

## Annual Progress Report (APR)



2023 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 2023

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## **Executive Summary: Air Quality in Our Area**

### **Air Quality in East Renfrewshire Council**

Air quality in East Renfrewshire remains good. 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 monitoring 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.

2022 showed an increase in pollution levels from those measured in 2020 and 2021 when significant reduction in pollutant concentrations were witnessed across the country as a direct result of continuing Covid-19 travel restrictions and periods of community lockdowns. Although recorded levels of NO<sub>2</sub> were marginally increased from 2021, the levels measured in 2022 did not return to those experienced pre-covid (2017-2019) and NO<sub>2</sub> levels across 21 of 23 monitoring locations were significantly down compared to the previous pre-covid years.

### **Actions to Improve Air Quality**

This progress report reviews air quality and actions completed in 2022.

Like many businesses, organisations and communities affected by the Covid-19 Pandemic, East Renfrewshire Council's efforts were redirected to supporting the local and national response to the Pandemic. However 2022 saw the gradual return of the 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.

Business and community response to the pandemic supported home working, virtual meetings and on line training. Within East Renfrewshire Council information technology and network infrastructure remained in place to ensure many employees had a digital platform at home reducing the need to travel to their workplace, meetings and training. As was expected, as the country gradually emerged from the pandemic, many of the measures put in place remained as common practise with support for home or agile working/ distant learning and virtual meetings. Hybrid

working is becoming the norm rather than an exception- with many organisations and companies opting for a 50/50 or 60/40 hybrid working programme for their employees. This change in work culture is likely to have a significant impact on air quality and levels of transport generated pollutants.

We have moved away from roadside emission spot testing to a joint initiative between Environmental Health, Community Safety and our Communications team to increase the profile and level of vehicle idling enforcement schemes operating around local schools, local transport hubs and taxi ranks. A digital display screen rotates key air quality messages and lamppost/bollard collars are erected when Idling Enforcement is taking place in that area.



**Figure 1: Promotional material to raise awareness of air quality, idling enforcement, road safety and active travel (Digital display with rotating messages, lamppost and bollard collars)**

East Renfrewshire Council have continued to support a wider anti idling awareness campaign in conjunction with 5 neighbouring Local Authorities (Figure 2.).



**Figure 2: Promotional material for regional awareness campaign (Billboards and Bus Advertising)**

Planned work by the Environmental Health Department with colleagues in Education, Active Travel co-ordinators and School committees to run air quality presentations and competitions has been re-instated. Presentations on air quality and active travel have been completed at Primary Schools with banner competitions to promote the right to clean air.



**Figure 3: Winning banner at Eaglesham Primary School promoting air quality and active travel made possible by funding from Partner Organisations.**

## **Local Priorities and Challenges**

As air quality in East Renfrewshire is generally good, local priorities are not only about meeting objectives but the challenge remains to go beyond compliance and to deliver the Council's 3<sup>rd</sup> 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 remain a pivotal role in supporting local and national recovery from the Coronavirus Pandemic, however the time was also deemed right to reinstate and 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 continue support to, ERC's Education Department by continuing air quality education to pupils and promote 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.

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

## **How to Get Involved**

East Renfrewshire Council's Prevention Team has developed a unique partnership with many local MOT stations to offer free vehicle emissions checks to local residents. Any resident who is concerned about their vehicle's emissions can visit one of the participating local garages for a free check – details of all of the participating garages can be found on East Renfrewshire Council's website at:

<https://www.eastrenfrewshire.gov.uk/reduce-car-pollution>

Further information on local air quality and our enforcement and education activities can also 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>

Residents who are concerned about local air quality can contact Environmental Health at [environmentalhealth@eastrenfrewshire.gov.uk](mailto: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 2022. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether 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 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 <sub>2</sub> )	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m <sup>3</sup>	Annual mean	31.12.2005
Particulate Matter (PM <sub>10</sub> )	50 µg/m <sup>3</sup> , not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
	18 µg/m <sup>3</sup>	Annual mean	31.12.2010
Particulate Matter (PM <sub>2.5</sub> )	10 µg/m <sup>3</sup>	Annual mean	31.12.2021
Sulphur dioxide (SO <sub>2</sub> )	350 µg/m <sup>3</sup> , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m <sup>3</sup> , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005
Benzene	3.25 µg/m <sup>3</sup>	Running annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
Carbon Monoxide	10.0 mg/m <sup>3</sup>	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 has not declared 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 Placemaking – Plans and Policies

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

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](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](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](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) and roadside emissions checks, in conjunction with Police Scotland.

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. Further detail on these projects running across East Renfrewshire are detailed in **Table 2.1** (Page 7).

### **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 - like **Beat the Street** creating the perfect opportunity to look at Air Quality in a more holistic manner – and in particular local air quality around schools during drop off and collection times.

**Table 2.1 – Progress on Measures to Improve Air Quality**

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date	Comments
1	Air Quality education project in schools	Public Information	ERC Education Department will be supported to deliver active travel and air quality education in Primary schools.	ERC Education Department and Environment Department	1/4/17	1/4/18- continue	No. Of Schools supported	15 Schools were involved reaching over 5500 children	Ongoing	This Project successfully combines air quality and active travel education.
2.	Vehicle Idling Enforcement	Traffic management	Increase awareness of Vehicle idling enforcement around local schools, leisure and transport hubs	ERC Community Safety	2022	2023 Onwards		Level of enforcement continued at 10 Hours per week – supply materials for public awareness	ongoing	Enforcement has increased from some local schools to all local schools, leisure centres and transport hubs. Communication teams have developed advertising scheme.
4	Local garage emission test partnership	Vehicle fleet efficiency	ERC created a partnership with local MOTstations to offer free vehicle emission checks to residents	ERC Environment and local garages	1/4/16	Scheme fully operational		16 Garages have signed up to voluntary scheme	ongoing	Information available on council Website
5	Staff Pool Cars Electric Vehicles available	Promoting low emission transport	ERC now has 8 electric vehicles available for use as a staff pool car	ERC Environment Department		Scheme fully operational		Scheme fully operational	ongoing	The scheme is publicised across all staff to encourage uptake.



