Renfrewshire Council

Air Quality Action Plan Update

In fulfilment of Part IV of the Environment Act 1995

Local Air Quality Management

April 2024

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Report Reference Number	RenAQAP2024
Date	March 2024

Executive Summary

There is scientific consensus that exposure to air pollution is harmful to people's health in terms of premature mortality and morbidity. Air pollution is associated with a number of adverse health impacts, and particularly affects the most vulnerable in society: children and older people, and those with pre-existing health conditions.

Renfrewshire Council is committed to reducing the exposure of people within Renfrewshire to poor air quality in order to improve health.

A Renfrewshire Council Air Quality Action Plan (AQAP) was published in March 2019 which covered the council's three Air Quality Management Areas (AQMAs) within Paisley, Johnstone and Renfrew town centres.

Projects that were successfully delivered through the 2019 AQAP include:

- City Deals Projects - GAIA (Glasgow Airport Investment Area) works completed and infrastructure in use;
- City Deals Projects - two AMIDS (Advanced Manufacturing Innovation District Scotland) buildings are now complete and occupied;
- Upgrades & Improvements to the Council's Urban Traffic Control (UTC) system – faults identified, repairs undertaken, validation of traffic signals and updates to traffic controllers to ensure full optimisation of traffic signals in order to reduce congestion.
- Continual improvements to the Council fleet via the annual vehicle replacement capital programme and the increase of electric vehicles and associated charging infrastructure.
- Introduction of Renfrewshire Council's Corporate Sustainable Travel Planning Scheme including the provision of staff pool cars with the majority of these (approximately 50) being electric vehicles.
- Vehicle Idling Awareness Raising - regular targeted campaigns including a School Parking Campaign which by August 2019, all 49 Primary schools in Renfrewshire were engaged in.

- Cycle Strategy – construction of various infrastructure projects as per the Cycle Strategy priorities including the Paisley to Renfrew and Inchinnan Active Travel Routes. Provision of the Cycle to Work Scheme for Council employees.

Since implementation of the 2019 AQAP and the action measures contained therein, there has been a steady improvement of air quality across Renfrewshire Council. As such there have been no exceedances of any air quality objectives within Renfrewshire since 2019.

Given the length of time since exceedances of the objectives, revocation of the three AQMAs is now under consideration by the Council and, in accordance with the requirements of the Scottish Government's Local Air Quality Management Policy Guidance 2023 (PG(S)(23)), Renfrewshire Council expects the Paisley Town Centre, Renfrew Town Centre and Johnstone High Street AQMAs to be revoked no later than December 2024.

However, the Council remains committed to improving air quality further within Renfrewshire and have therefore produced this 2024 Renfrewshire Council Air Quality Action Plan Update (hereafter referred to as the AQAP Update) which outlines new measures that Renfrewshire Council will deliver between 2024-2029.

The action measures can be considered under five broad topics.

- Alternatives to private vehicle use
- Promoting travel alternatives
- Transport planning and infrastructure
- Traffic management
- Vehicle fleet efficiency.

Some measures are specific to a particular AQMA, and some are generic measures which will offer Renfrewshire wide air quality benefits.

Renfrewshire Council's priorities are to continue with transport planning and infrastructure works such as completion of the City Deals and AMIDS (South) infrastructure projects and cycling routes, publication of a new Local Transport Strategy (LTS) for the period 2025-2035 and continuing to promote low emissions transport and active travel alternatives.

Following revocation of the AQMAs, these measures will be incorporated into a Renfrewshire Council Local Air Quality Strategy. This is to ensure that air quality retains a high public profile and measures remain in place to continue to improve air quality in the area and prevent any future deterioration towards air quality objectives being exceeded.

By implementing the measures within this AQAP Update, the Council is striving to support the improvement of air quality within Renfrewshire as a whole. This is integral also to the Council's Local Outcome Improvement Plan, supporting the aim to make Renfrewshire a fairer, more inclusive place where all people, communities and businesses thrive.

Responsibilities and Commitment

This AQAP Update was prepared by Renfrewshire Council's Environmental Health team within Environment, Housing and Infrastructure with the support and agreement of the following council services:

Environment, Housing and Infrastructure - Transportation and Roads, Fleet, Active Travel, Environmental Health, Energy Management Unit;

Chief Executive's –City Deals, Climate Change.

This AQAP Update has been subject to consultation with statutory consultees and the local community and has been approved by the Council's Infrastructure, Land & Environment Policy Board.

Renfrewshire Council

If you have any comments on this AQAP, please send them to:

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Introduction

This Renfrewshire Council 2024 Air Quality Action Plan Update outlines new measures that Renfrewshire Council will deliver between 2024-2029 to continue to reduce concentrations of air pollutants within the council area thereby positively impacting on the health and quality of life of residents, workers and visitors to the area.

It has been developed in recognition of the legal requirement on the local authority to meet the requirements of the Local Air Quality Management (LAQM) statutory process, in particular the Scottish Government's Local Air Quality Management Policy Guidance 2023 (PG(S)(23)), which requires that air quality actions plans be reviewed and republished on a five yearly cycle from date of initial publication.

The new actions identified in this AQAP Update have been developed following consultation with all relevant council services, statutory consultees and key stakeholders. It is recognised that successful implementation and progress to deliver the measures within this AQAP Update will require ongoing effective partnership working and communication between all relevant bodies.

This AQAP Update will be formally reviewed and republished on a five-yearly cycle from date of initial publication unless the AQMAs are revoked, in which case measures will be incorporated into a Renfrewshire Council Local Air Quality Strategy. Progress each year will be reported in the Annual Progress Report (APR) produced by Renfrewshire Council, as part of the Council's statutory Local Air Quality Management duties.

Summary of Current Air Quality in Renfrewshire

There are three AQMAs declared in Renfrewshire within the towns of Paisley, Johnstone and Renfrew. The pollutants of concern within these AMQAs are nitrogen dioxide (NO_2) and particulate matter PM_{10} (particulate matter less than 10 microns in diameter) with a variety of sources contributing to the levels of these pollutants including background pollutant concentrations, transport, commercial and industrial sources.

The Council monitors these pollutants via three continuous automatic analysers and a network of approximately sixty NO_2 diffusion tube sites. Maps detailing the monitoring locations within each AQMA can be found in Appendix B.

Since implementation of the 2019 AQAP, there has been a steady improvement of air quality across Renfrewshire and as such there have been no exceedances of any air quality objectives at any of the monitoring locations (automatic and passive) within Renfrewshire since 2019.

Given the length of time since exceedances within the council area, revocation of the AQMAs is currently under consideration by the Council. This is discussed in more detail in section 1.7.1.

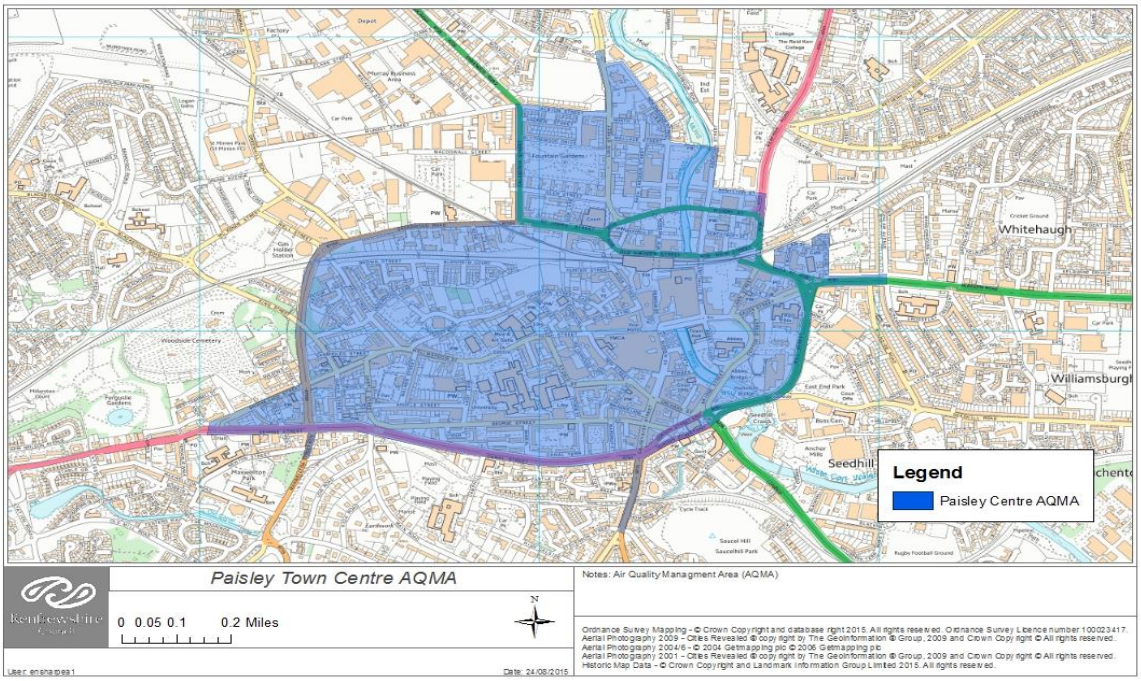
Details of the AQMAs and their most recent exceedances are described below followed by a summary of the 2023 Annual Progress Report.

1.1 Paisley Town Centre Air Quality Management Area

Paisley is Renfrewshire's largest town with a population in excess of 70,000. The town centre is a mix of historic buildings, commercial and residential premises within a compact area. A ring road around the town centre intercepts all the main routes converging on Paisley.

In August 2009 an AQMA covering the majority of Paisley town centre was declared due to numerous exceedances of the annual mean NO_2 and PM_{10} objectives and the 1-hr mean NO_2 objective. This AQMA, known as the Paisley Town Centre Air Quality Management Area, is presented in Figure 1.

Figure 1: Paisley Town Centre AQMA



The last exceedance within the Paisley Town Centre AQMA was in 2014 when the NO_2 annual mean statutory objective level of 40µg/m^3 was exceeded at five diffusion tube sites, the highest annual mean being 48.1µg/m^3. The last exceedance of the NO_2 1-hour mean objective (200µg/m^3 not to be exceeded more than 18 times/year) was in 2013. The last exceedance of the PM_{10} annual mean objective (18µg/m^3) was in 2014 with a level of 21.2 µg/m^3 measured at the Gordon St continuous monitor.

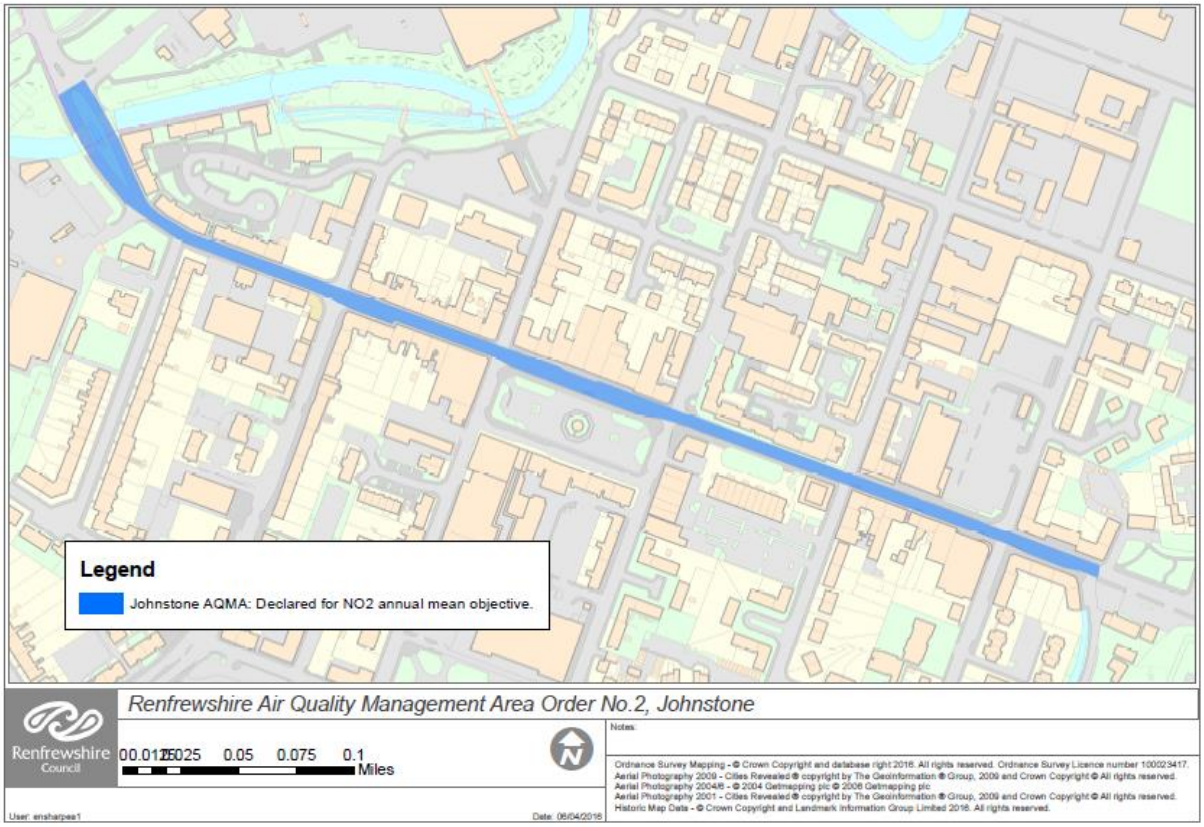
1.2 Johnstone High Street Air Quality Management Area

Johnstone is a town with a population of approximately 16,000. The town is set around a traditional grid pattern of streets and public spaces with the High Street running through the centre. Traffic congestion has been a significant issue on the High St and this, combined with a high volume of bus operations and canyon type topography had previously resulted in several hot spot locations where air quality objectives were being exceeded.

The Johnstone High Street AQMA was declared in August 2016 for exceedances of the NO_2 annual mean objective. Modelling as part of a 2015 Detailed Assessment also identified potential exceedances of the PM_{10} annual mean objective. A continuous particulate monitor (FIDAS), measuring both PM_{10} & $PM_{2.5}$, was installed on the High St in July 2017to determine whether there were exceedances of this objective.

The Johnstone Town Centre AQMA boundary extends along the entire High Street and is presented in Figure 2.

