Annual Progress Report (APR)

2024 Air Quality Annual Progress Report (APR) for East Renfrewshire Council

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

Local Air Quality Management

June 2024

Information	**East Renfrewshire Council**
Local Authority Officer	Richard Mowat
Department	Environment
Address	Thornliebank Depot, Carnwadric Road, Thornliebank , G46 8HR
Telephone	0141 577 3127
E-mail	Environmentalhealth@eastrenfrewshire.gov.uk
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Executive Summary: Air Quality in Our Area

Air Quality in East Renfrewshire Council

Air quality in East Renfrewshire remains good and continues to show improvement. There are no major industrial or commercial sources of air pollutants within the area and road traffic is therefore the main source of local air pollution. No air quality management areas have been declared in East Renfrewshire and our monitoring of air quality across the district has found that pollutant levels have decreased over recent years.

2023 showed a decrease in pollution levels from those measured in 2022 and remain down on pre-covid levels (2018-2019). NO_2 Levels at 13 of the 23 monitoring locations were down by more than 50% of the levels noted in 2019 (pre-covid).

Actions to Improve Air Quality

This progress report reviews air quality and actions completed in 2023.

2023 saw the full return of planned proactive work designed to improve local air quality and increase public awareness of the steps that we can all take to minimise our impact on our local environment.

Home working, virtual meetings and on line training are now accepted as a means to complement the traditional work place with many companies and employers offering hybrid working and hot desking / home working as an incentive to attract and keep employees. This change in work culture is likely to have a significant impact on air quality and levels of transport generated pollutants. It will be at least in part responsible for the 50% drop in level of NO_2 identified at 13 of the 23 monitoring sites. The move away from vehicles fuelled by fossil fuels will also be playing a part in the reduction of NO_2 levels.

East Renfrewshire Council continues to arrange joint initiatives between Environmental Health, Community Safety, Education, Culture and Leisure and our Communications team to increase the profile of how air quality can be affected by vehicle idling especially around local schools, local transport hubs and taxi ranks. Core work is completed by our Community Wardens who enforce anti-idling legislation but who have also been involved in supporting Junior Road Safety officers, school Eco-committee Members and the Parent/

Teacher Groups with their pro-active work to raise the profile of localised increased pollution levels around the school gates during drop off and pick up times. A digital display screen rotates key air quality messages and lamppost / bollard collars are erected when Idling Enforcement is taking place in that area. A similar display has been used inside the schools at Parents evenings, Parent Induction Days and social events such as Christmas Fayres.

Figure 1: Digital and Physical Displays available for school and community events that promote Air quality measures within East Renfrewshire Council.

Similar displays to those used at School events were established and located within local libraries during the summer reading challenges. Air quality worksheets and competitions to design and name an Air quality Champion / superhero ran in the libraries, with over two hundred entries.

Figure 2: Winning Designs of the "Create and Air quality Superhero Character that can help tackle Air Pollution in East Renfrewshire"

Air Quality monitoring work around school gates was supported by the Scottish Environmental Protection Agency (SEPA) who not only provided Air quality monitors for the work but also designed and established an accessible digital platform to explain the work being done, results found and action taken.

https://www.environment.gov.scot/our-environment/air/air-quality-projects/east-renfrewshire-schools-project/

Installation of 6 low cost air monitors provided real time data to empower the local school communities. Production of banners allowed the schools to display their own artwork at their school gates.

East Renfrewshire Council have continued to support a wider anti idling awareness campaign in conjunction with 5 neighbouring Local Authorities (Figure 3.).

Figure 3: **Promotional material for regional awareness campaign (Billboards and Bus Advertising)**

Local Priorities and Challenge

Air quality in East Renfrewshire is good, local priorities are to deliver the Council's 3rd Single Outcome Agreement in the Outcome Delivery Plan to ensure East Renfrewshire is "*a thriving, attractive and sustainable place for businesses and residents*".

The priorities for the Council is to raise the profile of our vehicle idling enforcement programme across East Renfrewshire. Our Community Safety Officers will carry out 10 hours per week of idling enforcement outside schools, leisure centres and at taxi stands / bus terminus with increased visibility and community engagement.

We will also look to provide continued support to, ERC's Education Department with air quality education for pupils and the promotion of active travel to and from school. It will also be the intention to attend community hubs and events to reiterate the pro-active measures that can be taken to improve local air quality. It will be our intention to support East Renfrewshire Culture and Leisure Trust in delivering a community arts programme that will focus on Air Quality and the Environment for both adults and children with creative sessions, performances and art installations across the Council's Library and Community Network.

We will continue to be committed to monitoring pollutant levels and analysing them.

How to Get Involved

Further information on local air quality and our enforcement and education activities can be found on East Renfrewshire Council's website at http://www.eastrenfrewshire.gov.uk/air-quality

Additional information on our local air quality and monitoring results can also be found here

http://www.scottishairquality.scot/

https://www.scottishairquality.scot/latest

https://www.environment.gov.scot/our-environment/air/air-quality-projects/east-renfrewshire-schools-project/

Residents who are concerned about local air quality can contact Environmental Health at environmentalhealth@eastrenfrewshire.gov.uk, by phone on 0141 577 3127 or via the 'Contact Us' section of our website. https://www.eastrenfrewshire.gov.uk/contact-us

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1 Local Air Quality Management

This report provides an overview of air quality in East Renfrewshire Council during 2023. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Progress Report (APR) summarises the work being undertaken by East Renfrewshire Council during 2023 to improve air quality and any progress that has been made.

Table 1.1 – Summary of Air Quality Objectives in Scotland

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

East Renfrewshire Council currently does not have any AQMAs.

2.2 Cleaner Air for Scotland 2

Cleaner Air for Scotland 2 – Towards a Better Place for Everyone (CAFS2) is Scotland's second air quality strategy. CAFS2 sets out how the Scottish Government and its partner organisations propose to further reduce air pollution to protect human health and fulfil Scotland's legal responsibilities over the period 2021 – 2026. CAFS2 was published in July 2021 and replaces Cleaner Air for Scotland – The Road to a Healthier Future (CAFS), which was published in 2015. CAFS2 aims to achieve the ambitious vision for Scotland "to have the best air quality in Europe". A series of actions across a range of policy areas are outlined, a summary of which is available on the Scottish Government's website.

Progress by East Renfrewshire Council against relevant actions for which local authorities are the lead delivery bodies within this strategy is demonstrated below.