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Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date	Comments
6.	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	<ul style="list-style-type: none"> <li>Phase out petrol and diesel cars by 2025.</li> <li>Phase out purchase of petrol/diesel light vans by 2025</li> <li>Phase out diesel HGVs and buses by 2030 onwards</li> </ul>	ERC Environment Department	April 2018	2019 - 2025		Performance monitoring	ongoing	The purchase of new electric vans has been made after evaluation during 2018/19.
7.	Promotion of Active travel to and from schools.	Active Travel	Reduction of children travelling to school in cars	ERC Environment Department	2017/8	2018/19 Ongoing	School travel assessments	Engagement through active programmes – <b>“Beat the Street”</b> , <b>“Walk and Stride”</b> <b>“Walk to School Week”</b> , extension of <b>“Bikeability”</b> and the <b>“Primary to Secondary transition travel Initiative”</b>	Ongoing	4 Secure , covered cycle parking shelters have been installed at local schools to support this programme.
8.	Secure purchase and installation of electric substation	Supporting low emission fleet vehicles	Power for Electric fleet	ERC Environment Department	2023	2024/2025				

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Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date	Comments
10..	Enforcement of Parking in vehicle electrical charging spaces for controlled vehicles/	Promoting low emission transport	Community Wardens are monitoring electrical charging stations in controlled carparks for vehicles either not being charged or not capable of being charged	ERC Community Safety	April 2017	June 2018 ongoing	No. of fixed penalty notices issued vs. no of spaces monitored	.	ongoing	Monitoring of electrical charging stations ensures that these bays can be fully available for recharging purposes.

### 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 currently have any automatic monitoring sites.

##### 3.1.2 Non-Automatic Monitoring Sites

East Renfrewshire Council undertook non-automatic (passive) monitoring of NO<sub>2</sub> at 23 sites during 2022. Table A.2 in **Appendix A** provides details of the monitoring sites and data recovered.

Maps are also included in **Appendix A** showing the location of the monitoring sites. 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**.

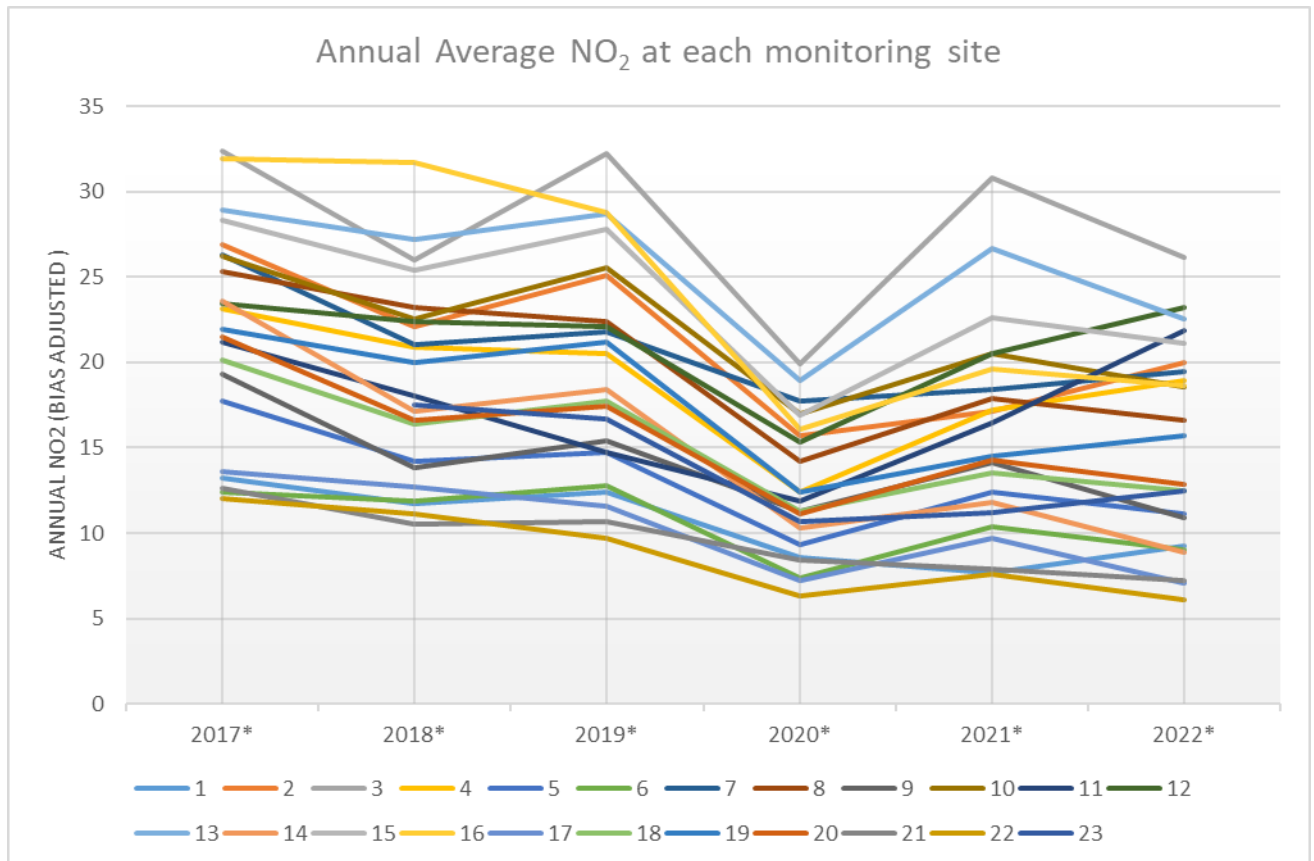
##### 3.2.1 Nitrogen Dioxide (NO<sub>2</sub>)

East Renfrewshire Council currently monitors nitrogen dioxide at 23 locations, using diffusion tubes. During 2022, 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 2022 compared to the previous, pre-covid, calendar year, levels. Overall trend in NO<sub>2</sub> levels over the last six years is shown in **Figure 4.1** below. If a simplistic view is taken then it could be said that 2022 NO<sub>2</sub> levels have increased from the very low levels witnessed during 2020 where full covid restrictions and national lockdowns were being adhered to but have not returned to the “pre-covid” levels seen in 2017-2019.