Figure 2: Johnstone High Street AQMA



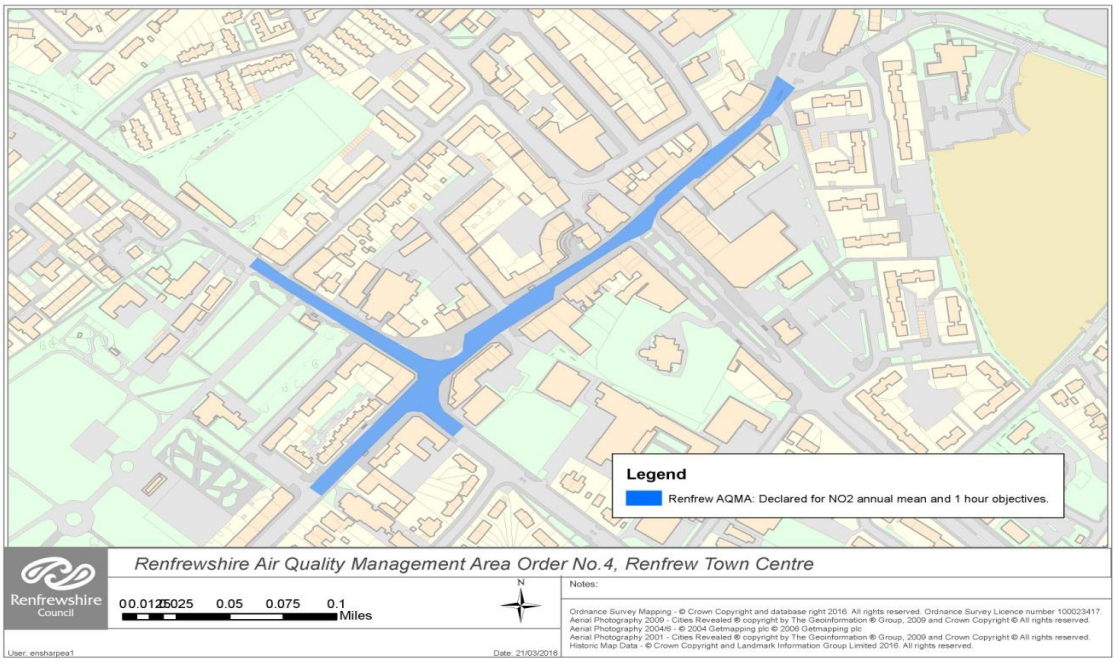
The last exceedance within the Johnstone High Street AQMA was in 2017 when the NO_2 annual mean statutory objective level of 40µg/m^3 was exceeded at one diffusion tube site. This was only a marginal exceedance of 40.6µg/m^3 (after bias adjustment and distance correction) and was located within a canyon area of the High St (diffusion tube no.59).

1.3 Renfrew Town Centre Air Quality Management Area

Renfrew is the second largest settlement in Renfrewshire with a population in excess of 20,000. The town centre is compact and comprises of commercial buildings and residential property, mainly in the form of tenement buildings.

The Renfrew Town Centre AQMA was declared in August 2016 for exceedances of both the NO_2 annual and 1-hour mean objectives. The boundary extends across the main junctions within the town centre (Inchinnan Road, Hairst Street, Glebe Street, Paisley Road, Canal St and High St) and is presented in Figure 3. This is a complex junction as a result of its physical layout and presents traffic management challenges in terms of signal staging and can result in congestion particularly at peak times.

Figure 3: Renfrew Town Centre AQMA



The last exceedance within the Renfrew Town Centre AQMA was in 2019 when the NO_2 annual mean statutory objective level of 40µg/m^3 was only marginally exceeded at one diffusion tube site on Inchinnan Road near to the main junction (diffusion tube no.8) where a value of 41.1µg/m^3 (after bias adjustment and distance correction) was recorded.

A continuous oxides of nitrogen (NO_x) analyser was installed on Inchinnan Road in close proximity to this diffusion tube in January 2019 but has not reported any exceedances of the NO_2 objectives.

1.4 2023 Annual Progress Report

The Council's 2023 Annual Progress Report (APR) reviewed all monitoring data from 2022 and identified no exceedances of the NO_2 and PM_{10} annual mean and short-term objectives anywhere within Renfrewshire.

In 2022 the Council operated three automatic monitoring sites (Cockels Loan Renfrew, Inchinnan Rd Renfrew and High St Johnstone) which measured NO_2 and/or PM_{10} and $PM_{2.5}$ concentrations. Concentrations recorded at all automatic monitoring sites were below the annual mean and short-term objective levels for both pollutants.

The Council also operates a network of approximately sixty NO_2 diffusion tube monitoring sites. There were no exceedances of the NO_2 annual mean objective at any diffusion tube locations across the council area during 2022.

Renfrewshire's Air Quality Priorities

1.5 Required Reduction in Emissions

Since implementation of the 2019 AQAP there has been a steady improvement of air quality across Renfrewshire Council with no exceedances of any air quality objectives since 2019. There is therefore no reduction in emissions required to meet statutory air quality objectives within Renfrewshire.

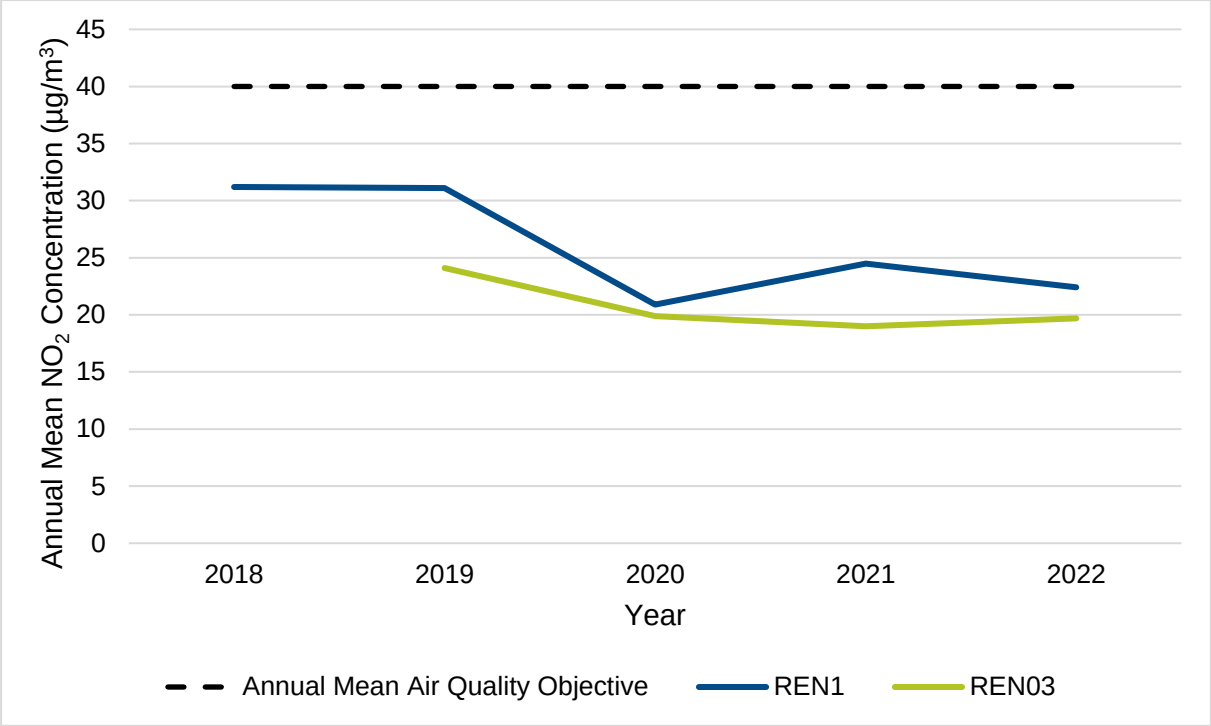
As reported within the Council's most recent 2023 Annual Progress Report, the monitored concentrations of NO_2 continue to show the downward trend observed across Renfrewshire for the majority of the past decade. Information on pollutant trends is provided below with additional detail available within the 2023 APR, a copy of which can be requested from Environment, Housing and Infrastructure.

1.5.1 Nitrogen Dioxide (NO_2)

From the most recent annual monitoring results (2022 data), only seven monitoring sites experienced an increase in annual mean NO_2 concentration from 2021 to 2022, compared to 49 sites experiencing a decrease. The increases were observed at the Renfrew Inchinnan Road automatic monitoring site and six diffusion tube locations with the increases ranging from +0.2 µg/m^3 to +2.3 µg/m^3. The decreases observed ranged from -0.6 µg/m^3 to -9.7 µg/m^3.

Table 3 in Appendix C compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40 µg/m^3. Broadly, over the past five years, the majority of the monitoring sites have shown a decrease in NO_2 concentrations. This is demonstrated in Figures 4 to 10 below.

Figure 4: Annual Mean NO_2 Concentrations at Automatic Monitoring Sites



(REN 1 – Cockels Loan Renfrew, REN 03 – Inchinnan Rd Renfrew)

Figure 5: Annual Mean NO_2 Concentrations at Diffusion Tube Monitoring Sites (Urban Centre, Urban Background, Kerbside)

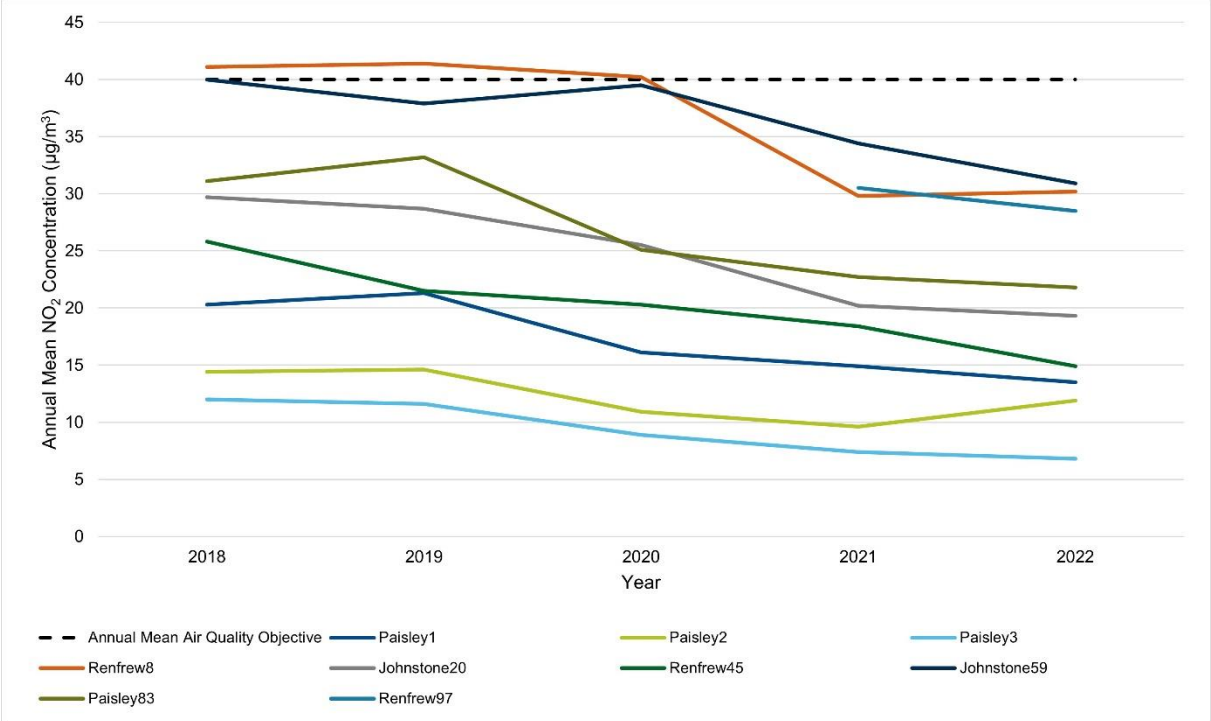


Figure 6: Annual Mean NO_2 Concentrations at Diffusion Tube Monitoring Sites (Roadside 1)

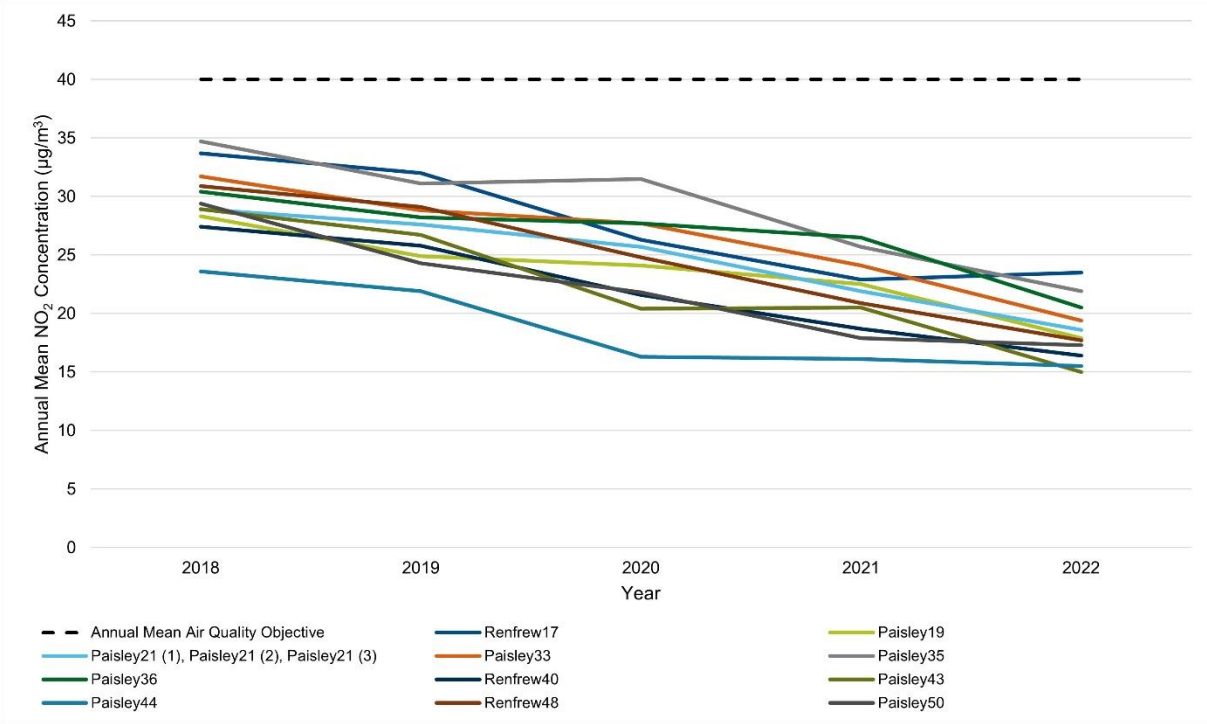


Figure 7: Annual Mean NO_2 Concentrations at Diffusion Tube Monitoring Sites (Roadside 2)