2.2.1 Place making – Plans and Policies

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

Details of East Renfrewshire Council's commitment to playing its part in adapting to the climate change challenge can be viewed at:

https://www.eastrenfrewshire.gov.uk/climate-change

The web site is regularly updated and gives further details on East Renfrewshire council's:

- Climate Change Emergency Declaration: https://www.eastrenfrewshire.gov.uk/media/7574/ERC-Climate-emergency-declaration/pdf/Council_minute_-_27_October_2021.pdf?m=637850137894170000
- East Renfrewshire **Council's Get To Zero Ambition Statement and Action Planning Approach:** https://www.eastrenfrewshire.gov.uk/media/7575/ERC-Get-to-Zero-Ambition-Statement/pdf/Cabinet_item_10_-_25_November_2021.pdf?m=637850141063830000
- and the Council's membership in the **Climate Ready Clyde** Collaboration: https://climatereadyclyde.org.uk/our-vision-theory-of-change/

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. East Renfrewshire Council have presented to Cabinet a report on their proposed approach to the Environmental Sustainability Strategy for 2020 – 2022/23 Available at:

https://eastrenfrewshire.gov.uk/media/1772/Cabinet-Supplementary-Papers-13-August-2020/pdf/Cabinet_Supplementary_Papers_-_13_August_2020.pdf?m=637322255037000000

This ESS underpins a group of strategies, plans and policies that describe the function of the Council in reducing its resource use and mitigating its environmental impact; mainly in relation to emission of Greenhouse Gases (GHGs).

The responsibility for implementing this Strategy and the Get to Zero Plan (GTZ) will lie with the Council. Changes to Council operations will be needed as well as the Council playing a role in facilitating change in the wider community. However, there may be projects arising from this strategy that have a bearing on other community planning partnership organisations.

• The Council Cabinet will oversee this strategy.

• The Corporate Asset Management Group will assume the management role.

• Environment Dept. – namely the Environment Partnership will be responsible for the implementation of the overall Strategy.

The responsibility for the success of the Strategy will rely on all Council staff understanding their part in helping to reduce the environmental impacts of the Council.

Air Quality considerations are covered across the strategy and include the following examples:

- Planning and the local development plan have targets to increase the current capacity of wind turbines, establish 2.85km of new walkway by 2029, establish new bus route for Levern valley and establish new rail station at Barrhead south
- Public sustainable transport have targets to enhance the lengths of cycle tracks and cycle routes, work with public transport providers to increase the number of people using public transport and encourage the implementation of a school “walking bus” scheme.
- Housing have targets to ensure 100% of Council and RSL homes meet Energy Efficiency in Social Housing standards by 2020, to contact households re support for energy efficiency measures and maximise available support for home energy efficiency improvements directed towards the most vulnerable households
- The launch of the Think Green Campaign within East Renfrewshire aims to support the Council by raising awareness of current environmental issues and encourage staff to take action.

2.2.2 Transport – Low Emission Zones

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

East Renfrewshire Council has no Low Emission Zones established within the Local Authority area.

All local authorities should ensure that they have a corporate travel plan, which is consistent with any local air quality action plan. Details of East Renfrewshire Council’s most recent climate change report can be viewed at :

https://www.eastrenfrewshire.gov.uk/climate-change

The report contains details of how ERC is performing in its target to promote active travel, promote the use of low emission vehicles and reduce the need for “unnecessary journeys”. The reduction of staff making “unnecessary journeys” is underpinned by Service redesign promoting the use of a digital platform for conference calls, agile working, hot desks and virtual training. Significant progress has been made in this area since 2020 including the introduction of a Hybrid work policy for staff members.

East Renfrewshire is committed to progressing the “Spaces for People “ approach and in June 2023 launched its public consultation allowing residents to help shape future transport plans in East Renfrewshire:

https://erspacesforpeople.commonplace.is/en-GB/news/help-shape-future-transport-plans-in-east-renfrewshire

The Spaces for People project includes a number of specific measures taken to encourage active travel in general and to school access. Access to details of the projects taken forward are regularly updated in East Renfrewshire’s Spaces for People Website:

https://erspacesforpeople.commonplace.is/news

2.2.3 Progress and Impact of Measures to address Air Quality in East Renfrewshire.

Key completed measures include the continued adoption of enhanced enforcement powers to target vehicle idling, particularly outside schools, at public transport hubs and leisure facilities.

We will continue to work with local Schools and Junior Road Safety Officers to produce promotional material that can be used to promote an anti-idling message around the school gates. Across East Renfrewshire Council, an active travel strategy has been developed, together with energy efficiency and sustainable transport projects. The following page shows three of the Banners designed by school pupils and printed for display outside their own school gates. This approach allows schools to buy into the work required around school gates to help improve air quality at drop off and pick up times.

Further detail on these projects running across East Renfrewshire are detailed in **Table 2.1** (Page 8).

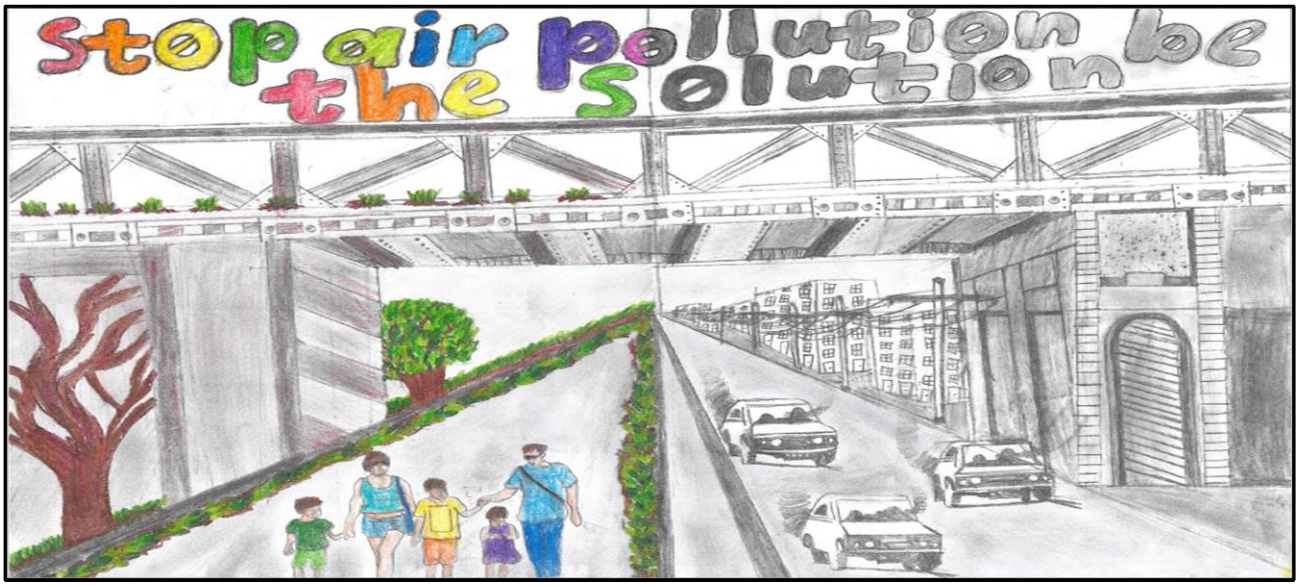


Figure 4:**Three of the winning banner designs for display outside local Primary Schools promoting air quality messages.**

2.2.4 Collaborative and Partnership working

Pooled resources from Environmental Health, Active Travel and Education in partnership with SEPA, Living Streets and “Smarter Choices, Smarter Places” allowed the production of an educational package that can be delivered in schools.