**Table A.2** in **Appendix A** compares the ratified and adjusted monitored NO<sub>2</sub> annual mean concentrations for the past 6 years with the air quality objective of 40µg/m<sup>3</sup>.

**Fig. 4.1 Nitrogen Dioxide diffusion tube results at each monitoring site 2017-2022**



For diffusion tubes, the full 2022 dataset of monthly mean values is provided in **Appendix B- Table B.1**.

### 3.2.2 Particulate Matter (PM<sub>10</sub>)

PM<sub>10</sub>. 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 PM<sub>10</sub>.

**3.2.3 Particulate Matter (PM<sub>2.5</sub>)**

East Renfrewshire Council does not monitor PM<sub>2.5</sub> and currently has no plans to do so.

**3.2.4 Sulphur Dioxide (SO<sub>2</sub>)**

East Renfrewshire Council does not monitor SO<sub>2</sub> as there are no significant sources of SO<sub>2</sub> 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 and a small retail park to the north of Barrhead. 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:

<http://www.eastrenfrewshire.gov.uk/planning-and-building-standards>

### 4.1 Road Traffic Sources

2022 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.

### 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

Although there have been applications for small extensions to a quarry and landfill, there are no new:

- 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 2022. 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 2024).

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.

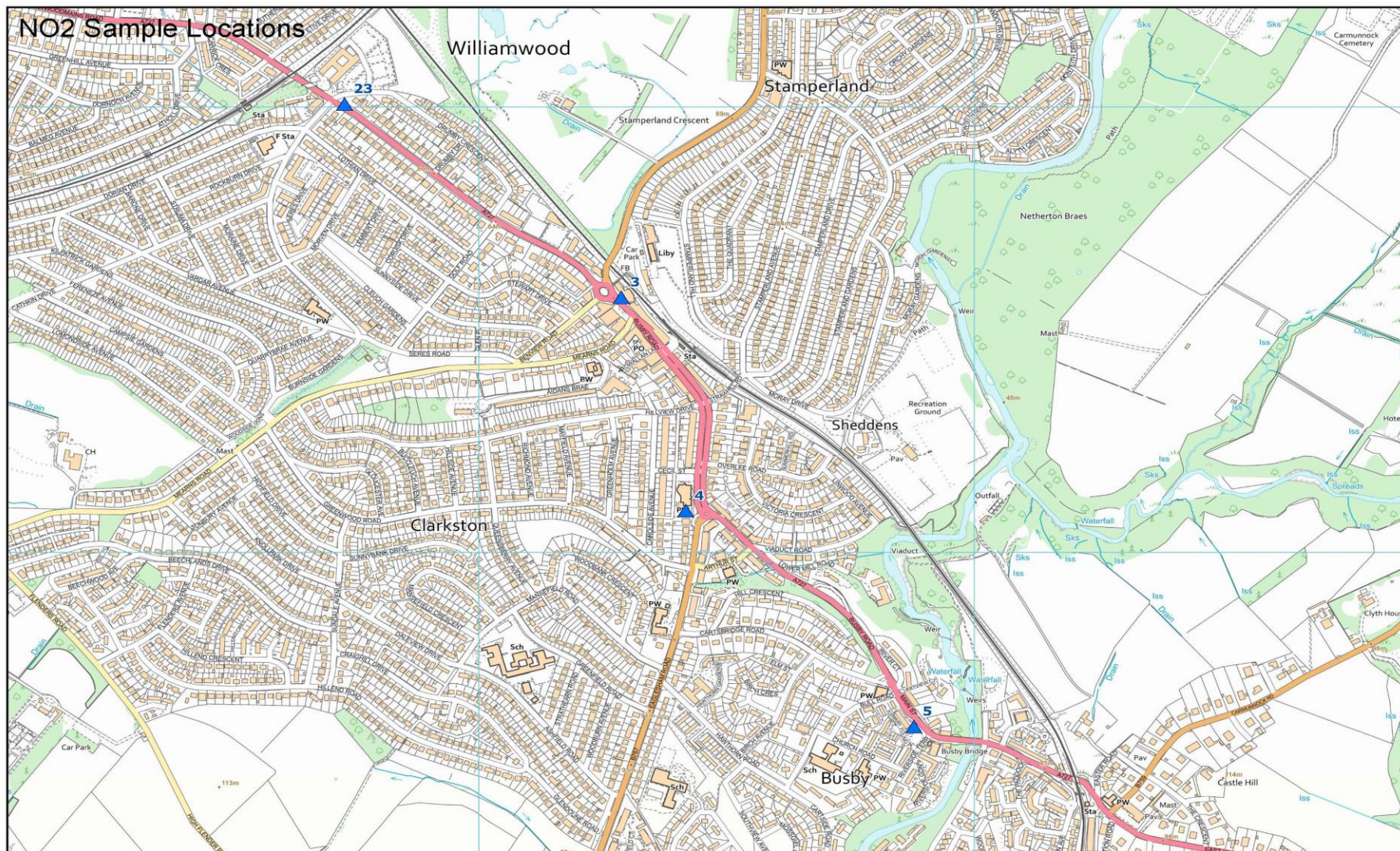
We will therefore be continuing to work throughout 2023/24 on air quality education projects within local schools and at community events, on vehicle idling enforcement and on promotion of the anti-idling message. East Renfrewshire Council is also committed to providing and promoting opportunities for active travel and will continue to deliver on this throughout 2023/24.