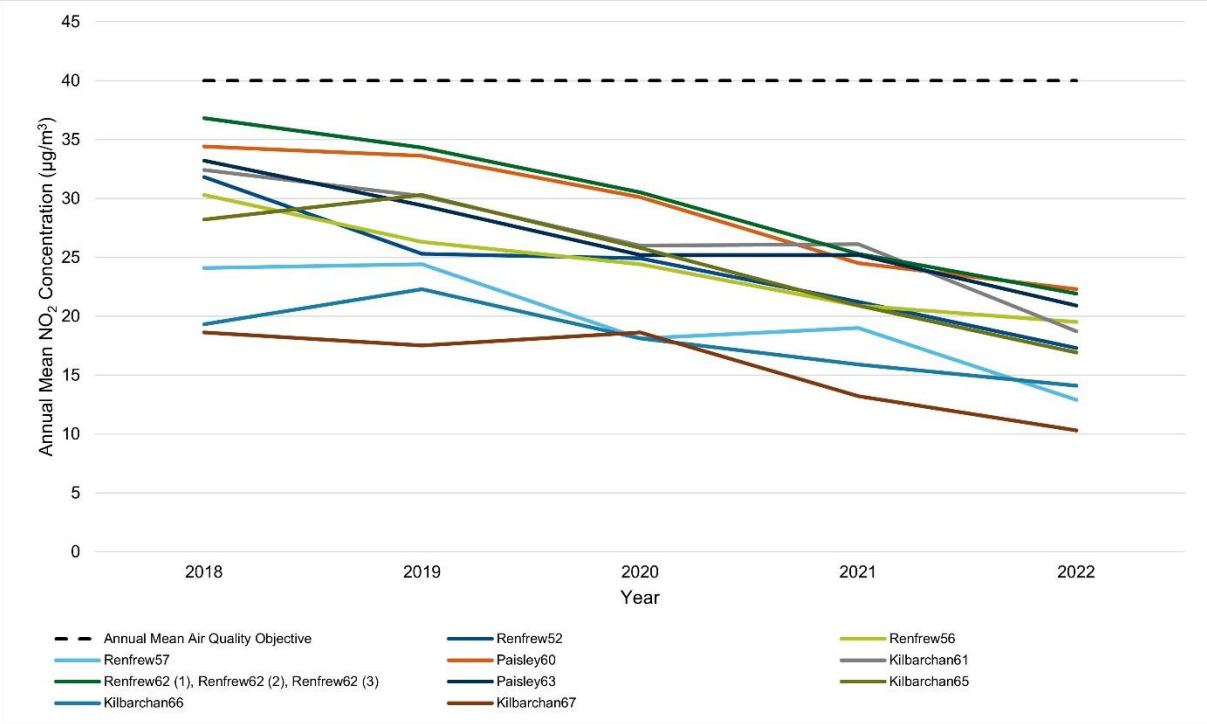


Figure 8: Annual Mean NO_2 Concentrations at Diffusion Tube Monitoring Sites (Roadside 3)

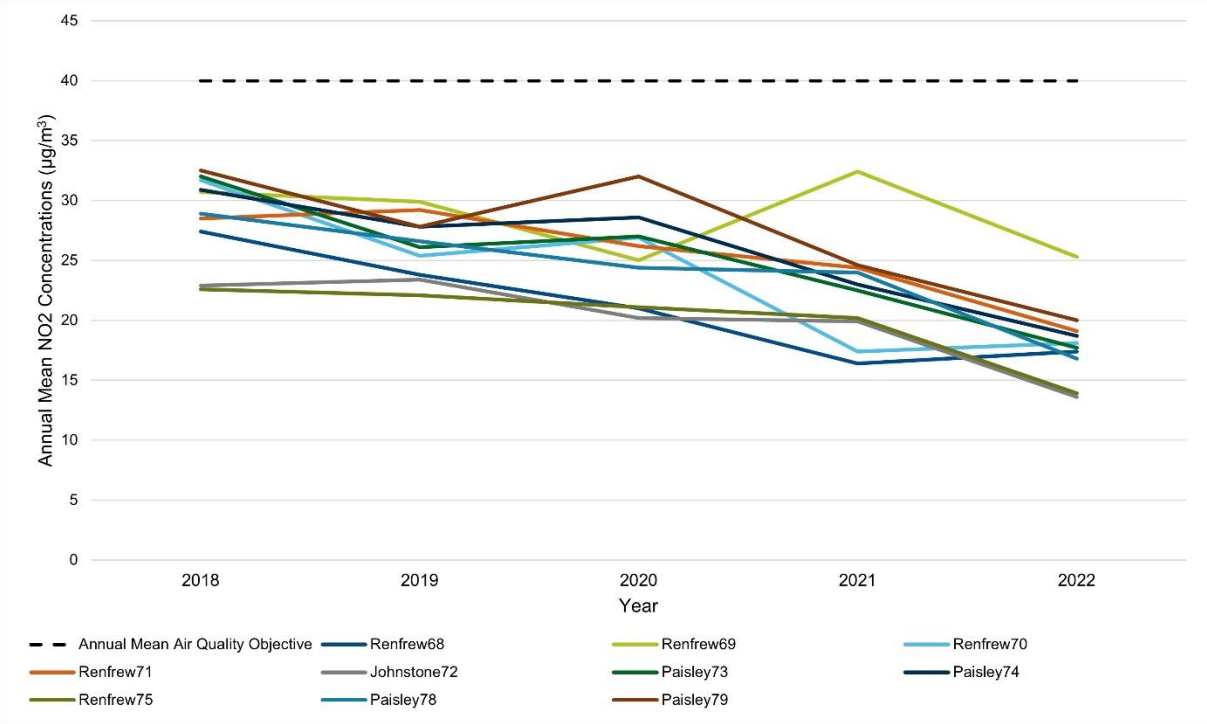


Figure 9: Annual Mean NO_2 Concentrations at Diffusion Tube Monitoring Sites (Roadside 4)

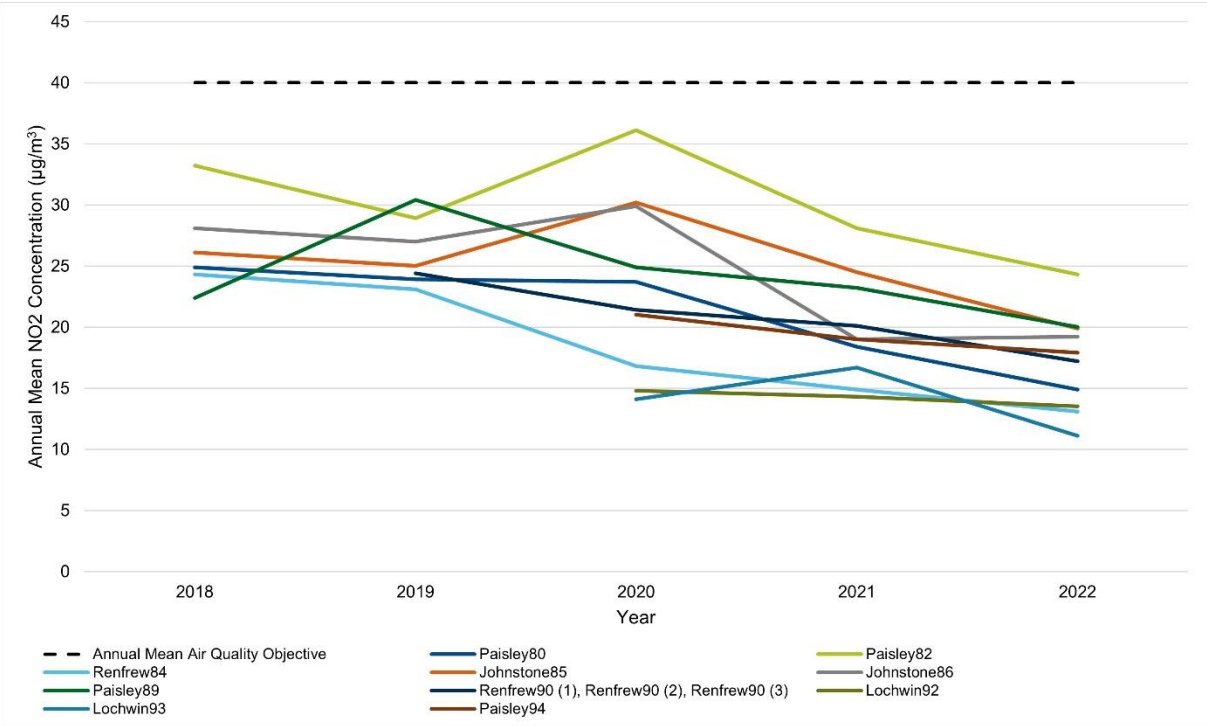


Figure 10: Annual Mean NO_2 Concentrations at Diffusion Tube Monitoring Sites (Roadside 5)

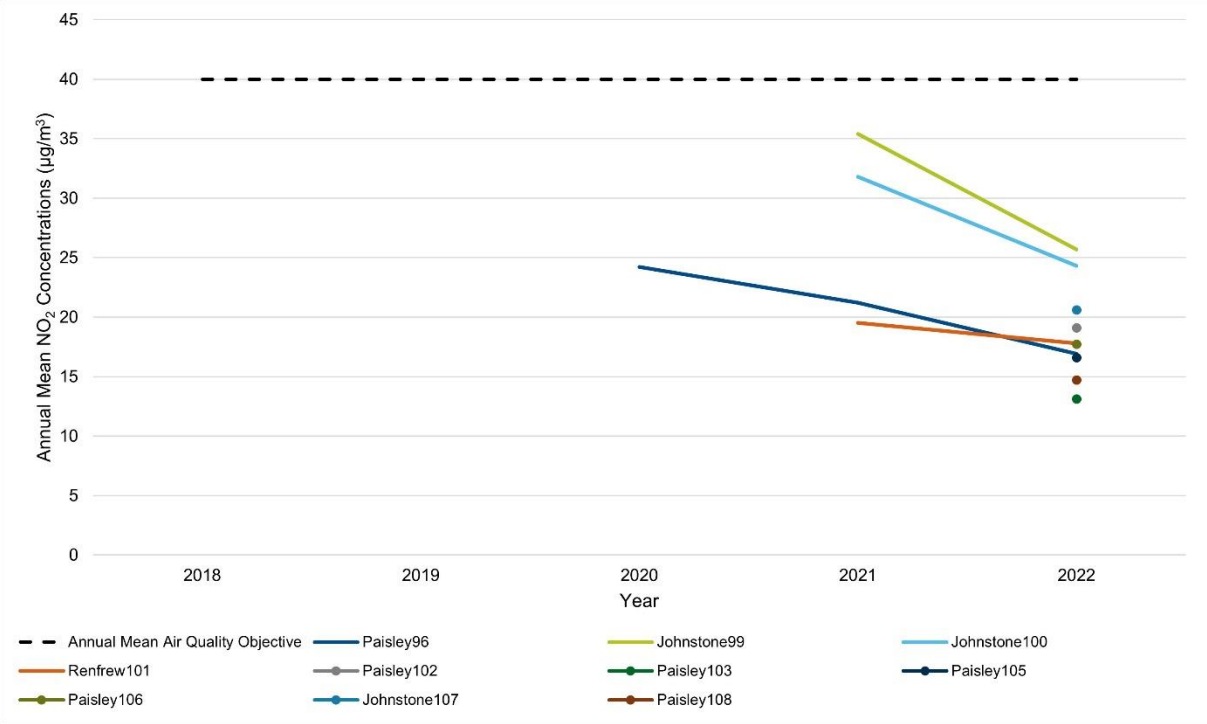


Table 4 Appendix C compares the ratified continuous monitored NO_2 hourly mean concentrations for the past five years with the air quality objective; 200 µg/m^3 not to be exceeded more than 18 times per year. No exceedances of the hourly mean air quality objective for NO_2 were recorded at any of the automatic monitoring sites. None of the diffusion tube monitoring sites reported concentrations exceeding 60 µg/m^3 which would indicate there are no exceedances of the short-term air quality objective.

1.5.2 Particulate Matter (PM_{10})

Particulate matter has recently only been monitored at one automatic monitor located on High St in Johnstone (REN02) due to the PM monitor at Gordon St Paisley being decommissioned at the end of 2021.

Table 5 in Appendix C compares the ratified and adjusted, monitored PM_{10} annual mean concentrations from the Johnstone site over the past five years with the air quality objective of 18 µg/m^3 (showing the ratified data and the ratified corrected data for REN02 which is a FIDAS monitor). There are variations in concentrations ranging

from 10.2 µg/m^3 to 16.3 µg/m^3 for the ratified data and 11.3 µg/m^3 to 17.9 µg/m^3 for the ratified corrected data over the past five years. The concentration in 2022 is a reduction of 0.8 – 0.9 µg/m^3 compared to the concentration recorded in 2021. The site has not recorded an exceedance of the annual mean PM_{10} objective since its installation in 2017.

The trend in the PM_{10} concentrations at the High Street Johnstone PM monitor over the past five years is shown in Figure 11 below.

Figure 11: Annual Mean PM_{10} Concentrations at Johnstone Automatic Monitoring Site