This educational resource will be used to compliment a wider health initiatives - creating the perfect opportunity to look at Air Quality in a more holistic manner. Engagement with School Parent Teacher Associations and Community Groups has allowed wider engagement as has Partnership working with East Renfrewshire Culture and Leisure Trust who displayed promotional material and ran Air Quality competitions throughout the local Libraries. It is intended to continue with this wider community engagement and citizen science approach as the main method to improving air quality.

2.3 Measures to address air quality

Table 2:1 overleaf, details the measures and progress taken by East Renfrewshire Council to improve local air quality since the last reporting year:

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
1	Air Quality education project in schools	Public Information	2018 - onwards	In progress	SG Grant Funded	20 Schools involved reaching over 7000 children since 2018	Over 2023/24 school year, 5 schools have engaged and completed the programme of initial engagement, school assemblies and banner competition	Accessing education programmes to fit in with existing curriculum
2	Promotion of Air Quality initiatives in the wider local community	Public information	2023- 2026	In progress	Scottish Government	Partnership working with Leisure trust/ community groups and parent/teacher groups	Funding invested in promotional material for awareness events (eg school induction days / parents evenings school fayres and also to promote art /educational programme through local libraries	Funding allocated on a yearly basis rather than 3 year programme basis.

3	Vehicle Idling Enforcement	Traffic Management	ongoing	In progress	SG Grant funded	Level of enforcement continued at 10 Hours per week – supply materials for public awareness	Ongoing	
4	Staff Pool Cars Electric Vehicles Available	Promoting Low Emission Transport	Ongoing	Ongoing	3 year funding lease	Pool car numbers reduced from 8 to 4	Scheme continues to be operational and publicised across all staff to encourage uptake.	Grant funding due to expire in Nov 2024
5	Replacement of 8 diesel powered vans by electric vans for use by the community Warden Service/mail run / print room and departmental teams	Promoting Low Emission Transport	2019-2025	Pool cars now electric and 3 departmental vans/cars are electric – remainder of fleet are ICE	Grant funded	•Phase out petrol and diesel cars by 2025. •Phase out purchase of petrol/diesel light vans by 2025 •Phase out diesel HGVs and buses by 2030 onwards	Cars and vans progressing	Current targets are being kept but funding has not been secured

6	Enforcement of Parking in vehicle electrical charging spaces for controlled vehicles/	Promoting Low Emission Transport	June 2018-ongoing	In progress	Not funded	Monitoring of electrical charging stations ensure that the bays can be fully available for recharging purposes.	ongoing	
7	Promotion of Active Travel to and from schools	Active travel	2018/2019-ongoing	In progress	Partially Funded	Engagement through active programmes “Walk and Stride” Walk to school week” extension of “Bikeability” and the “Primary to Secondary transition travel initiative	Ongoing	Secure , covered cycle parking shelters are required to be installed at local schools to support this programme.

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

East Renfrewshire Council does not undertake any automatic (continuous) monitoring within the authority's area.

3.1.2 Non-Automatic Monitoring Sites

East Renfrewshire Council undertook non-automatic (passive) monitoring of NO_2 at 23 sites during 2023. Table A.1 in **Appendix A** shows the details of the sites.

Maps showing the location of the monitoring sites are provided in **Appendix A**. 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)

East Renfrewshire Council currently monitors nitrogen dioxide at 23 locations, using diffusion tubes. During 2023, nitrogen dioxide levels at all 23 sites were within the annual mean objective. **There is therefore no need to proceed to any more detailed monitoring or assessment of nitrogen dioxide levels for any location within East Renfrewshire.**

All monitoring sites have recorded a significant decrease in nitrogen dioxide levels during 2023 compared to the previous, pre and post-covid, calendar years. Overall trend in NO2 levels over the last six years is shown in **Figure 5** below. If a simplistic view is taken then it could be said that 2021 NO2 levels had increased from the very low levels witnessed

during 2020 where full covid restrictions and national lockdowns were being adhered to but in 2022 and 2023 the levels continued to fall and now sit equivalent to the levels witnessed in 2019 where covid restrictions had a significant positive improvement in Air quality.

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

For diffusion tubes, the full 2023 dataset of monthly mean values is provided in **Appendix B.**

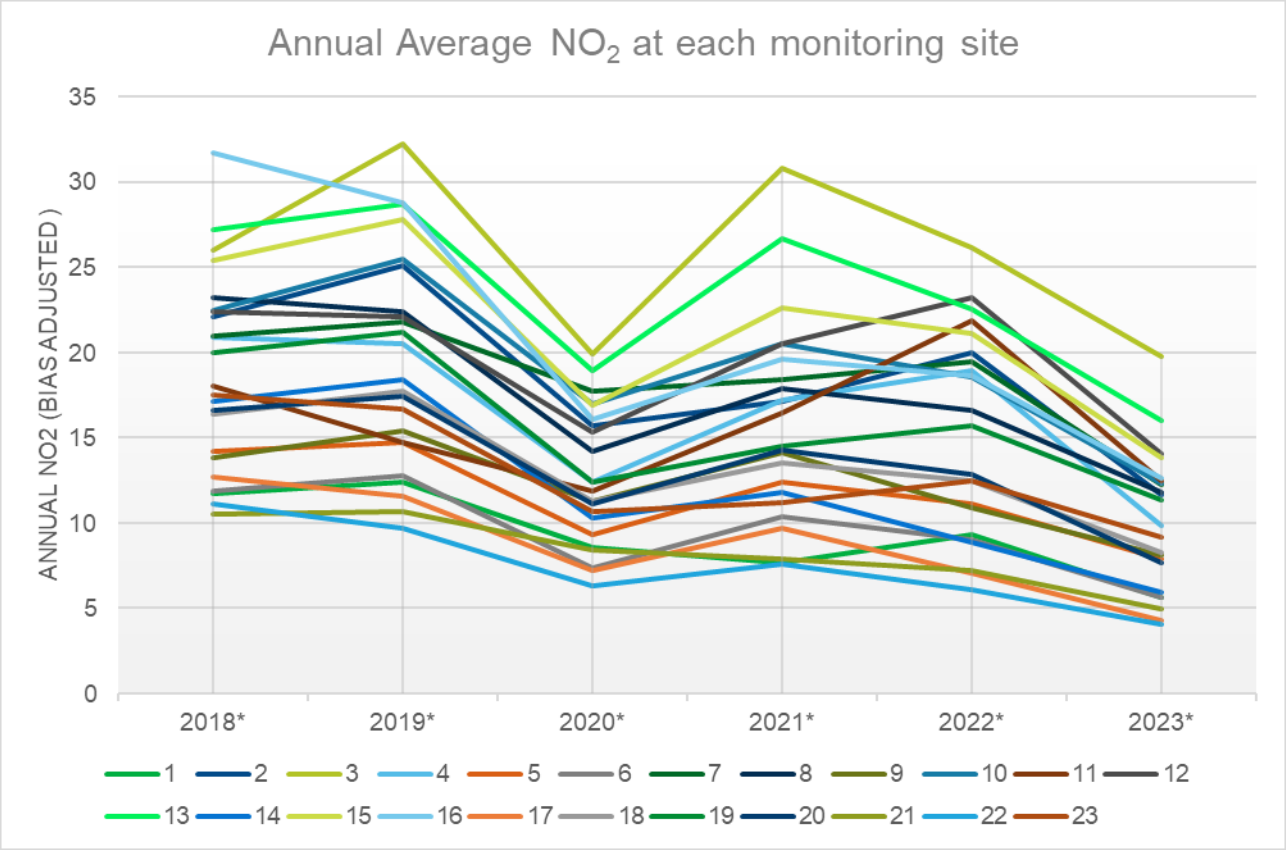


Figure 5: Nitrogen Dioxide diffusion tube results at each monitoring site 2018-2023

3.2.2 Particulate Matter (PM_{10})

PM10. Monitoring was undertaken at Sheddens Roundabout until mid-2014. Data results up until that time had indicated that there was no likelihood of failing to meet the hourly or annual mean objective for PM10.