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 2023/24, 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 for NO<sub>2</sub>**

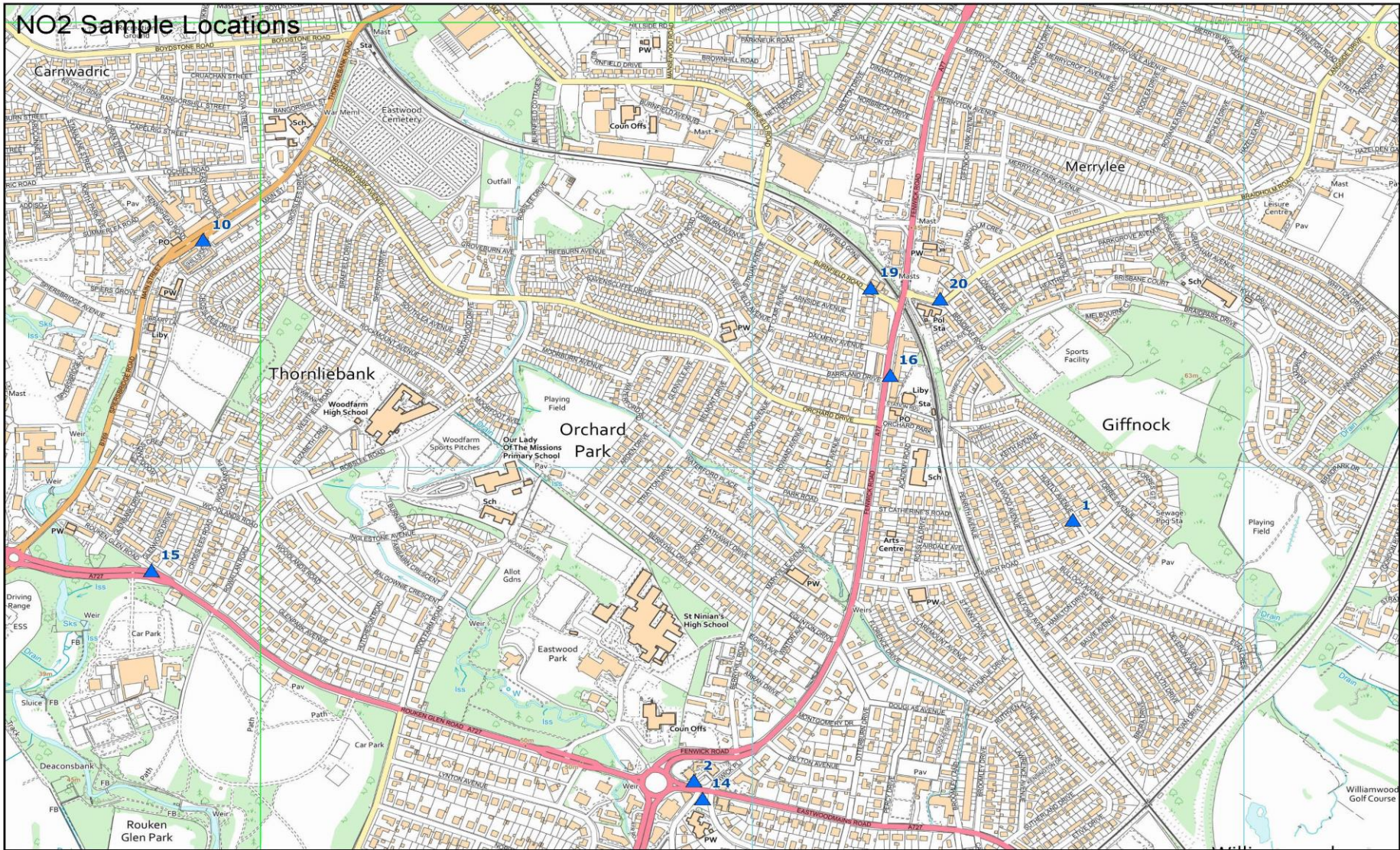
<b>Site ID</b>	<b>Site Name</b>	<b>Site Type</b>	<b>X OS Grid Ref</b>	<b>Y OS Grid Ref</b>	<b>Relevant Exposure? (Y/N with distance (m) to relevant exposure)</b>	<b>Distance to kerb of nearest road (m)</b>	<b>Does this location represent worst-case exposure?</b>
1	Huntly Drive, Giffnock	Roadside	256633	658900	Y 2.0m	0	Y
2	Eastwoodmains Road	Kerbside	255950	658269	Y 5.0m	2.5	Y
3	Clarkston Toll	Roadside	257278	657569	Y 5.0m	0	Y
4	Sheddens Roundabout	Kerbside	257437	657092	Y 2.0m	3	Y
5	Riverside Terrace, Busby	Kerbside	257889	656601	Y 2.5m	2.5	Y
6	Main Street, Neilston	Kerbside	247958	657299	Y 1.0m	2.5	Y
7	Kelburn St, Neilston Rd, Barrhead	Kerbside	249401	658377	Y 2.0m	2.5	Y
8	Cross Arthurlie St, Barrhead	Kerbside	249787	659237	Y 1.0m	2	Y
9	Darnley Rd, Barrhead	Kerbside	250845	659308	Y 5.0m	2.5	Y
10	Main St, Thornliebank	Kerbside	254759	659474	Y 5.0m	2.5	Y
11	Main St, Barrhead, North	Roadside	250651	659238	Y 5.0m	0.5	Y
12	Main St, Barrhead, South (Allans Corner)	Roadside	249845	658779	Y 15.0m	0.5	Y
13	Lochlibo Rd at W. Arthurlie	Kerbside	249344	658392	Y 7.0m	4	Y
14	Eastwoodmains Rd, Mains Ave	Kerbside	255709	658109	Y 5.0m	2	Y
15	Rouken Glen Rd	Kerbside	254777	658770	Y 5.0m	2	Y
16	195 Fenwick Road	Kerbside	256279	659209	Y 2.0m	0.5	Y
17	Mearnskirk Nursing Home	Roadside	253798	655385	Y 2.5m	1	Y
18	Brodick Place, Newton Mearns	Roadside	252407	655475	Y 1.0m	0	Y
19	Burnfield Road	Roadside	256218	659414	Y 1.0m	1.5	Y
20	Braidholm Rd, Giffnock	Roadside	256381	659380	Y 4.5m	2	Y
21	Mearns Castle High School Sports	Kerbside	255418	655265	Y 10m	2	Y
22	Mearns Castle High School Entrance	Kerbside	255405	655274	Y 5m	0.5	Y
23	Eastwood Health Centre Drumby Crescent	Kerbside	256728	658007	Y 5m	3	Y