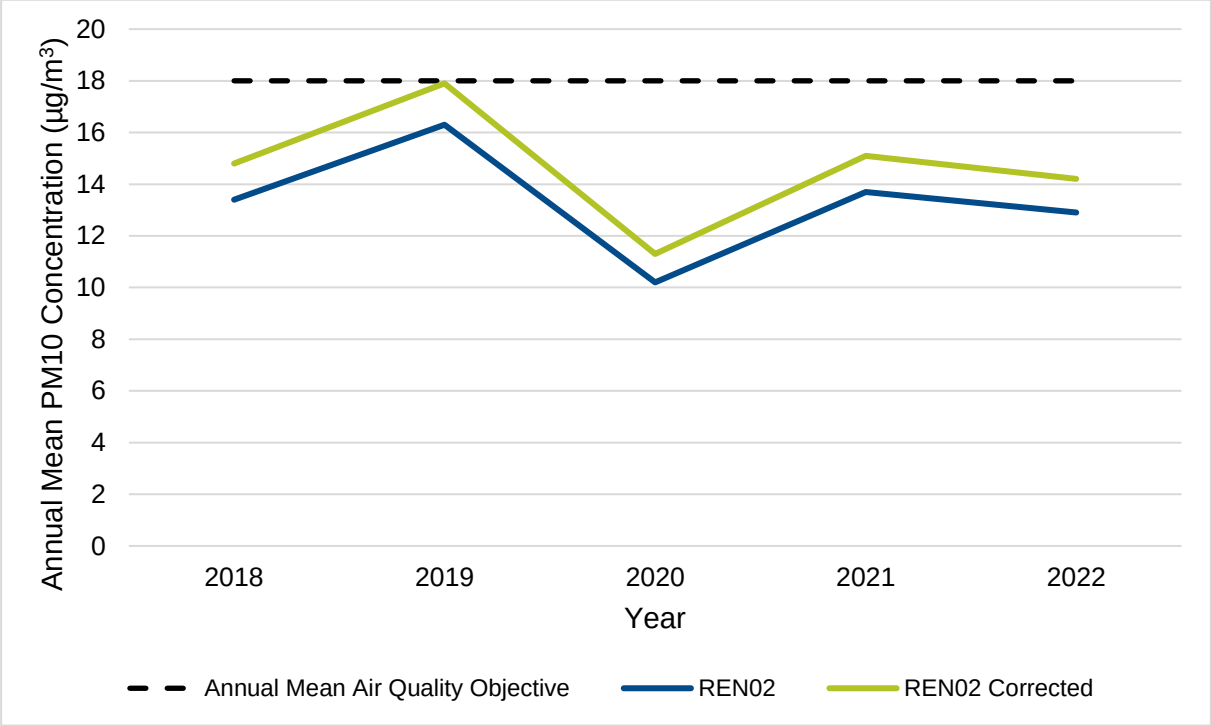


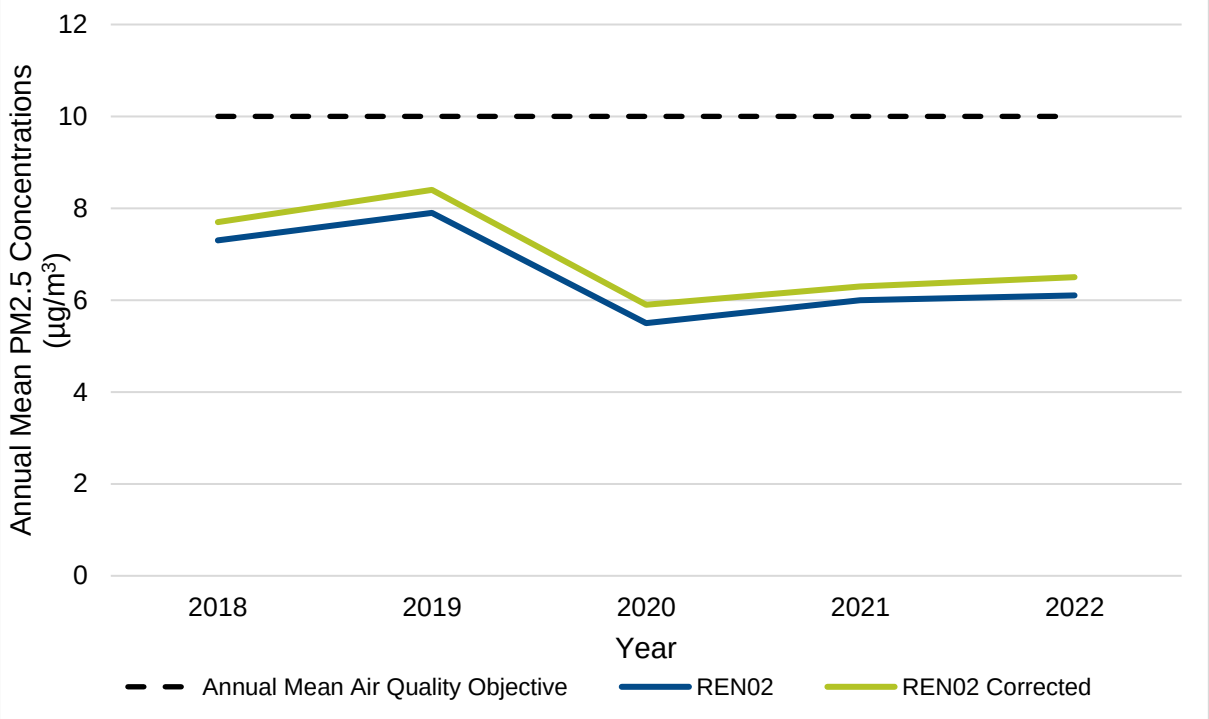
Table 6 in Appendix C compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the air quality objective of 50 µg/m^3, not to be exceeded more than seven times per year. There have been no exceedances of the 24-hour mean PM_{10} objective other than during the summer of 2019 which was investigated and identified to be attributed to very localised building works undertaken within a few metres of the site.

1.5.3 Particulate Matter ($PM_{2.5}$)

Table 7 in Appendix C compares the ratified and corrected monitored $PM_{2.5}$ annual mean concentrations for the past five years with the air quality objective of 10 µg/m^3. In 2022, the monitor recorded a concentration of 6.1 µg/m^3 (corrected value of 6.5 µg/m^3) which is a slight increase (+0.1 µg/m^3 and +0.2 µg/m^3 (corrected) respectively) compared to the concentration reported in 2021 (6.0 µg/m^3 and 6.3 µg/m^3 (corrected) respectively) but a reduction compared to the concentrations in 2018 and 2019 (7.3 µg/m^3 and 7.9 µg/m^3 for the ratified annual mean and 7.7 µg/m^3 and 8.4 µg/m^3 for the corrected annual mean). However, it should be noted that the $PM_{2.5}$ annual mean in 2020 and 2021 may have been impacted by COVID-19 related lockdowns.

The trend in the $PM_{2.5}$ concentrations at the High Street Johnstone PM monitor over the past five years is shown in Figure 12 below. The site has not recorded an exceedance of the annual mean $PM_{2.5}$ objective since its installation in 2017.

Figure 12: Annual Mean PM2.5 Concentrations at Johnstone Automatic Monitoring Site



1.6 Source Apportionment

Source apportionment is the process whereby the contribution of different pollutant sources to ambient concentrations is quantified. Given all statutory objective levels have been met, a source apportionment update is not required as part of this AQAP Update.

However, it is still useful to be aware of the predominant sources of emissions within the council area to ensure that the AQAP measures presented in this report are targeted towards these. Reference is therefore made to the previous source apportionment studies that were undertaken across all three AQMAs in 2015.

As previously detailed, the pollutants of concern within Renfrewshire are NO_2 and PM_{10}. A variety of sources contribute to the levels of these pollutants within the AQMAs including background pollutant concentrations, transport, commercial and industrial sources. In the case of particulate matter, a significant proportion of this comes from sources outside of the council area and even out with the UK.

The findings of the 2015 source apportionment study for each AQMA are summarised below however for a comprehensive understanding of the study please refer to the original report, a copy of which can be requested from Environment, Housing and Infrastructure.

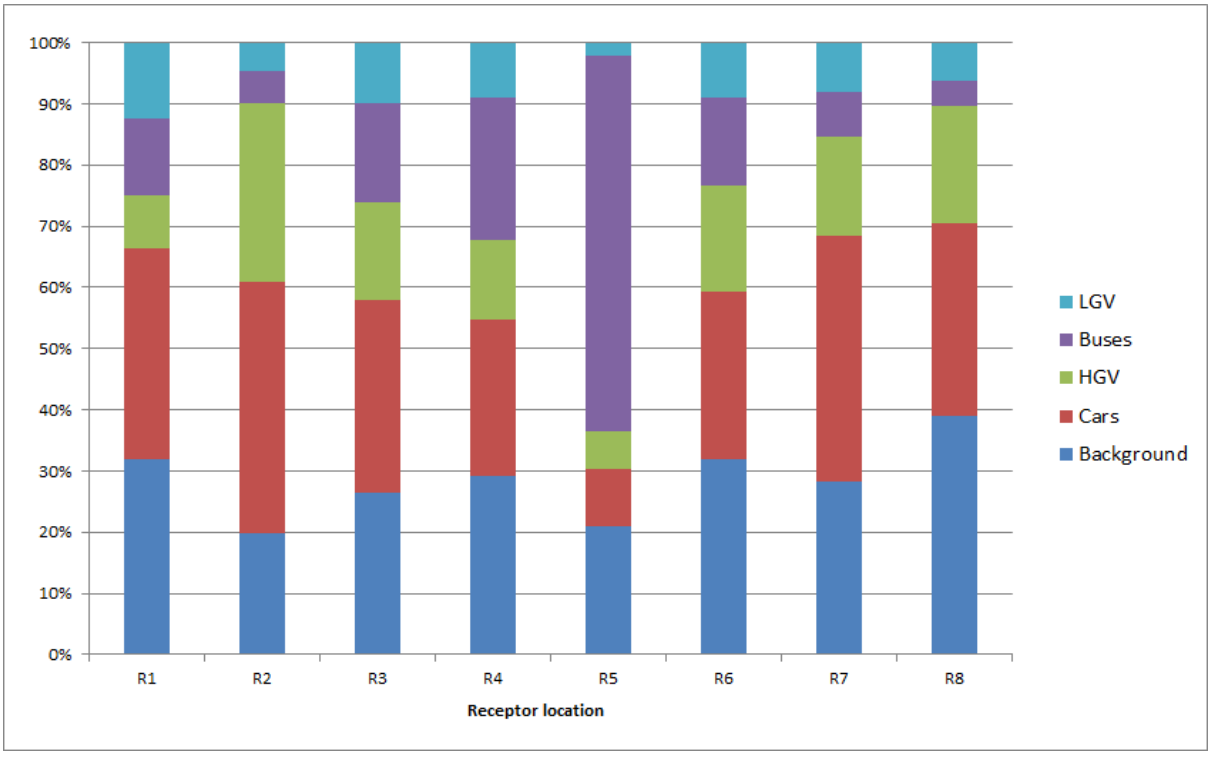
It is worth noting that the 2015 study refers to both nitrogen oxide (NO_x) and nitrogen dioxide (NO_2) emissions. For clarification, nitrogen oxide (NO_x) is a combination of nitrogen monoxide (NO) and nitrogen dioxide (NO_2) and is generally what is measured and modelled in terms of direct emissions from combustion processes, such as those found in diesel vehicles and industrial processes. The concentration of NO_2 is what is measured at roadsides and at other locations when investigating air pollution. The NO_x emitted from vehicles will undergo chemical reaction and dispersion to form the NO_2 concentrations measured at roadsides. Emission limits for vehicles are then set in terms of NO_x emissions, and the health-based air quality limits are set in terms of NO_2 concentrations.

1.6.1 Paisley Town Centre Air Quality Management Area

Nitrogen Oxides (NO_x)

The findings from the 2015 study indicated that the main source of NO_x at the selected receptor locations was local road traffic sources. The percentage contribution of road traffic sources varied between 61.1% and 80.3% dependant on location with background NO_x concentrations accounting for the remaining proportion. Of the local traffic sources, cars were identified as contributing the most significant proportion of NO_x at seven of the eight specified receptor locations, with buses identified as the main source at Receptor 5 (Receptor 5 is Smithhills Street which is a main bus stand location within the town centre).

Figure 13: NOx emissions by source and vehicle type (expressed as %) Paisley AQMA

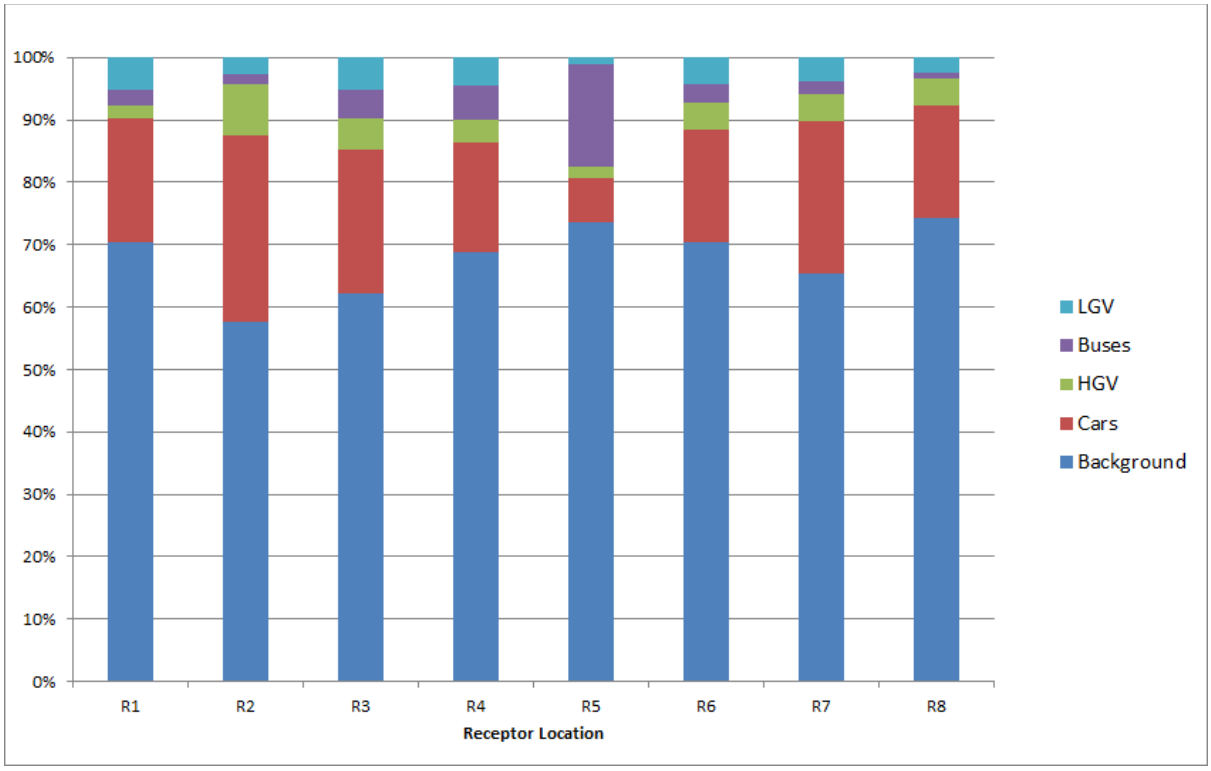


PM_{10}

With regards to concentrations of PM_{10}, the findings from the 2015 study indicated background sources were the most significant contributors to local concentrations. The percentage contribution of background sources varied between 70.1% and 83% dependant on receptor location with PM_{10} from local road sources making up the

remaining percentage. Of the local road sources, cars were the dominate source, contributing between 13.3% and 21.1% at seven of the eight receptor locations with buses identified as the main source at Receptor 5 (Smithhills Street).