3.2.3 Particulate Matter ($PM_{2.5}$)

East Renfrewshire Council does not monitor PM2.5 and currently has no plans to do so.

3.2.4 Sulphur Dioxide (SO_2)

East Renfrewshire Council does not monitor SO2 as there are no significant sources of SO2 in the area.

3.2.5 Carbon Monoxide, Lead and 1,3-Butadiene

East Renfrewshire Council does not monitor any of these pollutants as there are no significant sources of these pollutants within our area.

4 New Local Developments

There are significant new local residential developments currently either being considered under the development management system or are under construction around the south of Barrhead and Newton Mearns. As part of the development management process, air quality assessments are required for any significant development. These may be stand-alone assessments or may form a chapter of the wider Environmental Impact Assessment for the development. The conclusions of each of these air quality assessments has been reviewed by the Environmental Health Service; as background pollutant levels across the district are generally low, none of these developments has been considered to create a risk of exceedance of air quality objectives. Any of these air quality assessments can be viewed via East Renfrewshire Council's Online Planning Portal at:

https://www.eastrenfrewshire.gov.uk/planning-and-building-standards

4.1 Road Traffic Sources

2023 has not seen any new:

• Narrow congested streets with residential properties close to the kerb.

• Busy streets where people may spend one hour or more close to traffic.

• Roads with a high flow of buses and/or HGVs.

• Significant Junctions.

• New roads constructed or proposed

• Roads with significantly changed traffic flows.

• Bus or coach stations

4.2 Other Transport Sources

There are no airports or shipping ports within East Renfrewshire, nor are there any:

- Locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.

- Locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.

4.3 Industrial Sources

There are no new:

- **Industrial installations:** new or proposed installations for which an air quality assessment has been carried out.

- **Industrial installations:** existing installations where emissions have increased substantially or new relevant exposure has been introduced.

- **Industrial installations:** new or significantly changed installations with no previous air quality assessment.

- Major fuel storage depots storing petrol.

- Petrol stations.

- Poultry farms.

The Scottish Environmental Protection Agency have confirmed that they have not received any applications for new , or significant variation to existing PPC part A and B operations or Waste Management Licences within East Renfrewshire Council area

4.4 Commercial and Domestic Sources

There are no new:

- Biomass combustion plant – individual installations.
- Areas where the combined impact of several biomass combustion sources may be relevant.
- Areas where domestic solid fuel burning may be relevant.
- Combined Heat and Power (CHP) plant.

4.5 New Developments with Fugitive or Uncontrolled Sources

There have been no new applications for:

• Landfill sites.

• Quarries.

• Unmade haulage roads on industrial sites.

• Waste transfer stations, etc.

• Other potential sources of fugitive particulate matter emissions.

5 Planning Applications

There are significant areas of development around the south of Barrhead and Newton Mearns. These developments predominantly compromise residential development, together with associated community facilities e.g. schools. There is also approval for residential developments in areas to the north east of Barrhead and west of Newton Mearns regenerating industrial/commercial areas that have been lying vacant for a number of years.

Wherever such significant development is being considered, the Environmental Health Service recommends to the Development Management team that an air quality assessment is required. Often the developer's appointed consultant will contact the EH service to discuss the requirement for an assessment, obtain any available local monitoring data and agree a suitable methodology for the assessment.

For the smaller housing developments, the assessment usually comprises a stand- alone report. For larger scale developments, air quality is normally included as a chapter of the full Environmental Impact Assessment for the site. The assessment will cover both the construction and operational phases of the development. East Renfrewshire Council encourages developers to consider the cumulative effect of their own development and other nearby developments which are already the subject of a planning application or under construction.

6 Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

There were no exceedances of Scottish objectives identified within East Renfrewshire in 2023. The monitoring data shows a continued downward trend in NOx levels over the last 6 years.

6.2 Conclusions relating to New Local Developments

There are areas of significant development around the south of the existing suburbs of Newton Mearns and Barrhead and a number of regeneration projects to bring vacant commercial and industrial land to the north of Barrhead and west of Newton Mearns back into use as residential areas. Much of this development is already under construction, although some is still being processed through the development management system. For all planning applications for significant development, air quality assessments are required. These assessments will include review of the impact on local air quality during any demolition works, construction works or the completed and operational phase of the development. None of these assessments have considered that any of the development present a risk of national air quality objectives being exceeded, primarily as a result of the comparatively low background levels of pollutants.

This notwithstanding, Environmental Health has liaised with the Development Management section and with other services across East Renfrewshire Council to work towards securing some mitigation of any impacts on local air quality. East Renfrewshire Council seeks to encourage active travel within the context of place-making for significant new developments.

As new developments are completed and occupied, Environmental Health will review East Renfrewshire Council's air quality monitoring network to ensure that it continues to be appropriate in both scale and location.

6.3 Proposed Actions

As there are no exceedances of national or Scottish air quality objectives within East Renfrewshire, there is no need to progress to any further formal assessments before the next Annual Progress Report (due June 2025).

Although there is no requirement to proceed through any additional formal stages of the Local Air Quality Management process, East Renfrewshire Council is committed to improving local air quality, as part of the council's strategic outcome agreement to ensure that "*East Renfrewshire is a thriving, attractive and sustainable place for businesses and residents*" and as a part of ERC Environment Department's wider 'Prevention' agenda. East Renfrewshire Council is also cognisant of the key role of local authorities in delivery of the new Scottish Government "*Cleaner Air for Scotland 2*" strategy.

We will therefore be continuing to work throughout 2024/25 on air quality education projects within local schools and at community events, on vehicle idling enforcement and on promotion of the anti–idling message. East Renfrewshire Council is also committed to providing and promoting opportunities for active travel and will continue to deliver on this throughout 2024/25. East Renfrewshire Council will also support East Renfrewshire Culture and Leisure Trust in delivery of a community arts programme that will focus on Air Quality and the Environment for both adults and children with creative sessions, performances and art installations across the Council's Library and Community Network.

Environmental Health will continue to liaise with colleagues in Development Management and Development Plans to ensure that air quality impacts from new developments are appropriately assessed and that mitigation measures are included wherever necessary.