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## CLARKSTON AND BUSBY



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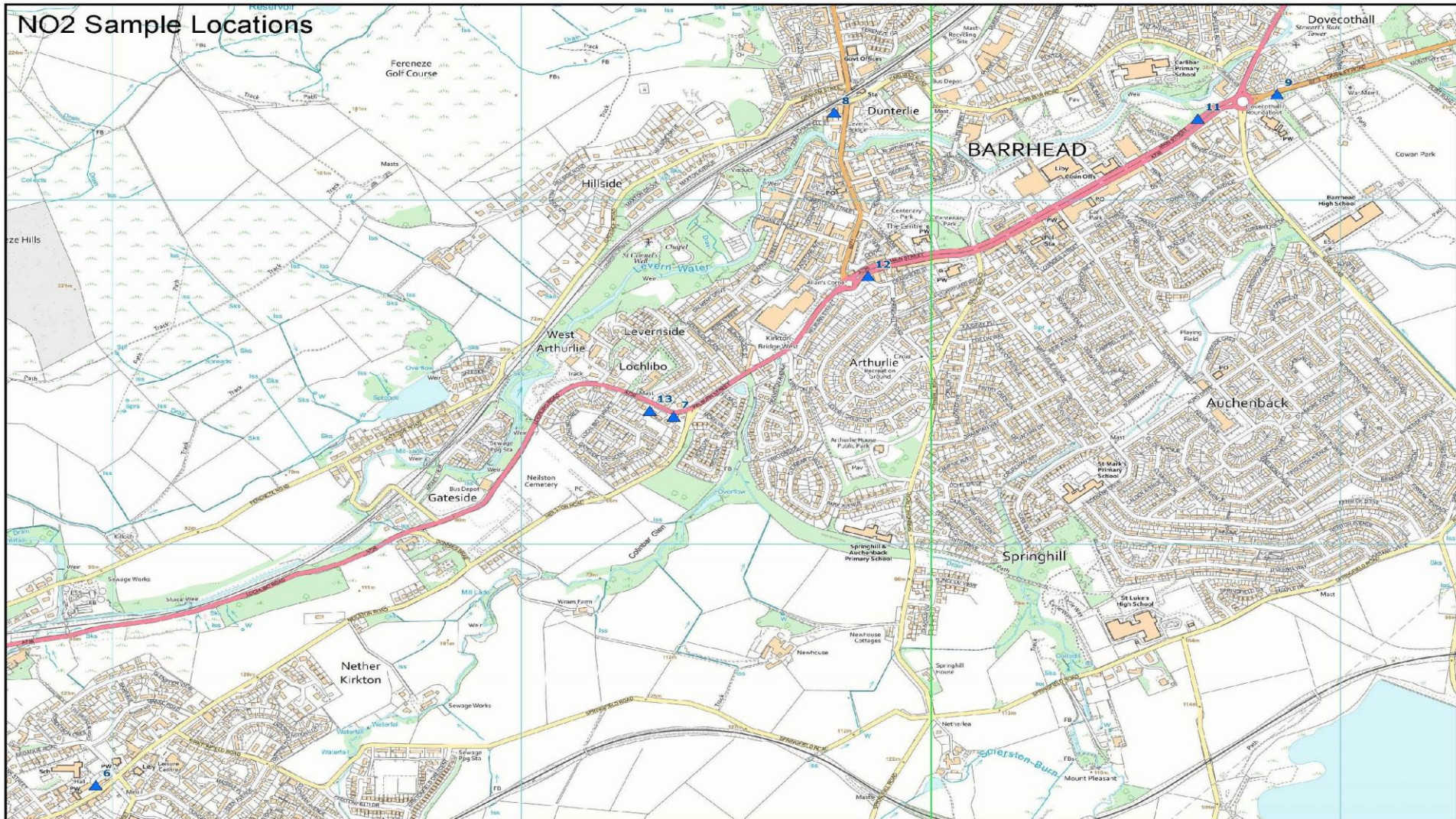
## Thornliebank and Giffnock



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## NEWTON MEARNS (South)



