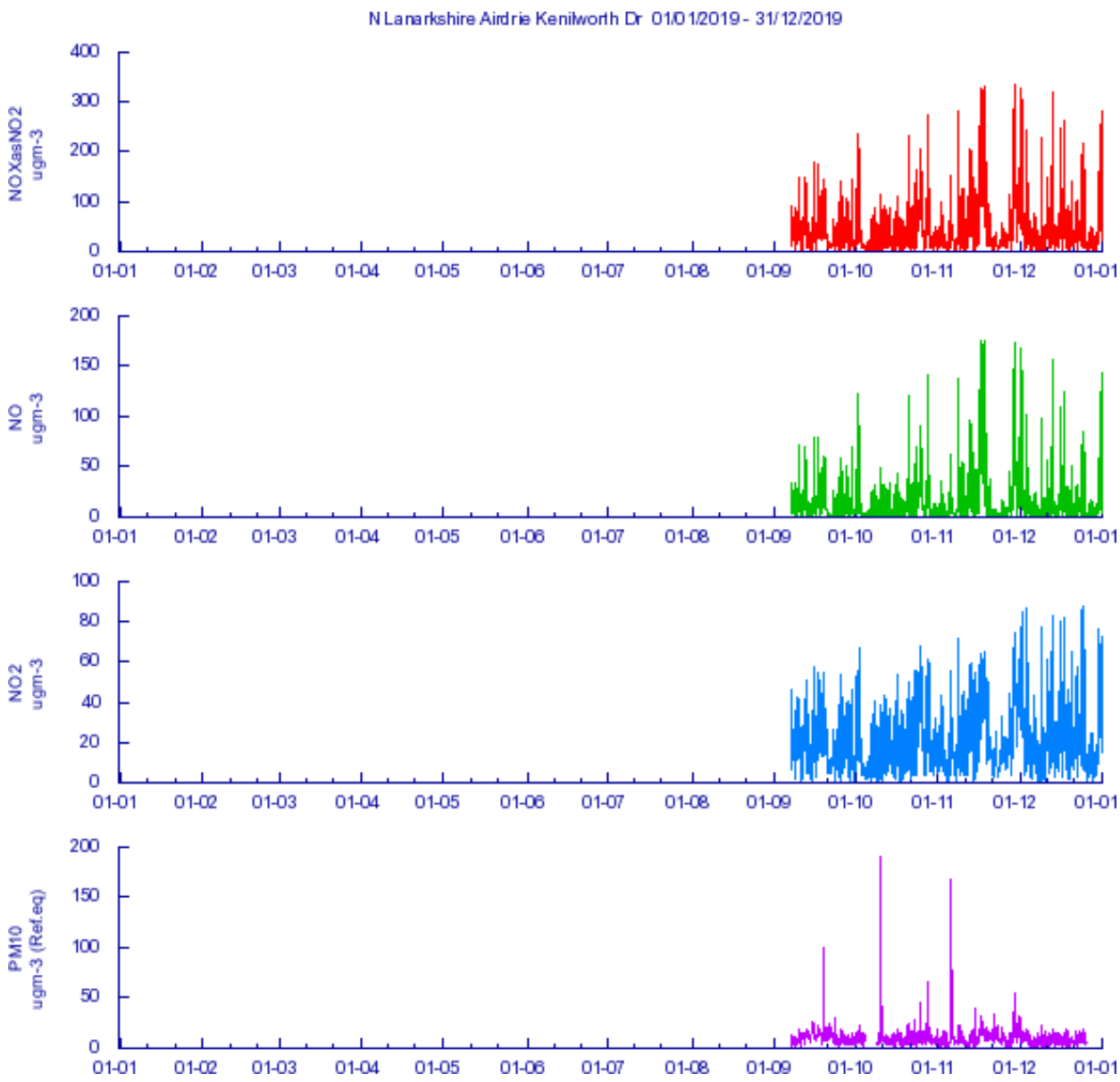
Instruments: PM_{10}: BAM Gravimetric Equivalent (correction applied)

All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO_X mass units are NO_X as NO_2 µg m-3

Note: For a strict comparison against the objectives there must be a data capture of 85% or greater throughout the calendar year.

Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 microgrammes per metre cubed	0	0
PM10 particulate matter (Hourly measured)	Annual mean > 18 microgrammes per metre cubed	0	-
Nitrogen dioxide	Hourly Mean > 200 microgrammes per metre cubed	0	0
Nitrogen dioxide	Annual Mean > 40 microgrammes per metre cubed	0	-

Annual Graph



Air Pollution Report

Air Quality in Scotland

1st January to 31st December 2019

N Lanarkshire Uddingston New Edinburgh Rd (Site ID: NL014)

These data have been fully ratified

Only relevant statistics for LAQM are presented in the table. Cells with - indicate no data available or calculated.

Pollutant	NO µg/m³	NO_2 µg/m³	NO_x as NO_2 µg/m³	PM_{10} µg/m³
Number Days Low	-	137	-	106
Number Days Moderate	-	0	-	0
Number Days High	-	0	-	0
Number Days Very High	-	0	-	0
Max Daily Mean	167	58	306	27
Annual Max	394	96	690	110
Annual Mean	28	27	70	11
98th Percentile of daily mean	-	-	-	21
90th Percentile of daily mean	-	-	-	17
99.8th Percentile of hourly mean	-	87	-	-
98th Percentile of hourly mean	198	73	366	29
95th Percentile of hourly mean	128	63	255	23
50th Percentile of hourly mean	12	23	41	10
% Annual data capture	**37.42%**	**37.42%**	**37.42%**	**29.55%**

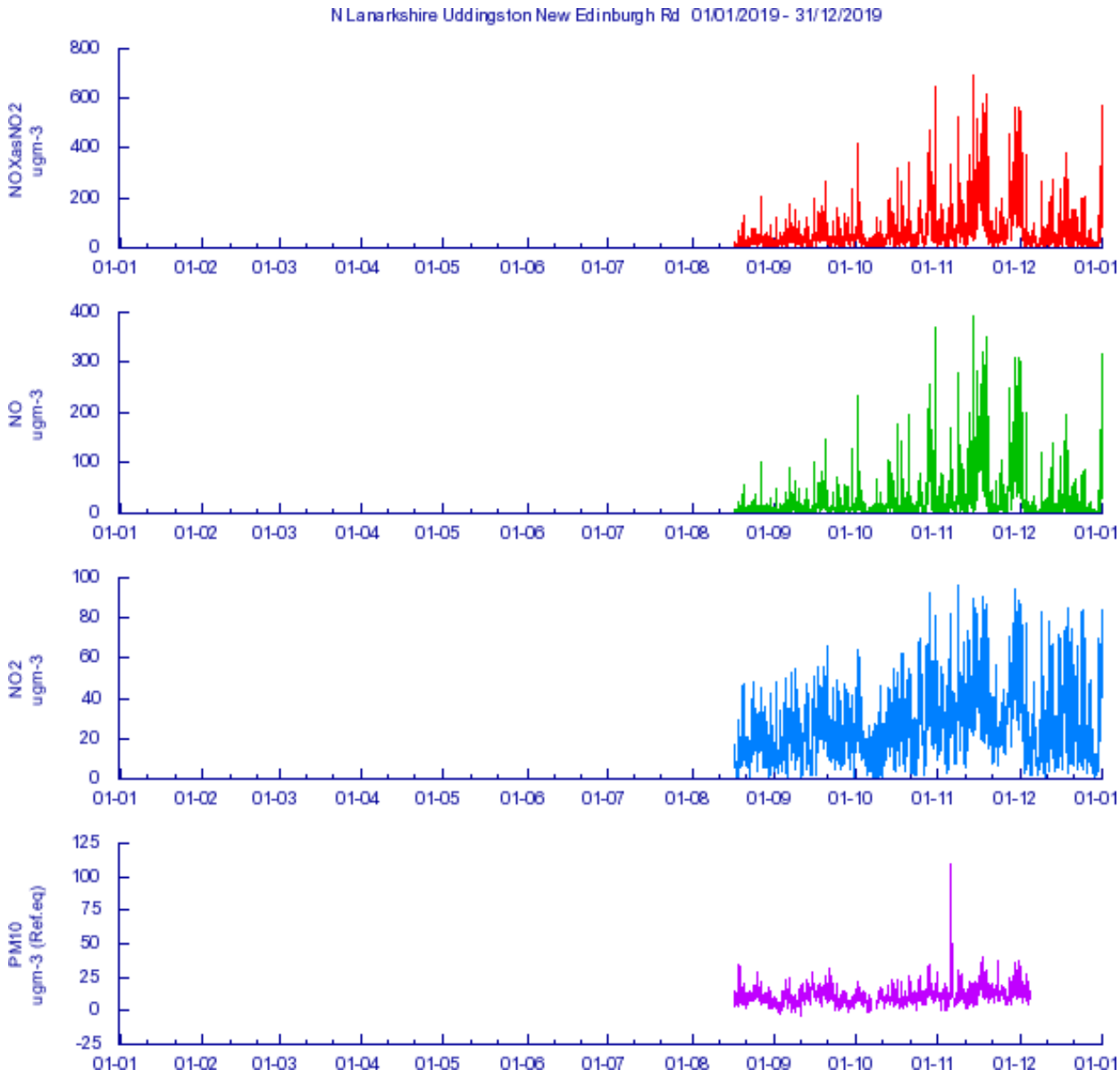
Instruments: PM_{10}: BAM Gravimetric Equivalent (correction applied)