East Renfrewshire Council will demonstrate our on-going commitment to improving local air quality throughout 2024/25, through developing partnerships between ERC services and with external organisations. This integrated partnership approach will help us to deliver beyond air quality compliance, to contribute to wider environmental and health benefits for our residents.

Appendix A: Monitoring Results

Table A.1 – Details of Non-Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
1	Huntly Drive, Giffnock	Roadside	256633	658900	NO2	NO	2.2	0.2	No	2.0
2	Eastwoodmains Road	Kerbside	255950	658269	NO2	NO	5.0	2.5	No	2.0
3	Clarkston Toll	Roadside	257278	657569	NO2	NO	5.0	0.2	No	2.0
4	Sheddens Roundabout	Kerbside	257437	657092	NO2	NO	2.0	3.0	No	2.0
5	Riverside Terrace, Busby	Kerbside	257889	656601	NO2	NO	2.5	2.5	No	2.0
6	Main Street, Neilston	Kerbside	247958	657299	NO2	NO	1.0	2.5	No	2.0
7	Kelburn St, Neilston Rd, Barrhead	Kerbside	249401	658377	NO2	NO	2.0	2.5	No	2.0

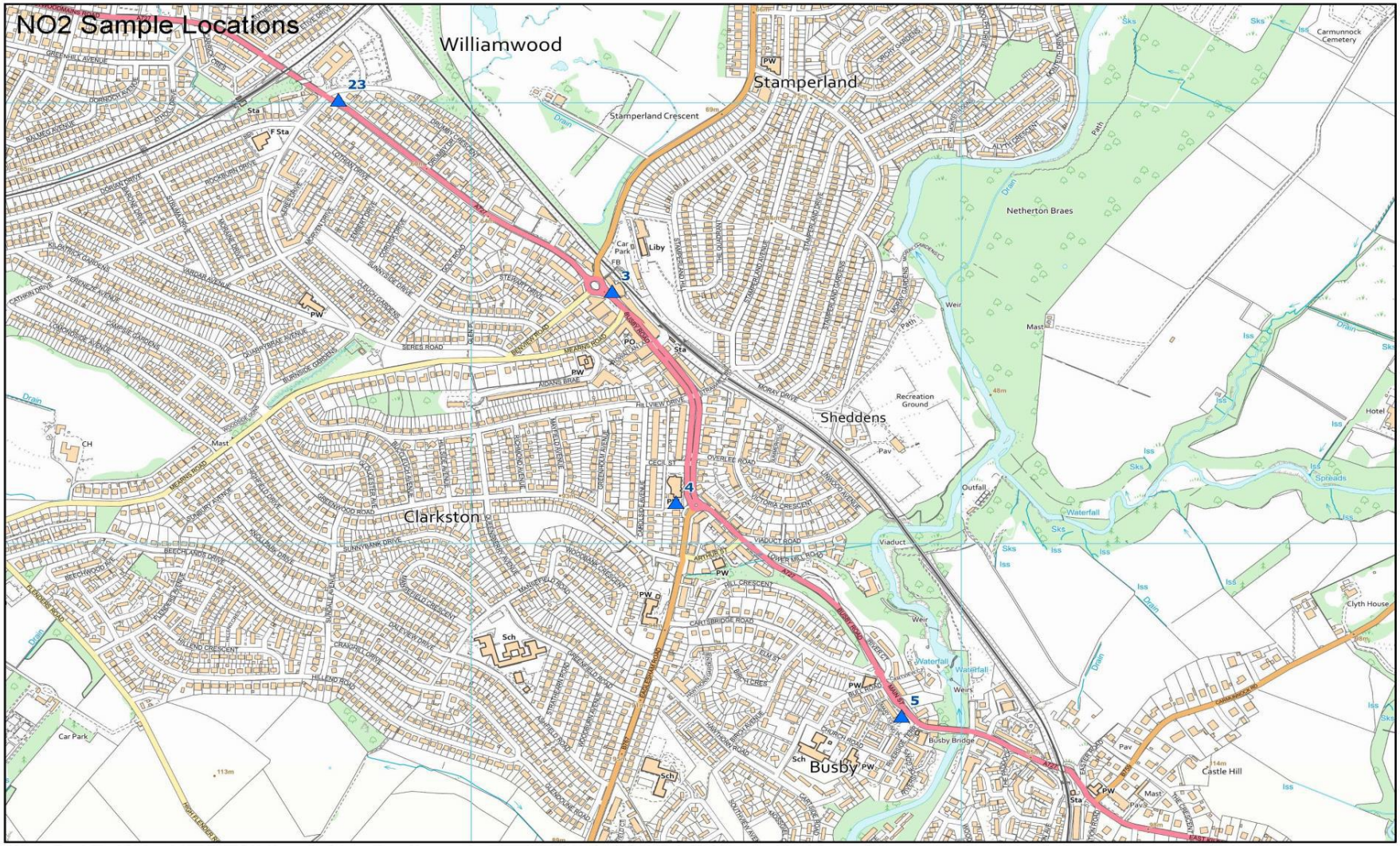
Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
8	Cross Arthurlie St, Barrhead	Kerbside	249787	659237	NO2	NO	1.0	2.0	No	2.0
9	Darnley Rd, Barrhead	Kerbside	250845	659308	NO2	NO	5.0	2.5	No	2.0
10	Main St, Thornliebank	Kerbside	254759	659474	NO2	NO	5.0	2.5	No	2.0
11	Main St, Barrhead, North	Roadside	250651	659238	NO2	NO	5.0	0.5	No	2.0
12	Main St, Barrhead, South (Allans Corner)	Roadside	249845	658779	NO2	NO	15.0	0.5	No	2.0
13	Lochlibo Rd at W. Arthurlie	Kerbside	249344	658392	NO2	NO	7.0	4.0	No	2.0
14	Eastwoodmains Rd, Mains Ave	Kerbside	255709	658109	NO2	NO	5.0	2.0	No	2.0
15	Rouken Glen Rd	Kerbside	254777	658770	NO2	NO	5.0	2.0	No	2.0
16	195 Fenwick Road	Kerbside	256279	659209	NO2	NO	2.0	0.5	No	2.0

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
17	Mearnskirk Nursing Home	Roadside	253798	655385	NO2	NO	2.5	1.0	No	2.0
18	Brodick Place, Newton Mearns	Roadside	252407	655475	NO2	NO	1.0	0.2	No	2.0
19	Burnfield Road	Roadside	256218	659414	NO2	NO	1.0	1.5	No	2.0
20	Braidholm Rd, Giffnock	Roadside	256381	659380	NO2	NO	4.5	2.0	No	2.0
21	Mearns Castle High School Sports	Kerbside	255418	655265	NO2	NO	10.0	2.0	No	2.0
22	Mearns Castle High School Entrance	Kerbside	255405	655274	NO2	NO	5.0	0.5	No	2.0
23	Eastwood Health Centre Drumby Crescent	Kerbside	256728	658007	NO2	NO	5.0	3.0	No	2.0