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## BARRHEAD AND NEILSTON

Table A.2 – Annual Mean NO<sub>2</sub> Monitoring Results

Site ID	Site Type	Monitoring type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2022(%) <sup>(2)</sup>	Annual mean concentration (adjusted for bias) µg/m <sup>3</sup>					
					2017* (Bias Adjustment Factor =0.97)	2018* (Bias Adjustment Factor =0.91)	2019* (Bias Adjustment Factor =0.86)	2020* (Bias Adjustment Factor =0.87)	2021* (Bias Adjustment Factor = 1.1) <sup>(3)</sup>	2022* (Bias Adjustment Factor = 1.05) <sup>(3)</sup>
1	Roadside	Diffusion tube	83.3	83.3	13.2	11.7	12.4	8.6	7.7	9.3
2	Kerbside	Diffusion tube	100	100	26.9	22.1	25.1	15.7	17.1	20.0
3	Roadside	Diffusion tube	100	100	32.4	26.0	32.2	19.9	30.8	26.1
4	Kerbside	Diffusion tube	100	100	23.1	20.9	20.5	12.4	17.2	18.9
5	Kerbside	Diffusion tube	100	100	17.7	14.2	14.7	9.3	12.4	11.1
6	Kerbside	Diffusion tube	92	92	12.4	11.9	12.8	7.4	10.4	9.0
7	Kerbside	Diffusion tube	100	100	26.3	21.0	21.8	17.7	18.4	19.4
8	Kerbside	Diffusion tube	92	92	25.3	23.2	22.4	14.2	17.9	16.6
9	Kerbside	Diffusion tube	100	100	19.3	13.8	15.4	11.3	14.1	10.9
10	Kerbside	Diffusion tube	75	75	26.2	22.5	25.5	17.0	20.5	18.5
11	Roadside	Diffusion tube	100	100	21.2	18.0	14.7	11.6 <sup>(4)</sup>	16.43 (*4)	21.8
12	Kerbside	Diffusion tube	83.3	83.3	23.4	22.4	22.1	15.3	20.5	23.2
13	Kerbside	Diffusion tube	100	100	28.9	27.2	28.7	18.9	26.7	22.5
14	Kerbside	Diffusion tube	92	92	23.6	17.1	18.4	10.3	11.8	8.8



Site ID	Site Type	Monitoring type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2022(%) <sup>(2)</sup>	Annual mean concentration (adjusted for bias) $\mu\text{g}/\text{m}^3$					
					2017* (Bias Adjustment Factor =0.97)	2018* (Bias Adjustment Factor =0.91)	2019* (Bias Adjustment Factor =0.86)	2020* (Bias Adjustment Factor =0.87)	2021* (Bias Adjustment Factor = 1.1) <sup>(3)</sup>	2022* (Bias Adjustment Factor = 1.05) <sup>(3)</sup>
15	Roadside	Diffusion tube	100	100	28.3	25.4	27.8	16.9	22.6	21.1
16	Roadside	Diffusion tube	75	75	31.9	31.7	28.8	16.1	19.6	18.6
17	Roadside	Diffusion tube	92	92	13.6	12.7	11.6	7.2	9.7	7.1
18	Roadside	Diffusion tube	100	100	20.1	16.4	17.7	11.3	13.5	12.5
19	Roadside	Diffusion tube	100	100	21.9	20.0	21.2	12.4	14.5	15.7
20	Roadside	Diffusion tube	92	92	21.5	16.6	17.4	11.1	14.3	12.8
21	Roadside	Diffusion tube	92	92	12.6	10.5	10.7	8.4	7.9	7.2
22	Roadside	Diffusion tube	92	92	12.0	11.1	9.7	6.3	7.6	6.1
23	Kerbside	Diffusion Tube	100	100	NA	17.5	16.7	10.7	11.2	12.5

Notes: Exceedances of the NO<sub>2</sub> annual mean objective of 40 $\mu\text{g}/\text{m}^3$  are shown in **bold**.

NO<sub>2</sub> annual means exceeding 60 $\mu\text{g}/\text{m}^3$ , indicating a potential exceedance of the NO<sub>2</sub> 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.

(4) All means have been “annualised” as per LAQM.TG(16) if valid data capture for the full calendar year is less than 75% and annualisation is appropriate. See Appendix C for details.

**Appendix B: Full Monthly Diffusion Tube Results for 2022****Table B.1 – NO<sub>2</sub> Monthly Diffusion Tube Results for 2022**