All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO_X mass units are NO_X as NO_2 µg m-3

Note: For a strict comparison against the objectives there must be a data capture of 85% or greater throughout the calendar year.

Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 microgrammes per metre cubed	0	0
PM10 particulate matter (Hourly measured)	Annual mean > 18 microgrammes per metre cubed	0	-
Nitrogen dioxide	Hourly Mean > 200 microgrammes per metre cubed	0	0
Nitrogen dioxide	Annual Mean > 40 microgrammes per metre cubed	0	-

Annual Graph



Air Pollution Report

Air Quality in Scotland

1st January to 31st December 2019

N Lanarkshire Coatbridge Sunnyside Rd (Site ID: NL015)

These data have been fully ratified

Only relevant statistics for LAQM are presented in the table. Cells with - indicate no data available or calculated.

Pollutant	NO µg/m³	NO_2 µg/m³	NO_x as NO_2 µg/m³	PM_{10} µg/m³
Number Days Low	-	130	-	0
Number Days Moderate	-	0	-	0
Number Days High	-	0	-	0
Number Days Very High	-	0	-	0
Max Daily Mean	223	75	417	No data
Annual Max	544	131	927	No data
Annual Mean	23	25	61	No data
98th Percentile of daily mean	-	-	-	No data
90th Percentile of daily mean	-	-	-	No data
99.8th Percentile of hourly mean	-	105	-	-
98th Percentile of hourly mean	208	81	390	No data
95th Percentile of hourly mean	116	65	230	No data
50th Percentile of hourly mean	7	20	31	No data
% Annual data capture	**35.48%**	**35.48%**	**35.48%**	**0.00%**