Figure 14: PM_{10} emissions by source and vehicle type (expressed as %) Paisley AQMA



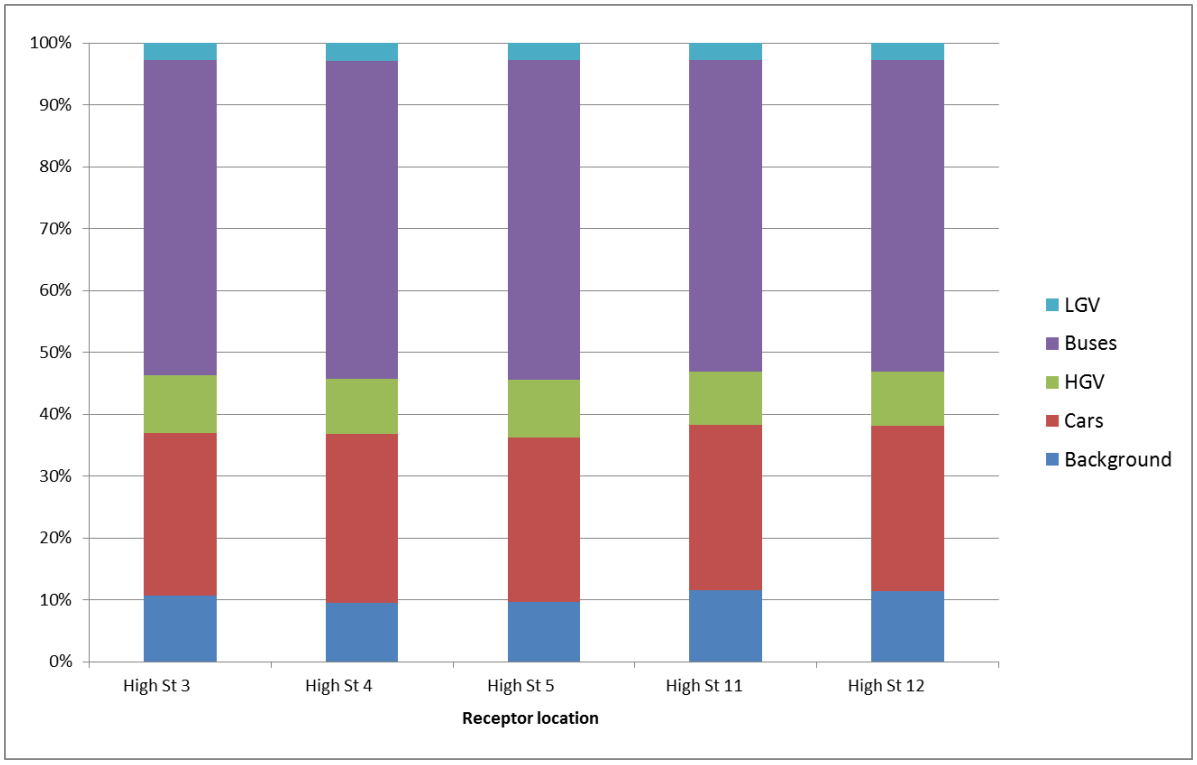
1.6.2 Johnstone High Street Air Quality Management Area

Nitrogen Oxides (NO_x)

The findings from the 2015 study indicated that the main source of NO_x at the selected receptor locations were local road traffic sources. The percentage contribution of road traffic sources varied between 88.5% and 90.5% dependant on location with background NO_x concentrations accounting for the remaining proportion. Of the local traffic sources, buses were identified as the dominant source at all receptor locations, contributing between 50.4% and 51.8% of NO_x. The proportion of NO_x (and PM_{10}) emissions from HGV and LGV movements is relatively low when compared to other vehicle types at all receptor locations.

Action plan measures targeted at reducing emissions from buses will therefore likely help reduce NO_2 (and PM_{10}) concentrations within the Johnstone AQMA. In addition, the locations where the highest pollutant concentrations are measured and modelled are within high sided street canyon topography and at locations where traffic is known to be regularly slow moving and congested at traffic lights. Measures aimed at improving traffic flow at these locations will therefore help to reduce vehicle emissions and pollutant concentrations.

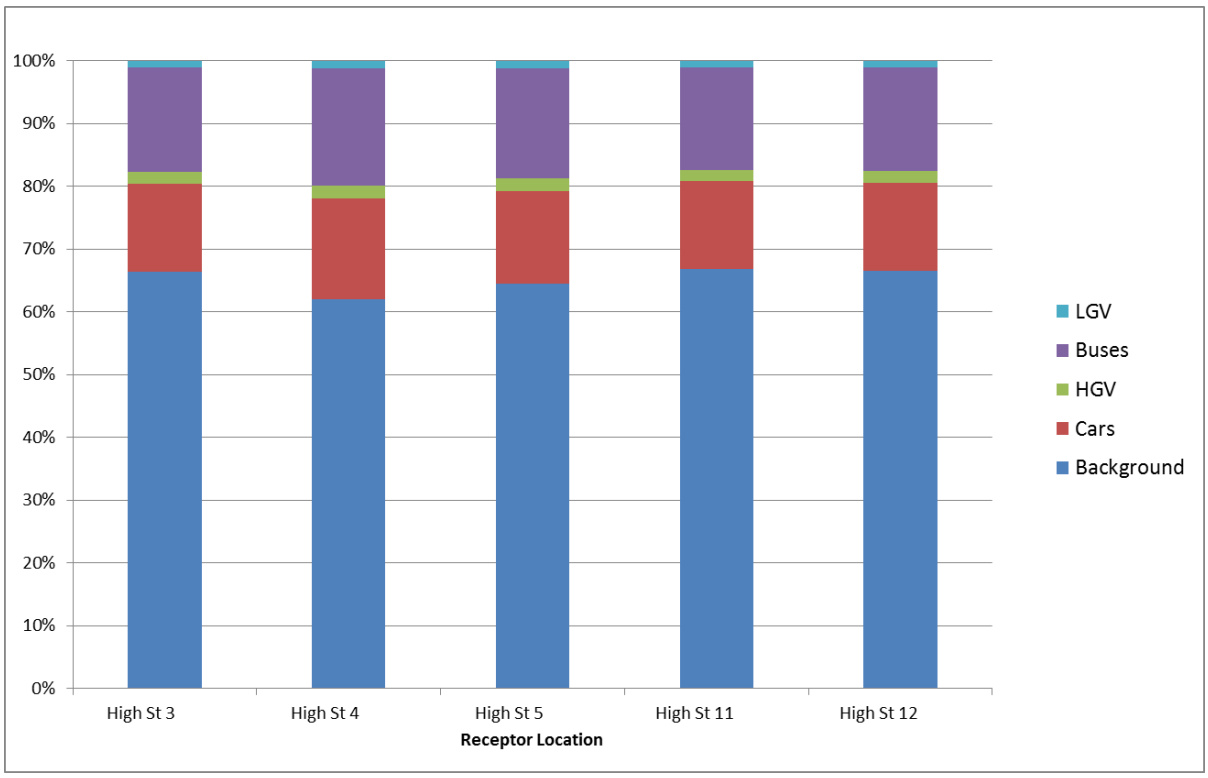
Figure 15: NOx emissions by source and vehicle type (expressed as %) Johnstone AQMA



PM10

With regards to PM_{10}, the findings from the 2015 study indicated background sources were the most significant contributors to local concentrations. The percentage contribution of background sources varied between 62% and 66.8% dependant on receptor location with PM_{10} from local road sources accounting for the remaining proportion. Of the local road sources, buses contributed slightly more than cars as can be seen in figure 16.

Figure 16: PM_{10} emissions by source and vehicle type (expressed as %) Johnstone AQMA



1.6.3 Renfrew Town Centre Air Quality Management Area

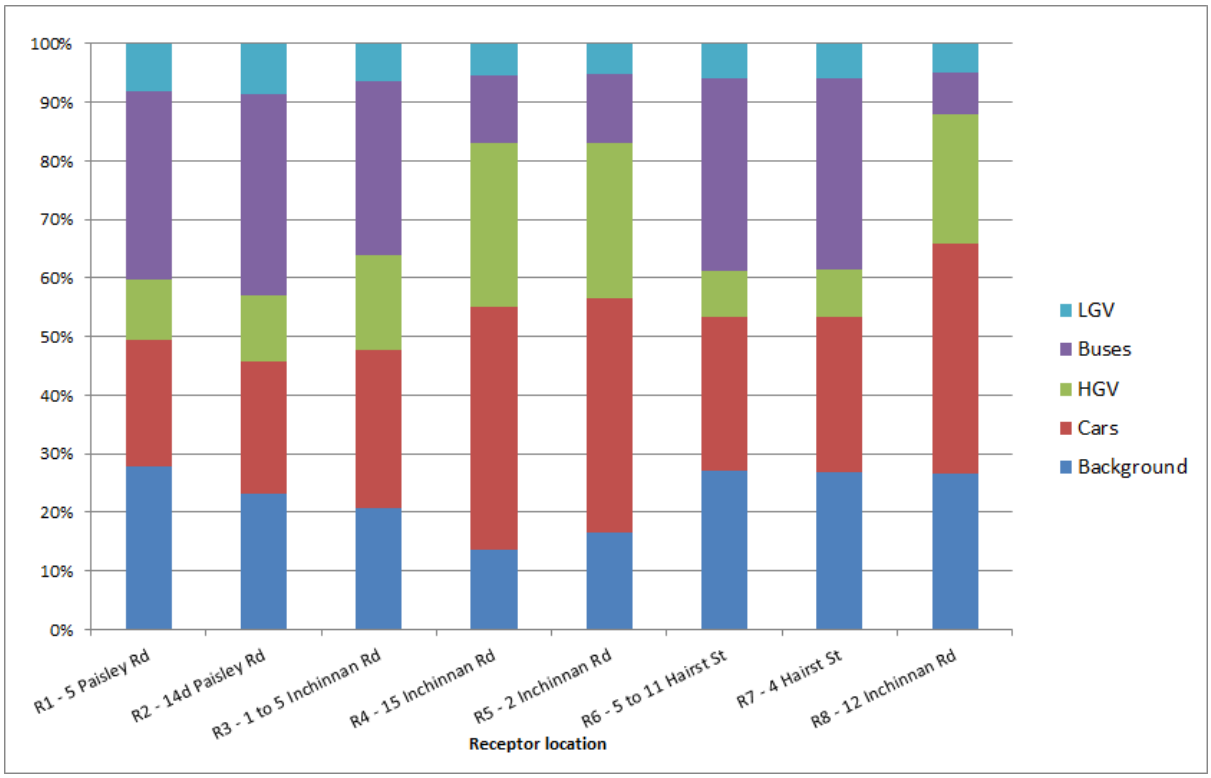
Nitrogen Oxides (NO_x)

The findings from the 2015 study indicated that the main source of NO_x at the selected receptor locations were local road traffic sources. The percentage contribution of road traffic sources varied between 72.1% and 86.5% dependant on receptor location with background NO_x concentrations accounting for the remaining proportion. Of the local traffic sources, the dominant source was variable dependant on receptor location. For example, the proportion of road NO_x from buses was greater on Paisley Road and Hairst St but emissions from cars were the most dominant contributor on Inchinnan Rd.

The locations where the highest pollutant concentrations were measured and modelled are at the section of Inchinnan Road approaching the traffic lights at the main junction with Paisley Road and Hairst Street where traffic will regularly be slow moving and idling at the lights. The high concentrations here also indicate that the

one-sided street canyon topography from the tenement properties on Inchinnan Road is possibly limiting dispersion of air pollutants. Measures aimed at improving traffic flow at these locations will therefore help to reduce vehicle emissions and concentrations.

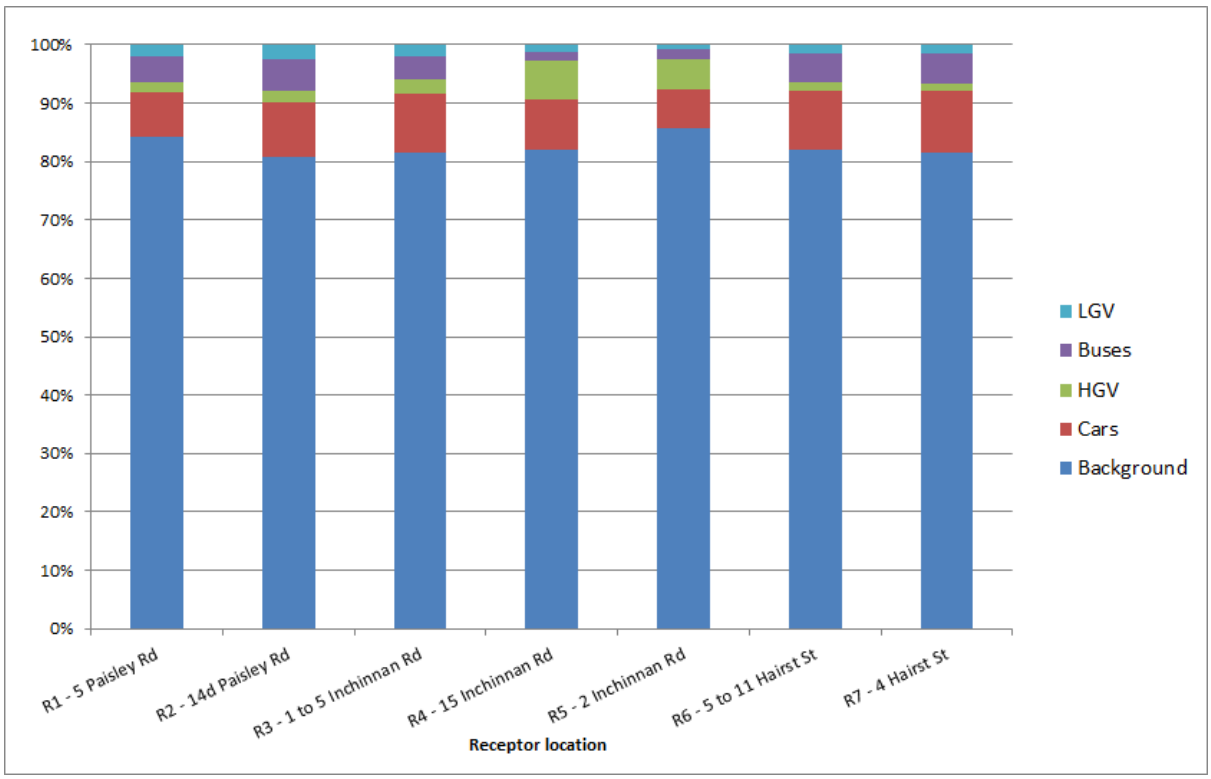
Figure 17: NOx emissions by source and vehicle type (expressed as %) Renfrew AQMA



PM10

With regards to concentrations of PM_{10}, the findings from the 2015 study indicated background sources were the most significant contributors to local concentrations. The percentage contribution of background sources varied between 80.9% and 85.7% dependant on receptor location with PM_{10} from local road sources accounting for the remaining proportion. Of the local road sources, cars were the most significant contributor as can be seen in figure 18.

Figure 18: PM_{10} Emissions by source and vehicle type (expressed as %) Renfrew AQMA



1.7 Key Priorities

1.7.1 Revocation

There are no set criteria on which an amendment or revocation decision should be based, and the Scottish Government considers each request on a case-by-case basis. However, a minimum requirement of the Scottish Government will normally be at least three consecutive years where the objectives of concern are being achieved and where monitoring data demonstrates that further exceedances of the objectives are unlikely to occur.

The Scottish Government's updated Local Air Quality Management Policy Guidance 2023 (PG(S)(23)) also states that there is an expectation that once the authority has demonstrated that the AQMA is in compliance with the air quality objectives (with confidence that future exceedances are unlikely) the AQMA order will be amended or revoked at the earliest opportunity.

Within Renfrewshire, there have been no exceedances of any air quality objectives since 2019. However, the Council delayed consideration of any revocation or amendment to the AQMAs due to significant traffic related developments within both Paisley town centre and Renfrew via the Glasgow City Region City Deal projects. However, progress with some of the City Deals projects has been delayed with completion dates now extended to 2027.