SITE ID		NO <sub>2</sub> Mean Concentrations (µg/m <sup>3</sup> )													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean	
														Raw Data (%)	Bias Adjusted <sup>(1)</sup> (Factor = 1.05)
1	Huntly Drive, Giffnock	10.3	9.3	14.8	8.2	5.1	3.6	NR	5.6	8	6.7	NR	16.8	83.3	9.3
2	Eastwoodmains Road, Giffnock	23.5	22.7	26	16.6	13.4	13	9.3	8.5	18.5	19.1	27.6	30.4	100	20.0
3	Clarkston Toll	18.3	18.4	35.8	31.3	21.8	11.9	17.5	21.1	32.3	22.9	32.7	34.8	100	26.1
4	Sheddens Roundabout, Clarkston	46.4	12.4	19.4	17.1	12.1	7.3	9	11.8	17.7	14.3	23.2	25.4	100	18.9
5	Riverside Terrace, Busby	7.7	8.1	14.9	12.2	9.2	3.5	6.7	8.3	14.4	9.2	16.7	16.1	100	11.1
6	Main Street, Neilston	6.7	7.3	12.1	8.5	5.8	4.1	4.5	NR	7.4	8	17	12.8	92	9.0
7	Kelburn St @ Neilston Rd, Barrhead	21.2	21.4	22.9	21.6	16.7	15.1	12	5.6	16.6	18.2	24.4	26.4	100	19.4
8	Cross Arthurlie St, Barrhead	15	15.8	24.9	22.1	15.6	7.7	NR	12.9	9.8	17.9	11.9	20.6	92	16.6
9	Darnley Rd, Barrhead	11.7	15.1	17	1.6	7.8	3.5	4.9	6.8	8.9	11.2	17.7	18.3	100	10.9
10	Main St, Thornliebank	20.7	21.1	25.1	NR	1.6	11.2	12	14.2	NR	NR	26.1	26.8	75	18.5
11	Main St, Barrhead, North	20.2	21.2	27.1	18.2	21.8	8	16.7	7.2	27.9	21.4	32.7	27.2	100	21.8
12	Main St, Barrhead, South	21.7	17.6	33.2	29	NR	15.7	13.4	8.5	NR	17.1	30.5	34.6	83.3	23.2
13	Lochlibo Rd at W. Arthurlie	17.3	20.9	30.3	26.7	19	12.3	15.1	9.7	25.7	21.4	30.5	28.6	100	22.5
14	Eastwoodmains Rd @ Mains Ave	5.8	9	13.5	9.2	6.8	3.5	3.8	7.1	9.7	7.3	Not analysed	16.9	92	8.8
15	27 Rouken Glen Rd @ Gushet	23.2	21.8	28.9	15.7	16.1	14.1	15.1	13	22.1	20	26.8	24.3	100	21.1
16	195 Fenwick Road	19	16.2	29.5	17	14.4	10.7	NR	7.8	NR	18.5	NR	26.7	75	18.6
17	Mearns Kirk Nursing Home (GSO)	6	6.2	10.1	8.1	4	3.3	2.1	4.8	6	NR	11.7	11.6	92	7.1
18	Brodick Place, Newton Mearns (M77)	17.7	13	17.5	11.9	3.5	7.6	9.1	4.1	12.4	12.6	14.7	18.8	100	12.5
19	5 Burnfield Road	12.8	10.6	19.9	19.2	11	6.6	8.3	10.8	16.3	15.2	21.8	27	100	15.7
20	8 Braidholm Rd, Giffnock	15.7	14.2	19	13.6	6.1	6.3	2.1	6.9	NR	16.1	14.8	19.6	92	12.8
21	Mearns Castle High School Sports	6.3	5.6	11.3	7.3	2.2	4.1	2.1	8	NR	6.4	9.6	12.7	92	7.2
22	Mearns Castle High School Entrance	5.5	5.2	8.8	NR	5	2.5	2.1	6.2	6	4.6	8.9	8.9	92	6.1
23	Eastwood Health Centre at Drumby Cres.	8.4	9.5	21.3	19	5.7	4.6	2.1	9.6	13.9	11.7	19.2	17.5	100	12.5

(1) See Appendix C for details on bias adjustment

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

### **Bias Adjustment Factor For Glasgow Scientific Services**

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 2022, GSS demonstrated 'poor' precision for 3 out of 6 assessments (see <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/national-bias/> )

DEFRA further reports that the 2022 bias adjustment factor for GSS is 1.05 (see <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/diffusion-tube-data-processing-tool/> Spreadsheet 03/23). 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.

**Annualising Results**

It is recommended that for results with less than 75% data collection that the results are annualised for the annual average. All results for NO<sub>2</sub> diffusion tubes had above, or met the recommended 75% collection rate and therefore annualising of results was not required.

## **Appendix D: Additional Information on the Impact of Covid Pandemic Mitigation Measures on Air Quality**

The various stages of national and regional lockdown requirements as part of the pandemic response resulted in noticeable improvements in ERC's air quality in both 2020 and into 2021. As road traffic is considered the major source of pollution within ERC, with less vehicles on the road during lockdowns, significant lower pollutant levels were recorded at all our monitoring sites.

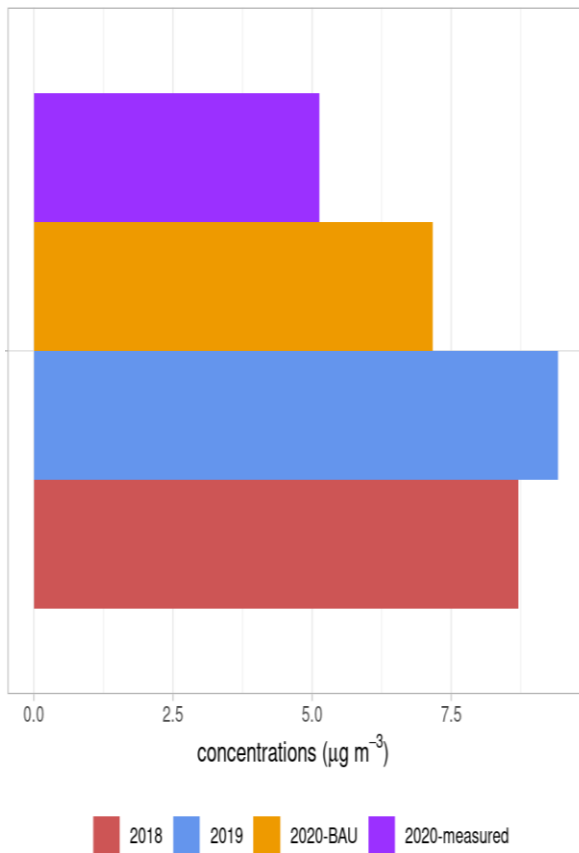
A report into the "**Covid19 lockdown effects on Air Quality**" was produced for East Renfrewshire and examines the impact of lockdown measures on ambient air quality data. This analysis focuses on NO<sub>x</sub>, NO<sub>2</sub> and ozone. Data was measured from January 2020 through January 2021, and proven modelling techniques to discount the influence of weather on ambient pollutant concentrations were used.

The result of the study carried out at the Waukmill Glen automatic measuring station (which lies on the Glasgow /East Renfrewshire Boundary) compares 2018 , 2019 , modelled 2020-Business as Usual and the 2020 measured concentrations of NO<sub>2</sub>.