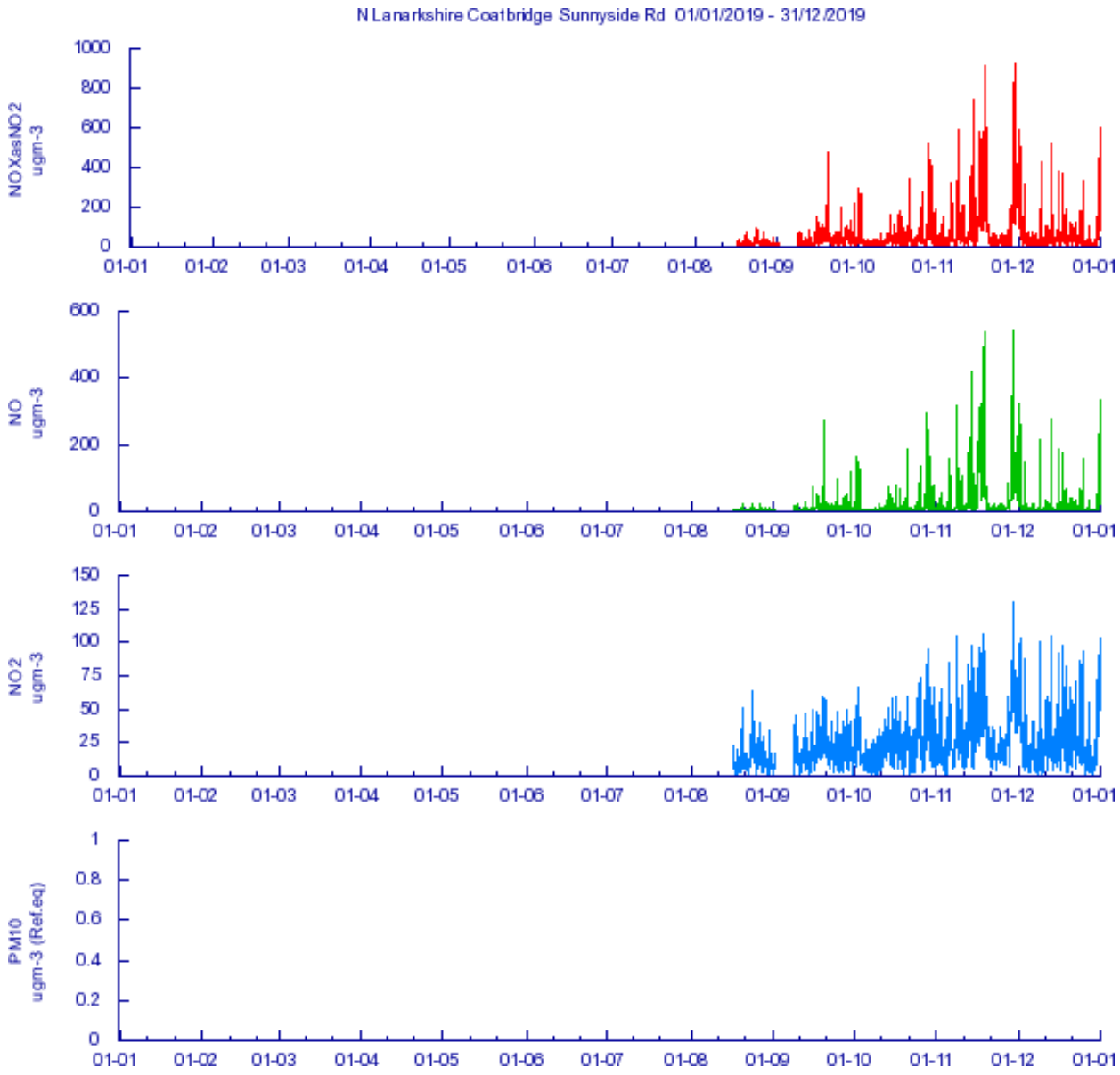
Instruments: PM_{10}: BAM Gravimetric Equivalent (correction applied)

All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO_X mass units are NO_X as NO_2 µg m-3

Note: For a strict comparison against the objectives there must be a data capture of 85% or greater throughout the calendar year.

Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 microgrammes per metre cubed	0	0
PM10 particulate matter (Hourly measured)	Annual mean > 18 microgrammes per metre cubed	0	-
Nitrogen dioxide	Hourly Mean > 200 microgrammes per metre cubed	0	0
Nitrogen dioxide	Annual Mean > 40 microgrammes per metre cubed	0	-

Annual Graph



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

Technical Guidance TG(16), Defra

Cleaner Air for Scotland : An Air Quality Strategy for Scotland (Scottish Govt)

North Lanarkshire Council Air Quality Action Plan