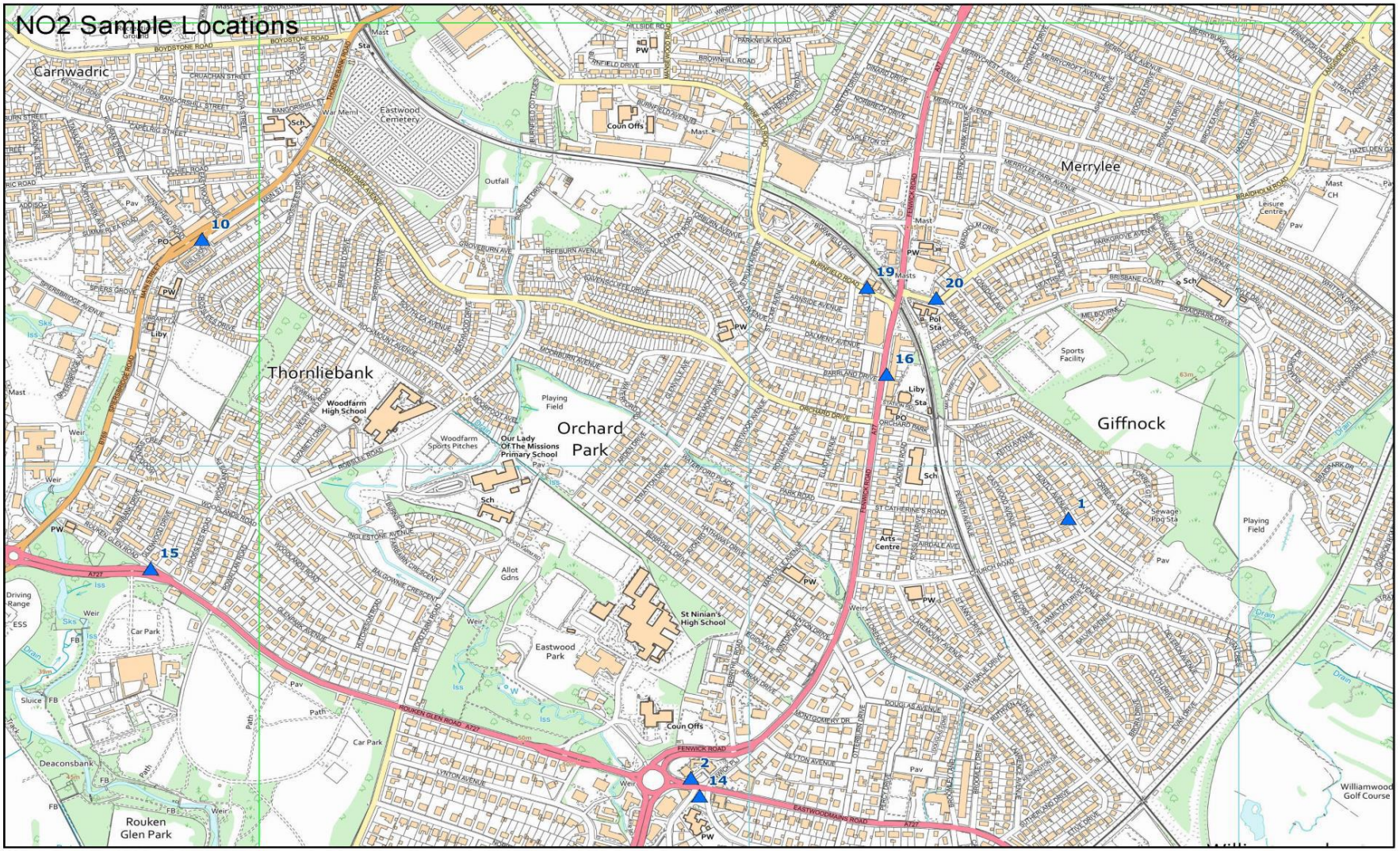
Notes:

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

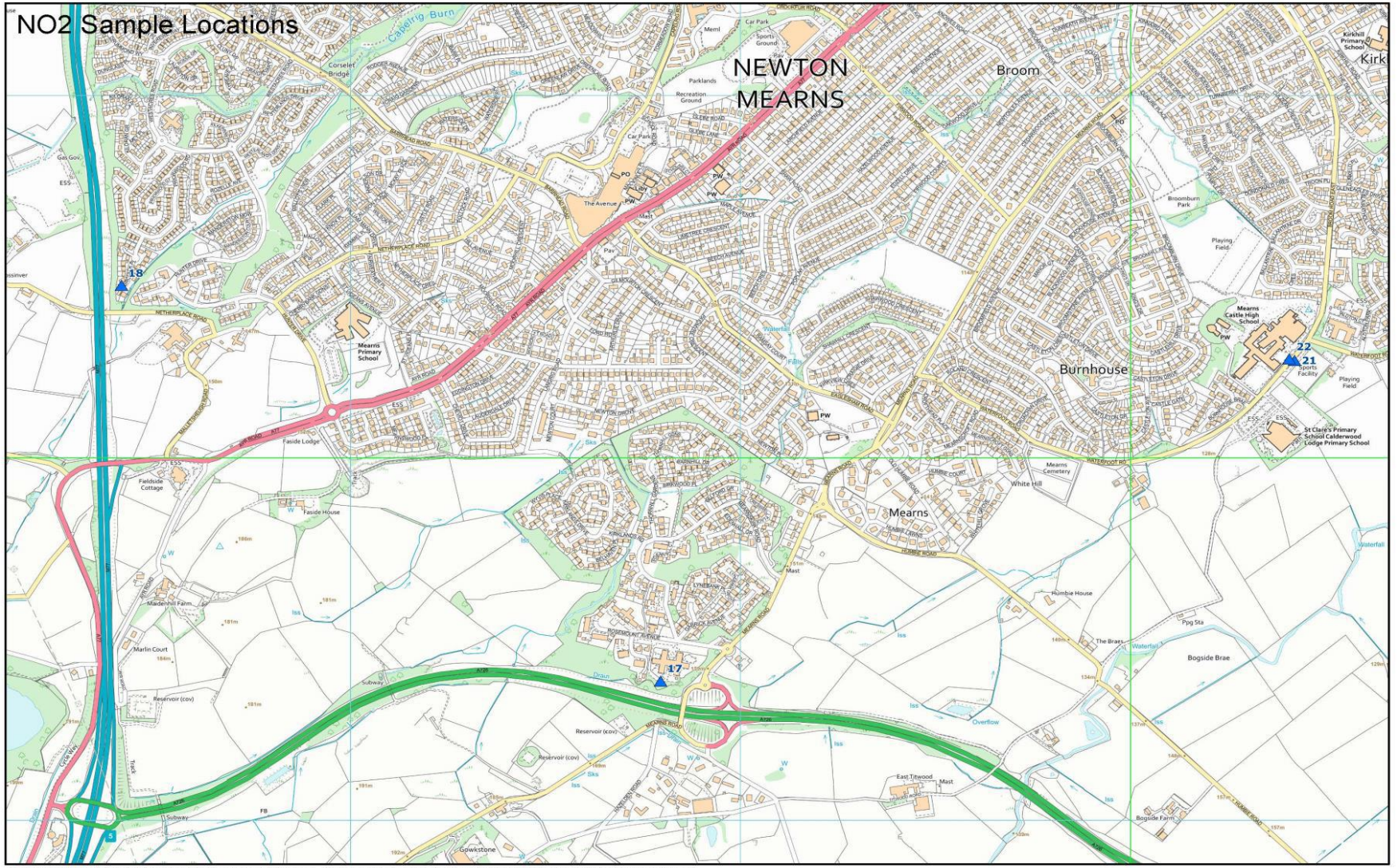
(2) N/A if not applicable.