The results suggest that measured 2020 concentrations were approximately 65% of the measured 2018 and 2019 NO<sub>2</sub> levels or a drop of 22% on modelled Business as usual figure for 2020. **Figure 1** below summarises the report's findings and the full report can be viewed at:

[http://www.scottishairquality.scot/assets/documents//East\\_Renfrewshire\\_covid\\_analysis\\_updated.html](http://www.scottishairquality.scot/assets/documents//East_Renfrewshire_covid_analysis_updated.html)

Figure 1. Covid – 19 Lockdown Effects on Air Quality



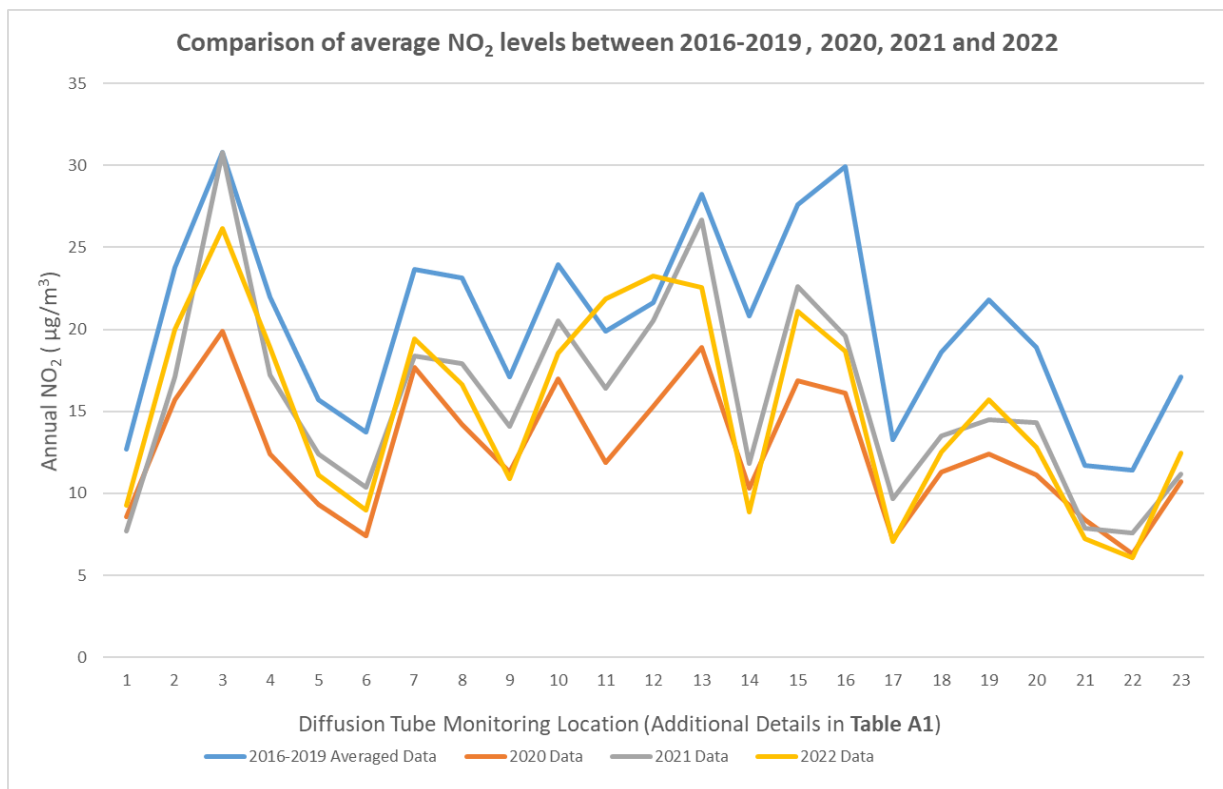
The national vaccination programme co-ordinated by the Scottish Government allowed the gradual easing of Covid restrictions to commence in early 2021- however, it is noted that schools did not return to the classroom until 19<sup>th</sup> April, with the whole of Scotland moving to “protection level 0” on the 19<sup>th</sup> July 2021 and “beyond level 0 restrictions” commencing on the 9<sup>th</sup> of August 2021. The full timeline of Covid national protection measures and their easing is included in the Scottish Parliament Information Centre’s Report **“Timeline of coronavirus (COVID-19) in Scotland”**

<https://spice-spotlight.scot/2022/08/19/timeline-of-coronavirus-covid-19-in-scotland/>

The gradual easing of restrictions and concurrent gradual return to what is being described as the “new normal” was virtually complete by the start of 2022 and we can start to report with confidence that air quality measurements recorded in 2022 will reflect any improvements seen as a direct result of the introduction of hybrid working, virtual meetings and new ways of working.

A very simple comparison of the data – comparing figures for average NO<sub>2</sub> levels across East Renfrewshire’s 23 monitoring sites for the years 2016-2019 versus the average annual levels experienced during 2020 (full Covid restrictions), 2021 (gradual easing of restrictions) and 2022 “new normal” is demonstrated in **Figure 2**. The results for 2021 are where we might expect them to be – approximately mid-way between 2016-2019 levels versus 2020 Covid lockdown levels, however we can also see the clear and significant reduction in NO<sub>2</sub> levels in 21 out of 23 of the monitoring stations compared to the average of 2016 to 2019 levels.

**Figure 2. Covid – 19 Comparison of averaged historical data (2016-2019) with Covid Lockdown Effects (2020 data), Covid Recovery (2021 data) and “New Normal” (2022 data) on Air Quality**



## 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)
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
ERC	East Renfrewshire Council
ESS	Environmental Sustainability Strategy
FDMS	Filter Dynamics Measurement System
GHG	Green House Gasses
GTZ	Get to Zero (Climate Change)
LAQM	Local Air Quality Management
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
PM <sub>10</sub>	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM <sub>2.5</sub>	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control



SEPA	Scottish Environmental Protection Agency
SO <sub>2</sub>	Sulphur Dioxide