Taking into account the recent updating of the Scottish Government's PG(S)(23), the length of time since exceedances and also that the 2023 raw monitoring data suggests a further year of no exceedances (all annual averages being below 30µg/m^3 although this will not be confirmed until reported within the 2024 Annual Progress Report), revocation of the three AQMAs is now a main priority for the Council.

As such, Renfrewshire Council expects the Paisley Town Centre, Renfrew Town Centre and Johnstone High Street AQMAs to be revoked no later than December 2024, in accordance with the requirements of PG(S)(23).

1.7.2 Air Quality Strategy

Following revocation of an AQMA, PG(S)(23) recommends that the local authority should consider replacing the AQAP (which has served its purpose) with a local air quality strategy, although there is no statutory obligation to do so.

However, adopting such a strategy would ensure air quality retains a high public profile and measures remain in place to continue to improve air quality in the area and prevent any future deterioration towards exceedances of the air quality objectives.

Where an air quality strategy is developed, the ongoing measures contained in the final AQAP should form the basis of the relevant content of the strategy, but consideration should also be given to wider air quality in the local authority area and the strategic approaches required to ensure the authority maintains compliance with the air quality objectives and continues to reduce emissions.

Therefore, whilst the process of revocation is under consideration by Renfrewshire Council, progress of the measures outlined in this AQAP Update will continue in order to improve air quality within Renfrewshire between 2024 and 2029. Should

revocation of the AQMAs proceed, these measures will be incorporated into a Renfrewshire Council Air Quality Strategy to demonstrate the Council's commitment to improving the air quality within Renfrewshire on an ongoing basis to improve health.

1.7.3 Action Measures

Following on from the key priorities of revocation of the AQMAs and thereafter development of an Air Quality Strategy, Renfrewshire Council will continue to implement measures that are aimed to improve air quality within the area.

As discussed, the findings of the 2015 source apportionment study for each AQMA identified local road traffic to be the main source of NO_2 across the areas with background concentrations being the main source of PM. The key action measures of this AQAP Update are therefore aimed at reducing local transport related emissions with the following measures considered a priority.

- Priority 1 – Progress with the significant new road and cycle infrastructure projects which are part of the City Deals and AMIDS South projects;
- Priority 2 - Publication of a new Renfrewshire Local Transport Strategy and Active Travel Strategy;
- Priority 3 - Continuation with the upgrade and development of the cycling network as per the Renfrewshire Council Cycle Strategy priorities;
- Priority 4 - Improvement of the council's fleet, funded via the Council's Vehicle Replacement Programme (VRP). £2.2 million has been set aside for the VRP in 2023-24 for the purchase of new fleet vehicles. This includes the replacement of older fossil vehicles with newer fleet vehicles with better emission standards and the introduction of HVO as an alternative fuel for some of the fleet;
- Priority 5 - Continue with promotion of active travel measures, encouraging people to travel actively and sustainably with a view to supporting longer term behaviour shift.

Development and Implementation of Renfrewshire Council's AQAP Update

1.8 Consultation and Stakeholder Engagement

In developing this AQAP Update, several Renfrewshire Council services have collaborated to identify new measures to be taken forward and provided updates on existing measures. The Council also commits to working with other local authorities, agencies, businesses and the local community to improve local air quality, where we are requested to do so.

Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 1 below. This consultation was undertaken during March 2024. In addition, the Council will publicise the AQAP Update on the council website.

Table 1: Consultation Undertaken

Consultee	Consultation Undertaken
The Scottish Government	Yes
The Scottish Environment Protection Agency (SEPA)	Yes
Transport Scotland	Yes
All neighbouring local authorities	Yes
Other public authorities as appropriate, such as NHS Scotland and Health Boards	Yes
Bodies representing local business interests and other organisations such as community groups as appropriate	Yes

1.9 Steering Group

A steering group was established at the start of the action planning update process to take forward the development of this plan. The remit of the group was to provide an update on existing action plan measures contained within the 2019 Air Quality Action Plan and also identify new effective, feasible and proportionate action measures for inclusion within this AQAP Update and to ensure implementation and delivery of these.

The group was composed of Renfrewshire Council officers from those services with an interest or potential impact on air quality and who may have an influence on the action measures being considered. Members were similar to that of the steering group involved in the production of the 2019 AQAP and included officers from Environment, Housing and Infrastructure (Environmental Health, Transportation and Roads, Fleet, Active Travel, Energy Management Unit) and Chief Executive's (City Deals, Climate Change). Officers provided guidance in their respective areas of expertise to ensure evaluation and selection of the most appropriate measures. The Environmental Health team within Environment, Housing and Infrastructure have taken lead responsibility for production of the plan.

AQAP Measures

Air Quality Policy Guidance PG(S)(23) states that Action Plans must focus on ‘effective, feasible, proportionate and quantifiable measures as the top priority’.

The action measures detailed within this five yearly AQAP Update are a mix of new measures and ongoing existing measures from the 2019 AQAP.

The proposed action measures can be considered under the following broad topic areas:

- Alternatives to private vehicle use
- Promoting travel alternatives
- Transport planning and infrastructure
- Traffic management
- Vehicle fleet efficiency.

Given that road traffic is the principal source of NO_x pollution within all three AQMAs, the action measures focus on traffic management scenarios and the promotion of low emission transport. Some measures are specific to a particular AQMA, and some are generic measures which will offer Renfrewshire wide air quality benefits.

Table 2 provides a summary of all action measures including the following information:

- A list of the measures that form part of the plan.
- Expected or actual completion year for measures.
- Measure status (whether the measures are planned, in progress, completed or delayed)
- The responsible individual and departments/organisations who will deliver these measures.
- How the measure will be funded (Scottish Government or other).
- Estimated cost of implementing each measure (overall cost and cost to the local authority).
- Expected benefit in terms of pollutant emission and/or concentration reduction.

- Key milestones towards delivery.

NB: Please see future Annual Progress Reports for annual updates on implementation of these measures.

Additional details for some of the measures are provided following Table 2.

Table 2: Air Quality Action Plan Measures

Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
1	**Glasgow City Region City Deal Projects** - Clyde Waterfront & Renfrew Riverside Project (CWRR) - Glasgow Airport Investment Area Project (GAIA) **UK Government Levelling Up Fund Project** - Advanced Manufacturing Innovation District Scotland (AMIDS) South	**Transport Planning and Infrastructure** - Active travel Public transport improvements **Traffic Management** - Strategic highway improvements **Promoting Travel Alternatives** - Promotion of cycling Promotion of walking	CWRR – expected completion early 2025 GAIA – completed 2022 AMIDS South – anticipated construction commencing 2025 with completion 2027	CWRR – in progress GAIA – completed AMIDS South – in progress	Scottish Government & Local Authorities across the region. The decision-making body is the Glasgow City Region Cabinet. The Renfrewshire projects are lead within the Council by the Chief Executive's Service, City Deals Section.	**City Deals** UK Government funding 85% of the capital costs of the projects. Renfrewshire council contribution is 15% of costs. Government funding will be unlocked in 5 yearly Gateway Reviews. If the City Deal meets agreed outputs and outcomes at each review, the full £1 billion of funding from the UK and Scottish Governments will be unlocked. **AMIDS South** Funding via the UK Government Levelling Up Fund. Funding provided for 90% of the capital cost with Renfrewshire council contribution of 10%.	Partially funded	Renfrewshire Council contribution >£10 million	The AQAs submitted for the CWRR development states there will be a minor to moderate beneficial impact on air quality levels (reduction of up to 3.9ugm3) measured at the three diffusion tube sites on Inchinnan Road within the Renfrew AQMA. Reference should be made to the AQAs for full details.	**CWRR** Nov 2018 – planning consent granted Autumn 2019 – tenders published Nov 2021 – Contract Start Date Early 2025 – Anticipated construction completion **GAIA** Nov 2017 – planning consent granted Spring 2019 – tender contracts awarded June 2019 – start of construction March 2022 – Works opened to the public **AMIDS South** March 2023 – planning consented Nov 2022 to 2024 – Contractor procurement and land acquisition 2025 - 2027 – Construction period	Further information on these projects can be found after Table 2.

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Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
2	**Council Fleet Improvements** - Continue to improve the standard of fleet - Increase numbers of electric vehicles (EVs) & associated charging infrastructure - Continue to work in line with the Scottish Government's Net Zero policy with regards to fleet vehicles - EV Fleet Strategy Feasibility Study	**Promoting Low Emission Transport** Company Vehicle Procurement - Prioritising uptake of low emission vehicles Procuring alternative refuelling infrastructure to promote low emission vehicles	Ongoing. There is an annual vehicle replacement programme (VRP) whereby vehicles at the end of their service life are replaced with an improved EURO standard or an electric alternative. The Council will continue to introduce EVs & charging points where opportunities and funding permits. As technology evolves the Council will extend the EV Fleet Strategy to include all vehicles including HGVs and buses.	In progress Phasing out need for new petrol or diesel light commercial vehicles by 2030	Renfrewshire Council, Environment Housing and Infrastructure Fleet	Local Authority - Fleet improvements funded via the Council's capital VRP. Partial funding towards charging infrastructure from Transport Scotland's Switched On Fleets funding.	Partially funded	£2.1 million was set aside for 2024-25 for the purchase of new fleet vehicles. The Council will continue to improve the standard of fleet and introduce greener vehicles where opportunities and funding permits	Unknown	The Council fleet consists of approx. 400 vehicles of which >78% are of EURO V or VI standard. There are approx. 80 HGV vehicles, 32 of which are EURO VI standard with the remaining 48 being of EURO V. The EURO V HGVs are prioritised for replacement with EURO VI vehicles. First Council EVs and charging points purchased and installed in 2012. The Council now have 115 EVs (cars/vans) in the fleet or 27% of overall fleet. As of the start of 2024, there are now 73 EV chargers for public usage (146 charging bays) and 48 EV chargers for council fleet vehicles (89 charging bays) across 14 council depots /buildings. Contract awarded for £250,000 investment in the council's Underwood Road Waste & Fleet Depot during 2023 with a new 2.3MVA power supply and transformer to support the further expansion of EV charging infrastructure for light vans, HGVs and refuse collection vehicles. In addition to EV pool cars, the council have 10 electric pool bikes for staff to use for business travel as part of the Business Travel Hierarchy.	The Council have recently introduced Hydrotreated Vegetable Oil (HVO) as an alternative fuel for some of the fleet – and are looking to expand the project to come in line with more fleet vehicles. As part of Renfrewshire Council's ambition to achieve net zero carbon emissions by 2030, options for new delivery models to increase the provision of EV charging infrastructure and the uptake of EVs themselves have been explored. As such a business case has been jointly prepared with the eight Glasgow City Region Councils, utilising external funding, which provides recommendations on the scope, locations, delivery model and funding arrangements for a significant expansion of the public EV charging network in Renfrewshire. In order to advance to the next stage of this project, an Inter-authority Agreement will be explored between the eight Glasgow City Region councils. Further details on this matter is provided after table 2.
3	**UTC Improvements** - Replacement of previous Urban traffic Control (UTC) system with externally hosted UTC-X system from Yunex with guaranteed updates for the next 10 years.	**Traffic Management** (UTC, congestion management, traffic reduction)	Expected completion year – 2023/24	In progress The work to replace life-expired traffic signals continues.	Renfrewshire Council, Environment Housing and Infrastructure Fleet Contractor Yunex	Local Authority SPT Capital Programme	Not funded (from external sources)	£100k - £500k	Unknown	Spring 2023 - 66 sites across 30 junctions throughout the council area have been upgraded to an externally hosted UTC system between 2020 and 2023. This is then followed with a 10-year maintenance contract at these sites to ensure signals remain as efficient as possible.	Feasibility of extending UTC control to Johnstone being pursued but will be dependent on funding. 4G communications between the signals and the system are being superseded by connections to the council's fibre network and priority junctions continue to have their equipment replaced as needs and funding arise.

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Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
4	**Vehicle Fleet Tracking System** - UK Telematics for all fleet vehicles	**Freight and Delivery Management** Route management plans/ Strategic routing strategy for HGV's **Vehicle Fleet Efficiency** (other)	UK Telematics Ltd awarded contract in April 2023 with system now fully utilised.	In progress	Renfrewshire Council, Environment Housing and Infrastructure Fleet Contractor UK Telematics Ltd	Local Authority The cost for this contract will be met through Environment & Infrastructures Operational revenue budget	Not funded (from external sources)	£600k over 5 years	Unknown	UK Telematics now installed in all council vehicles (including hires). Training has been provided for user departments in report writing and system functionality.	The new system provides a real time, web-based asset tracking system using GPS. This should improve fuel economy and provide departments with more in-depth reports about driver behaviour when in a fleet vehicle.
5	**Renfrewshire's Local Transport Strategy** - Publication of a new Local Transport Strategy (LTS) for the period 2025-2035 to replace the Council's existing 2007 LTS.	**Policy Guidance and Development Control** (Other policy) **Transport Planning and Infrastructure** Public transport improvements **Traffic Management** (various) **Promoting Travel Alternatives** (various)	Summer 2024	In progress	Renfrewshire Council, Environment Housing and Infrastructure, Transport and Development Contractor AECOM Ltd The project will be managed by a steering group comprised of internal stakeholders.	Financial costs in respect of this contract will be met from specific grant funding.	Not funded (from external sources)	£50k - £100k	Unknown	Contract awarded in Sept 2023. Completion date expected to be summer 2024 (approx. 9 months after award).	The LTS shall set out a comprehensive and balanced plan which looks at the transport needs for the Renfrewshire area and sets out a way forward detailing the policies and interventions required to improve the local transport and active travel networks. The plan will ensure emphasis on active travel, behavioural change and sustainable climate change including consideration of the Council's plan for net zero emissions by 2030.