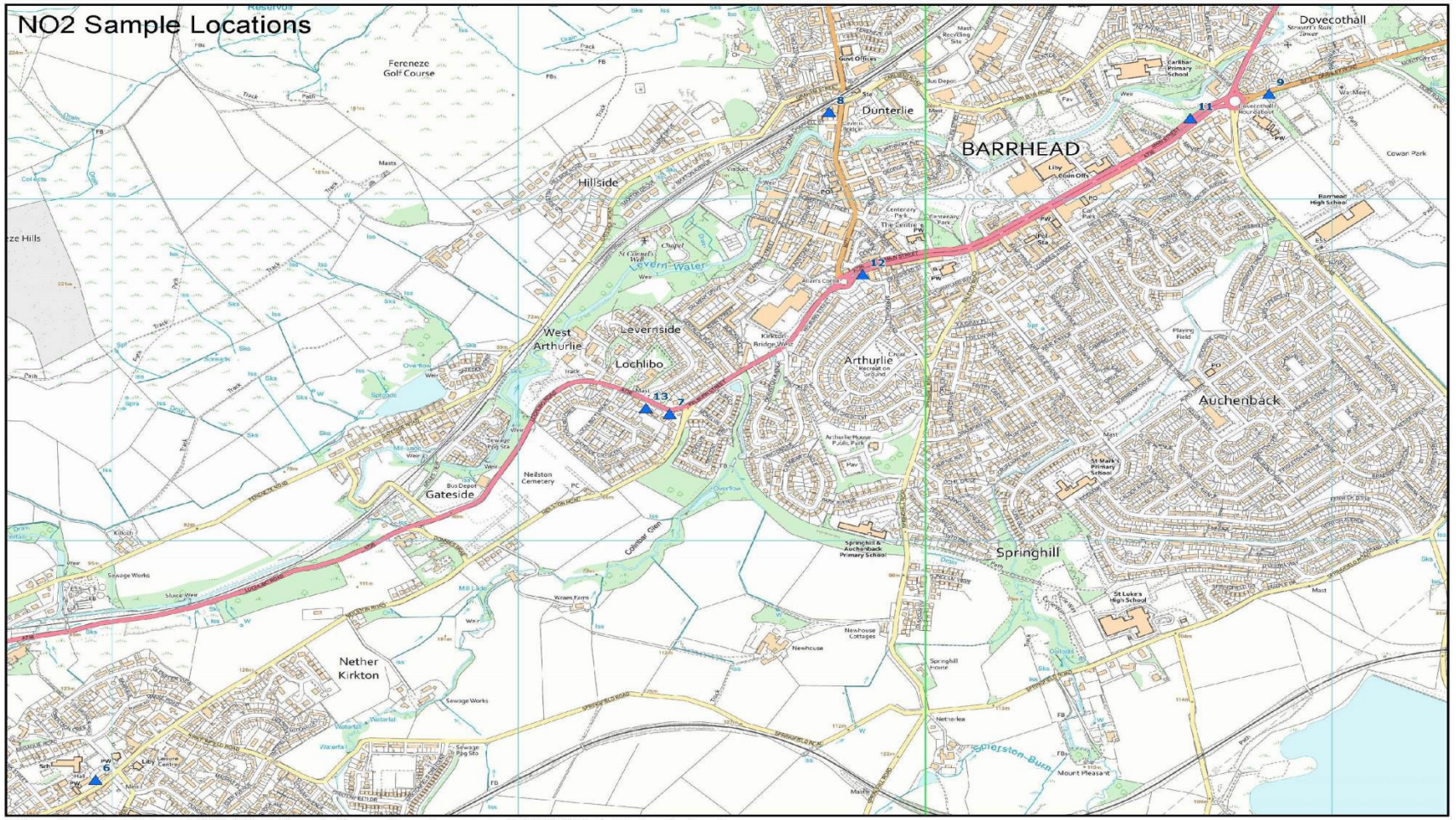
CLARKSTON AND BUSBY



THORNLIEBANK AND GIFFNOCK



NEWTON MEARNS (South)



BARRHEAD AND NEILSTON

Table A.2 – Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
1	256633	658900	Roadside	91	91.0	12.4	8.6	7.7	9.3	5.6
2	255950	658269	Kerbside	100	99.5	25.1	15.7	17.1	20.0	11.7
3	257278	657569	Roadside	100	99.5	32.2	19.9	30.8	26.1	19.8
4	257437	657092	Kerbside	100	99.5	20.5	12.4	17.2	18.9	9.9
5	257889	656601	Kerbside	100	99.5	14.7	9.3	12.4	11.1	7.9
6	247958	657299	Kerbside	100	99.5	12.8	7.4	10.4	9.0	5.7
7	249401	658377	Kerbside	100	99.5	21.8	17.7	18.4	19.4	12.3
8	249787	659237	Kerbside	100	99.5	22.4	14.2	17.9	16.6	11.8
9	250845	659308	Kerbside	89.9	89.9	15.4	11.3	14.1	10.9	8.1
10	254759	659474	Kerbside	91	91.0	25.5	17.0	20.5	18.5	12.3
11	250651	659238	Roadside	100	99.5	14.7	11.9	16.4	21.8	12.4

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
12	249845	658779	Roadside	100	99.5	22.1	15.3	20.5	23.2	14.1
13	249344	658392	Kerbside	89.9	89.9	28.7	18.9	26.7	22.5	16.0
14	255709	658109	Kerbside	100	99.5	18.4	10.3	11.8	8.8	5.9
15	254777	658770	Kerbside	100	99.5	27.8	16.9	22.6	21.1	13.8
16	256279	659209	Kerbside	91.8	91.8	28.8	16.1	19.6	18.6	12.6
17	253798	655385	Roadside	89.3	89.3	11.6	7.2	9.7	7.1	4.2
18	252407	655475	Roadside	100	99.5	17.7	11.3	13.5	12.5	8.2
19	256218	659414	Roadside	100	99.5	21.2	12.4	14.5	15.7	11.3
20	256381	659380	Roadside	100	99.5	17.4	11.1	14.3	12.8	7.7
21	255418	655265	Kerbside	100	99.5	10.7	8.4	7.9	7.2	5.0
22	255405	655274	Kerbside	100	99.5	9.7	6.3	7.6	6.1	4.0

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
23	256728	658007	Kerbside	100	99.5	16.7	10.7	11.2	12.5	9.2

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

Notes:

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

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

Means for diffusion tubes have been corrected for bias.

Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO_2 2023 Monthly Diffusion Tube Results ($\mu g/m^3$)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.74)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
1	256633	658900	8.8	10.0	11.7	4.3	5.0	5.2	3.3	3.8		9.6	15.1	5.5	7.6	5.6		
2	255950	658269	12.7	21.2	23.5	8.2	16.7	15.5	4.0	12.1	15.8	16.7	27.3	10.4	15.8	11.7		
3	257278	657569	16.8	32.8	33.5	17.8	26.7	22.8	16.6	24.6	27.1	33.8	39.3	25.3	26.7	19.8		
4	257437	657092	9.6	16.5	23.5	9.7	12.0	10.5	8.5	11.4	11.4	15.3	20.8	7.3	13.3	9.9		
5	257889	656601	5.9	14.5	14.6	6.8	9.0	12.5	5.7	8.8	5.4	14.0	21.4	5.7	10.6	7.9		
6	247958	657299	6.1	11.5	10.2	5.0	6.3	7.6	3.7	5.4	5.6	10.9	13.7	4.6	7.6	5.7		
7	249401	658377	15.0	25.4	21.8	13.9	16.5	15.4	10.3	14.2	12.3	18.6	24.4	8.9	16.6	12.3		
8	249787	659237	8.5	19.5	22.7	9.1	13.9	18.5	9.6	12.3	14.2	24.2	24.1	12.4	15.9	11.8		
9	250845	659308	15.1	13.9		6.6	10.7	10.4	7.2	6.2	7.9	14.0	20.0	7.9	10.9	8.1		

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.74)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
10	254759	659474	2.1	26.1	24.0	11.5	16.6	18.7	9.4	16.1		19.3	25.3	9.3	16.6	12.3		
11	250651	659238	17.4	20.6	20.7	14.8	14.5	16.1	9.8	14.3	14.1	16.8	21.8	19.2	16.8	12.4		
12	249845	658779	11.8	25.7	28.5	10.1	21.3	18.1	2.3	19.7	20.5	27.5	26.9	10.9	19.0	14.1		
13	249344	658392	17.4	25.6		20.0	23.9	23.7	15.7	20.2	16.7	27.6	30.9	14.4	21.6	16.0		
14	255709	658109	6.5	11.9	12.1	6.5	7.1	6.7	4.9	6.5	5.6	6.7	14.1	5.4	8.0	5.9		
15	254777	658770	16.7	23.7	26.7	10.7	18.5	16.2	11.2	17.7	15.1	20.0	30.9	12.2	18.7	13.8		
16	256279	659209	18.6	24.5	27.7	12.7	15.5	15.3	9.0	12.2	11.2	17.1	22.2		17.1	12.6		
17	253798	655385	6.9	7.9	8.3	4.2	4.1	5.7	2.3	5.5	2.9	5.8		9.1	5.7	4.2		
18	252407	655475	17.2	17.5	15.7	5.4	10.7	7.9	6.2	9.9	9.0	8.1	15.1	9.4	11.1	8.2		
19	256218	659414	14.3	20.0	22.1	14.0	12.0	15.3	7.5	1.5	22.0	15.7	26.8	10.8	15.3	11.3		
20	256381	659380	10.1	14.9	12.2	6.9	4.3	8.7	6.4	8.7	7.7	10.7	19.8	11.7	10.4	7.7		
21	255418	655265	5.8	10.1	9.0	4.6	2.1	7.1	2.9	5.0	2.7	8.7	17.1	3.1	6.7	5.0		

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.74)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
22	255405	655274	3.8	7.5	7.2	4.7	2.3	5.5	2.3	4.1	3.1	6.5	13.8	2.1	5.4	4.0		
23	256728	658007	7.7	14.9	18.7	9.5	5.6	12.7	5.7	9.7	8.7	16.4	27.5	6.6	12.4	9.2		

1. **All erroneous data has been removed from the NO_2 diffusion tube dataset presented in Table B.1.**
2. **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.**
3. **National bias adjustment factor used.**
4. **Where applicable, data has been distance corrected for relevant exposure in the final column .**

East Renfrewshire Council confirm that all 2023 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System

Notes:

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

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

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within East Renfrewshire During 2023

East Renfrewshire has not identified any new sources relating to air quality within the reporting year of 2023.

Additional Air Quality Works Undertaken by East Renfrewshire During 2023

East Renfrewshire has not completed any additional works within the reporting year of 2023.

QA/QC of Diffusion Tube Monitoring

Diffusion Tube Annualisation

All diffusion tube monitoring locations within East Renfrewshire Council recorded data capture of 75% or above, therefore it was not required to annualise any monitoring data.

Diffusion Tube Bias Adjustment Factors

East Renfrewshire Council have applied a national bias adjustment factor of 0.74 to the 2023 monitoring data. A summary of bias adjustment factors used by East Renfrewshire Council over the past five years is presented in Table C.1.

The diffusion tubes are supplied and analysed by Glasgow Scientific Services (GSS) and are prepared using the 20% TEA in water method and in accordance with the procedures set out in the practical guidance. East Renfrewshire has not carried out any co-location studies itself, although co-location studies are available for GSS. The Department for Environment and Rural Affairs (DEFRA) reports that in co-location testing in 2023, GSS

demonstrated ‘good’ precision in 1 assessment (see https://laqm.defra.gov.uk/air-quality/air-quality-assessment/national-bias/)

DEFRA further reports that the 2023 bias adjustment factor for GSS is 0.74 (see https://laqm.defra.gov.uk/air-quality/air-quality-assessment/diffusion-tube-data-processing-tool/ Spreadsheet 03/24) This bias adjustment factor has therefore been applied to the annual average diffusion tube results reported above. Laboratory performance in analysing diffusion tubes is subject to quality assurance/control under the AIR-PT scheme operated by LGC and supported by the Health and Safety Laboratory.

Table C.1 – Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	National	03/24	0.74
2022	National	03/23	1.05
2021	National	06/22	1.11
2020	National	06/21	0.95
2019	National	06/20	0.87

NO_2 Fall-off with Distance from the Road

No diffusion tube NO_2 monitoring locations within East Renfrewshire required distance correction during 2023.

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the LA intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
APR	Annual Progress Report
AURN	Automatic Urban and Rural Network (UK air quality monitoring network)
CAFS	Clean Air For Scotland
DEFRA	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
DT	Diffusion Tube
ERC	East Renfrewshire Council
ESS	Environmental sustainability Strategy
FDMS	Filter Dynamics Measurement System
GHG	Green house Gasses
GTZ	Get to Zero
ICE	Internal Combustion Engine
LAQM	Local Air Quality Management
LEZ	Low Emission Zone
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
PPC	Pollution Prevention and control Permits
QA/QC	Quality Assurance and Quality Control
SEPA	Scottish environmental Protection agency
SO_2	Sulphur Dioxide