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Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
6	**Renfrewshire Council Cycle Strategy & Action Plan 2016-2025** - The strategy contains a Cycling Action Plan which sets out a programme of activities and network interventions for the ten-year period, including upgrades and expansion of cycle networks, upgrading the Council's facilities for cyclists and updating the Council's Travel Plan.	**Promoting Travel Alternatives** Promotion of cycling Intensive active travel campaign & infrastructure School Travel Plans **Traffic Management** Strategic highway improvements, re-prioritising road space away from cars	The current Cycle Strategy and Action Plan runs for the period 2016-2025. Upgrades and development of the cycling network is ongoing as per the strategy priorities. Expected completion year is dependent on each measure, some are ongoing, and some have funding until end of 2023/24.	In progress	Renfrewshire Council, Environment Housing and Infrastructure, Transport and Development. Scottish Government SPT Transport Scotland Sustrans	Fully funded. Funding providers include Scottish Government, SPT, Transport Scotland and Sustrans. Funding is applied for each financial year from the Scottish Government via the Cycling, Walking and Safer Routes fund. At least 36% of this fund must be allocated to cycling including for example infrastructure or design works. Sustrans also provides funding for certain projects. Sustrans funded projects completed in 22/23 include NCN improvements at Jennyswell, Miller Street Johnstone.	Measures contained within the action plan will be implemented dependant on funding. Funding status depends on each project but can be fully funded / partially funded / not funded/ annual or ongoing funding required.	**22/23 - £2.35 million of funding for active travel projects as detailed below.** £80,000 – SPT funding for Paisley to Renfrew link £920,000 – Mission Clyde for Paisley to Renfrew link £350,000 – Transport Scotland Cycling, Walking Safer Routes for Paisley to Renfrew link £1,000,000 – City Deal Funding for Inchinnan Road **23/24 - £2.55 Million funding** £2 Million – Transport Scotland Active Travel Transformation Funding for 4 projects (Paisley to Renfrew, North Renfrewshire – Barnsford Road at Glasgow Airport, Linside Avenue link and Gallowhill to Paisley to Renfrew) £550,000 – SPT for Paisley to Renfrew link	Unknown	Renfrewshire used 49.4% of CWSR budget in 2022/23 on new infrastructure to encourage cycling. Projects included construction of Paisley to Renfrew and Inchinnan Active Travel Routes. There are several other cycling infrastructure projects which are currently at concept design /public consultation design stage. The routes for these are: 1. Southolm Roundabout Erskine 2. Linside Avenue 3. Hawkhead Rd/ Glasgow Rd junction 4. Linclive Roundabout 5. Inchinnan Business Park 6. Barnsford Road, Glasgow Airport The £2 Million Transport Scotland Active Travel Transformation Funding awarded in 2023 for four Renfrewshire projects is a significant investment which aims to create high-quality active travel infrastructure that will support people to make the switch to more sustainable transport methods and reduce emissions. Expected completion of these projects is summer 2024.	Other measures included within the overall aims of the Cycle Strategy include: - the addition of a Sustrans Senior Officer to the Council's Active Travel Team in summer 2023 to assist with development of the National Cycle Network in Renfrewshire. This is a 3-year post and linked to the overall Sustrans funding received by the Council. - Working with Transport Scotland to ensure safer streets that enable active travel, including introducing 20mph zones by 2025 where proportionate to make communities safer. - Village Traffic Calming Improvements to reduce speeding and improve walking facilities in Houston, Howwood and Kilbarchan.

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Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
7	**Active Travel Projects** - Not Far? Leave the Car - Beat the Street - Living Streets WOW Project - School Bikeability & Scootability Training -School travel Plans - Carshare	**Promoting Travel Alternatives** Promotion of cycling Promotion of walking Intensive active travel campaign & infrastructure School Travel Plans **Alternatives to private vehicle use** Car & lift sharing schemes	Dependant on measure. Some are ongoing and some have funding until end of 2023/24	Ongoing	Renfrewshire Council, Environment Housing and Infrastructure, Transport and Development team oversee all projects with some being led by external contractors including, for example, Better Points Ltd for the Not Far? Leave the Car project and Intelligent Health for Beat the Street.	Scottish Government Air Quality Action Plan Fund has been used to partially fund two of the projects - Not Far? Leave the Car and Beat the Street. Other funding sources include- Smarter Choices Smarter Places Cycling Scotland Local Authority funding	Funding status depends on each project but can be fully funded / partially funded / not funded/ annual or ongoing funding required.	Variable cost for each measure but total cost for all listed active travel projects between £100k - £500k	Unknown	Key milestones and headline results for some of these active travel projects can be found after Table 2.	
8	**Renfrewshire's Plan for Net Zero Strategy** Renfrewshire Council declared a climate emergency in June 2019 with a commitment to work towards net zero by 2030. Renfrewshire's Net Zero Strategy was produced and approved in August 2022 with key themes including: - Sustainable Transport - Clean Energy - Resilient Place Action Measures for these themes will also align with improving air quality levels within Renfrewshire.	**Policy Guidance and Development Control**	The Net Zero Strategy is ongoing until 2030 with action measures implemented as per the strategy priorities which the Council will continue to monitor to 2045 in line with national targets and beyond.	Ongoing	Renfrewshire Council, Environment Housing and Infrastructure, Climate Team. Whilst the Plan for Net Zero will be led by Renfrewshire Council as the lead partner and producer of the Plan, it was co-designed with input from all stakeholders, and it will also be the result of collaborative work with Renfrewshire stakeholders, communities and public and private organisations.	Local Authority – Renfrewshire Council have committed £1million to a Climate Change Action Fund supporting innovative climate projects and initiatives across Renfrewshire.	Not funded (from external sources). However, it is hoped that the LHEES will also act as a prospectus for government funding and external investment using a robust evidence and place-based approach.	Costed delivery plans currently in development.	Air quality reductions unknown at this stage. However, with regards to reduction in carbon emissions from baseline to net zero for: Council as an organisation: baseline of 37tCO2e (2014-15) Renfrewshire as an area: baseline of 914tCO2e (2014-15)	Detailed Phased Road Map to 2030 and Quantified Delivery Plans being developed. Verifying, adopting and updating the emissions modelling tool: quantification of the impact of the phased actions, to inform future targets and present data in an interactive way - Annual updates on this will be provided from April 2024. Developing a carbon budget for Renfrewshire Council - projected completion date April 2024.	In addition to traditional avenues of funding, it will be key to explore more innovative and collaborative ways to finance climate action across stakeholders, including new business models; joint ventures and partnership projects.

Renfrewshire Council

Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
9	**Renfrewshire's Local Heat and Energy Efficiency Strategy** The Strategy designates the most appropriate energy efficiency and heat decarbonisation options within Renfrewshire	**Policy Guidance and Development Control**	Strategy approved at Board in January 2024.	Ongoing	Renfrewshire Council, Environment Housing and Infrastructure, Energy Management Team. The Strategy is local authority-led; however stakeholder engagement and partnership working are key as the Strategy addresses all building stock at a local authority wide level (Council, public, private, 3rd sector and all tenures of residents).	Scottish Government funding of £75K annually for 5 years to assist development and delivery of LHEES. Local Authority	Partially funded. However, it is hoped that the LHEES will also act as a prospectus for government funding and external investment using a robust evidence and place-based approach.	Outline costings being developed as part of Delivery Plan for energy efficiency measures across the area as well as decarbonisation of heat	Unknown	Renfrewshire's LHEES approved in January 2024. Delivery Plans being developed throughout 2024.	Update to be at least every 5 years

Additional Details on Measures

Measure 1 - Glasgow City Region City Deal Projects & UK Government Levelling Up Fund Project

Renfrewshire, together with seven neighbouring local authorities across Glasgow and the Clyde Valley have secured the second largest City Deal in the UK.

The three major projects within Renfrewshire are summarised below and will result in major infrastructure projects, including the construction of new bridges across the Clyde and Cart rivers; help create thousands of new jobs; improve public transport and connectivity; and deliver significant economic growth through investment within Renfrewshire.

For further information please refer to Renfrewshire's City Deal webpage http://www.renfrewshire.gov.uk/citydeal.

Clyde Waterfront & Renfrew Riverside (CWRR)

The CWRR project will see the construction of a new opening bridge across the River Clyde connecting the communities of Renfrew, Yoker and Clydebank. Proposals also include the construction of new roads and cycle routes aimed at opening up access to development sites and providing an alternative route around Renfrew Town Centre.

Construction comprises a twin-leaf swing bridge for vehicles, cyclists and pedestrians, riverside walking and cycling routes and a new road connecting from the bridge into the Advanced Manufacturing Innovation District Scotland (AMIDS) being developed next to Glasgow Airport. Construction commenced in 2022 and the project is expected to open by the end of 2024.

Construction of the Renfrew North Development Road will provide an alternative route avoiding Renfrew town centre. This will optimise the operation of the local road network resulting in improved traffic flows in and around Renfrew town centre and improved journey time reliability. A cycleway will also be provided on both sides of the new Development Road.

An Environmental Impact Assessment was submitted as part of the planning application for this development which included air quality and traffic impact assessments. While the findings predict an increase in traffic at certain locations within Renfrew as development takes place, in terms of the Renfrew Town Centre Air Quality Management Area, construction of the Renfrew North Development Road is predicted to result in a decrease in traffic and therefore positive impact on air quality levels on Inchinnan Road where the highest levels of NO_2 within the Air Quality Management Area are currently measured. The air quality assessment predicts that local air quality pollutant concentrations at sensitive receptors as a result of traffic flow changes will be below statutory air quality objectives and therefore concludes there will be no negative effects in relation to air quality as a result of the proposals.

Glasgow Airport Investment Area (GAIA) & Advanced Manufacturing Innovation District Scotland (AMIDS)

The Glasgow Airport Investment Area project was completed in October 2022. The project has resulted in infrastructure improvements by improving connections and enabling the continued growth and expansion of the airport and surrounding businesses. The development included new roads, cycling routes, pedestrian footpaths and bridges over both the White and Black Cart Water.

Development of GAIA has in turn resulted in improved access to Scotland's manufacturing innovation district (Advanced Manufacturing Innovation District Scotland (AMIDS)) and to nearby Westway and Inchinnan Business Parks.

AMIDS is a collaborative project led by Renfrewshire Council to develop the area as Scotland's home of manufacturing innovation. It has so far attracted the world's largest aerospace company Boeing, the National Manufacturing Institute Scotland (NMIS) and the Medicines Manufacturing Innovation Centre.

An Environmental Impact Assessment was submitted as part of the planning application for these developments including air quality and traffic impact assessments. This assessment concluded there would be no negative effects in relation to air quality as a result of the proposed development.

Advanced Manufacturing Innovation District Scotland (AMIDS) South

The AMIDS South project links with the above City Deals projects although has been funded through the UK Government Levelling Up Fund Project.

The AMIDS South project consists of:

- the construction of a new North to South route linking Paisley town centre, including Paisley Gilmour Street Station, via a new road bridge across the White Cart river at Harbour Road, to Glasgow Airport and the Advanced Manufacturing Innovation District Scotland (AMIDS),
- the construction of a new East-West route linking Renfrew Road, Paisley, to the new North-South route and improving connectivity for the Shortroods and Gallowhill areas,
- upgrades to existing roads Abercorn Street and Inchinnan Road that form part of the new North-South route,

- improved facilities for public transport, cyclists and pedestrians throughout the works from Paisley Gilmour Street Station to Abbotsinch Road.

Renfrewshire Council is currently going through the process of a Compulsory Purchase Order under the Roads (Scotland) Act 1984 and the Acquisition of Land (Authorisation Procedure) (Scotland) Act 1947 in order to progress this development. The Council are still awaiting the outcome of this process.

Measure 2 - Electric Vehicle Charging Infrastructure Investment in Renfrewshire

As part of Renfrewshire Council's ambition to achieve net zero carbon emissions by 2030, the Council are committed to expanding and investing in EV charging infrastructure within the area. As of the start of 2024, the Council currently have 73 EV chargers for public usage (146 charging bays) and 48 EV chargers for fleet vehicles (89 charging bays) for council vehicles located across 14 council depots /buildings.

In October 2021, Scottish Futures Trust (SFT) sought expressions of interest from local authorities to undertake a business case to explore alternative delivery models for public EV charging through private sector investment. Renfrewshire Council was successful in their application and received £60k funding towards the development of the business case which was undertaken by a consultant and completed in March 2023. The business case sets out how the Glasgow City Region partners could work together to expand the EV charging infrastructure network to meet projected EV demand over the next three to four years.

This report provides the overall strategic case for investment and sets out options and recommendations for collaborative delivery among all authorities which make up the Glasgow City Region: East Dunbartonshire, East Renfrewshire, Glasgow City, Inverclyde,

North Lanarkshire, Renfrewshire, South Lanarkshire and West Dunbartonshire. It proposes a viable investment programme which could enable Renfrewshire Council to work with commercial suppliers to increase the number of EV charge points from an existing 73 publicly funded and managed charge points, to an estimated 773 across Renfrewshire by 2026.

In tandem, a new, four-year £60 million fund for local authorities was launched by the Scottish Government, £30 million of which is provided by Transport Scotland to support the roll-out of an enhanced vehicle charging network. The proposals in the Glasgow City Region pathfinder business case were developed to align with this fund to maximise the potential for leverage of external funding as part of its emerging plans.

Four commercial models have been identified as options for delivery of new electric vehicle chargers at scale and pace. The preferred mechanism is a model where the EV network would be leased via a concession contract to an experienced commercial operator.

In order to advance to the next stage of this project, an Inter-authority Agreement would be explored between the eight Glasgow City Region councils, setting out the proposed governance processes and arrangements for the specification, procurement, development, delivery, operational and monitoring stages of the project.

Measure 7 – Active Travel Projects

Not Far? Leave the Car - Better Points Project

The Better Points active travel incentive scheme (titled Not Far? Leave the Car within the Renfrewshire Council area) offers a mobile app and management system which incentivises its users to make positive active travel behaviour changes. Better Points offers baseline surveying to build a picture of people's current behaviour, attitudes and capacity for change. The smartphone app delivers incentives and rewards tailored to reach as many of the target audience as possible.

Headline results for the project from March 2023 to December 2023 include:

654 users out of 917 replaced their last car journey with an active travel option;

75.9% of respondents agreed they used the car less than usual to get from place to place;

73% of respondents agreed they would likely use the car less to get from place to place in the future;

75.2% of respondents said they are more likely to walk or cycle to get from place to place in the future;

66.4% of respondents said they are likely to use public transport to get from place to place in future; and

76.7% of respondents said that the scheme has made them leave the car at home.

Living Streets WOW Project

Living Streets WOW project is a year-round walk to school challenge which rewards children and young people with badges for choosing an active travel method in going to school.

Travel Tracker, as part of the WOW Package, brings the Walk to School Challenge to life. Pupils log daily journeys to school on the system. The modes of transport pupils can choose include active travel modes - walk/wheel, cycle, park and stride, scooter/skate and non-active modes - driven, bus, taxi and other.

Headline results for the project during the period September 2023 – December 2023 include:

The Number of children engaged in the Project: 5470

The number of sustainable and active travel journeys: 121,832 (86%)

The number of badges earned: 5,987.

Number of Schools actively engaged: 19 schools.

86% of pupils engaged are choosing to be active in going to school.

Beat the Street

Beat the Street empowers communities to increase activity levels and improve health with a walking and cycling competition where participants tap their Beat the Street cards on Beat Boxes on lampposts to record distances walked or cycled.

During 2023/24 the game took place in Renfrewshire North, covering the areas of Paisley North, Inchinnan, Renfrew, Erskine and Langbank. Headline results include:

- 7604 players took part,
- 118,459 miles covered in Renfrewshire.

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Other -

- The Council are part of Carshare and promote car share journeys for all Renfrewshire employees.
- All Primary 5 - 7 classes across Renfrewshire will be invited to undertake their Bikeability training (funding dependent). Bikeability Is funded by Cycling Scotland and is led by OneRen within the Renfrewshire Council area.
- Primary Schools have been invited to work with the Council's Road Safety team and establish Junior Road Safety Officers where they will assist in keeping the school areas less congested thus resulting in improved air quality.
- School travel Plans: all schools will be invited to complete a school travel plan and work with the Council's Road Safety team and Junior Road Safety Officers to complete this.

Appendix A: Response to Consultation

Table A.1 – Summary of Responses to Consultation and Stakeholder Engagement on the AQAP Update

Consultee	Category	Response
SEPA	Statutory Consultee	Positive comments re the air quality improvements and agree with priorities and conclusion of plan and the proposal to revoke the three AQMAs.
Transport Scotland	Statutory Consultee	Positive comment re the air quality improvements and note to confirm that there had been significant improvements to bus emission standards throughout Scotland since the previous 2015 source apportionment study quoted in the Plan as well as a substantial investment in electrifying the bus fleet, all of which are positive in terms of air quality improvements.
NHS Greater Glasgow & Clyde Health Board	Statutory Consultee	Informative and helpful comments from Consultant in Public Health Medicine relating to the Plan and general air quality health impacts.

Appendix B: Monitoring Locations Within the AQMAs

Figure 19: Map of Automatic Monitoring Sites Across Renfrewshire

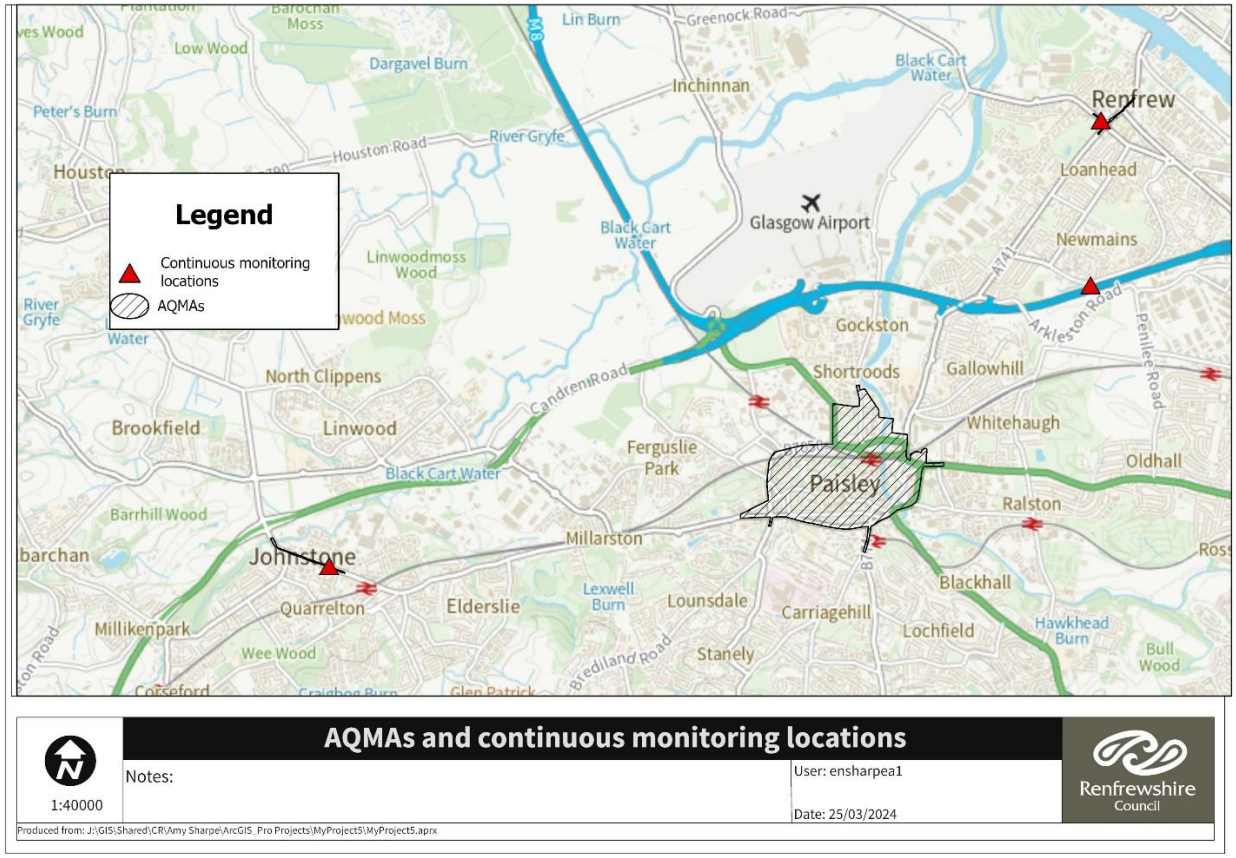


Figure 20: Map of Non-Automatic Monitoring Sites in Paisley

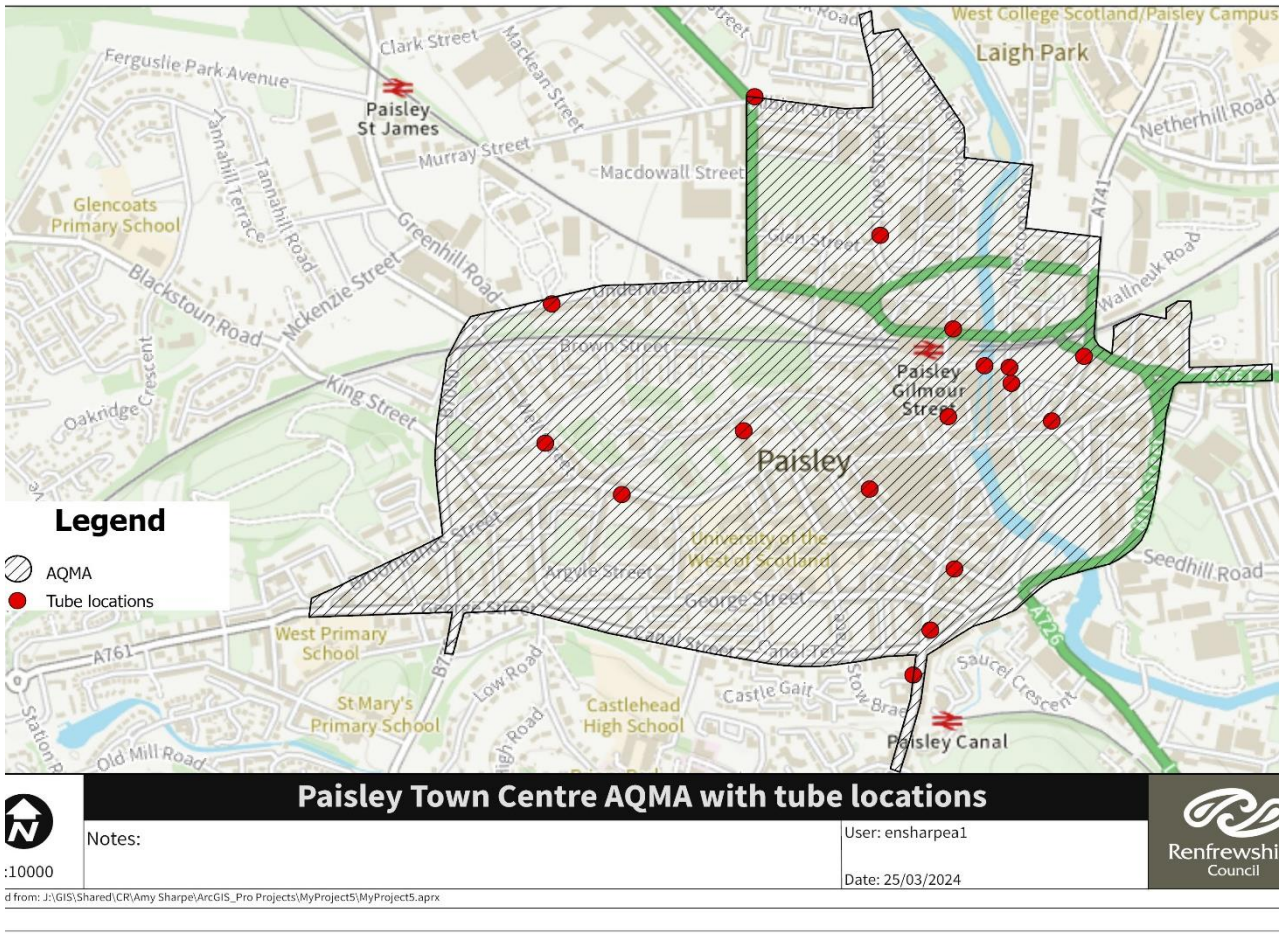
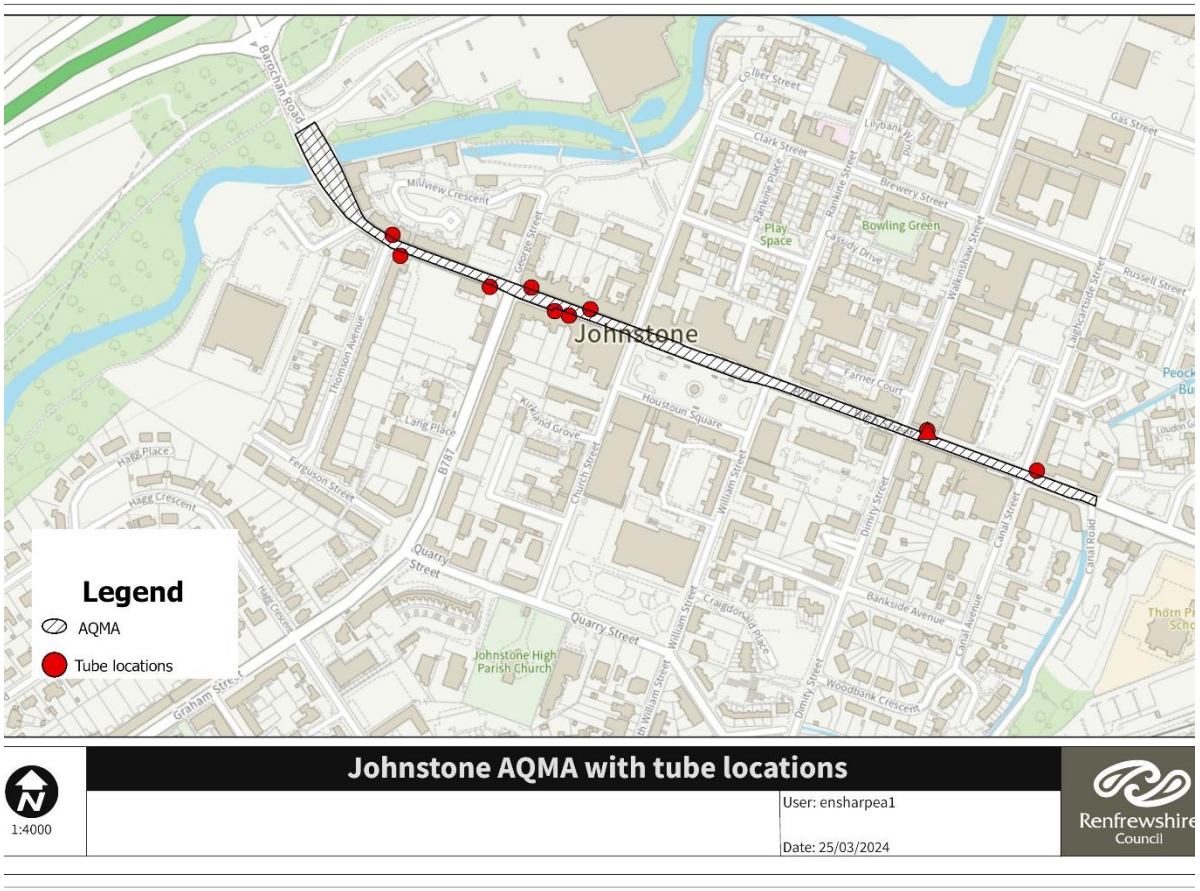


Figure 21: Map of Non-Automatic Monitoring Sites in Renfrew

Figure 22: Map of Non-Automatic Monitoring Sites in Johnstone



Appendix C: Monitoring Results 2018-2022

Table 3: Annual Mean NO_2 Monitoring Results (µg/m3)

Note – results shown are bias adjusted but not distance corrected.

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%)[1]	Valid Data Capture 2022 (%)[2]	2018	2019	2020	2021	2022
REN1	Roadside	Automatic	99.7	99.7	31.2	31.1	20.9	24.5	22.4
REN03	Roadside	Automatic	98.2	98.2	-	24.1	19.9	19.0	19.7
Paisley1	Urban Centre	Diffusion Tube	100.0	100.0	20.3	21.3	16.1	14.9	13.5
Paisley2	Urban Background	Diffusion Tube	84.6	84.6	14.4	14.6	10.9	9.6	11.9
Paisley3	Urban Background	Diffusion Tube	92.3	92.3	12.0	11.6	8.9	7.4	6.8
Renfrew8	Kerbside	Diffusion Tube	92.3	92.3	**41.1**	**41.4**	**40.2**	29.8	30.2
Renfrew17	Roadside	Diffusion Tube	92.3	92.3	33.7	32.0	26.3	22.9	23.5
Paisley19	Roadside	Diffusion Tube	100.0	100.0	28.3	24.9	24.1	22.5	17.9
Johnstone20	Kerbside	Diffusion Tube	92.3	92.3	29.7	28.7	25.5	20.2	19.3
Paisley21 (1) Paisley21 (2) Paisley21 (3)	Roadside	Diffusion Tube	100.0	100.0	28.9	27.6	25.7	21.9	18.6
Paisley33	Roadside	Diffusion Tube	92.3	92.3	31.7	28.8	27.7	24.1	19.4
Paisley35	Roadside	Diffusion Tube	92.3	92.3	34.7	31.1	31.5	25.7	21.9
Paisley36	Roadside	Diffusion Tube	100.0	100.0	30.4	28.2	27.7	26.5	20.5
Renfrew40	Roadside	Diffusion Tube	100.0	100.0	27.4	25.8	21.6	18.7	16.4
Paisley43	Roadside	Diffusion Tube	100.0	100.0	28.9	26.7	20.4	20.5	15.0
Paisley44	Roadside	Diffusion Tube	100.0	100.0	23.6	21.9	16.3	16.1	15.5
Renfrew45	Kerbside	Diffusion Tube	90.4	90.4	25.8	21.5	20.3	18.4	14.9

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%)[1]	Valid Data Capture 2022 (%) [2]	2018	2019	2020	2021	2022
Renfrew48	Roadside	Diffusion Tube	100.0	100.0	30.9	29.1	24.8	20.9	17.7
Paisley50	Roadside	Diffusion Tube	90.4	90.4	29.4	24.3	21.8	17.9	17.3
Renfrew52	Roadside	Diffusion Tube	100.0	100.0	31.8	25.3	24.9	21.2	17.3
Renfrew56	Roadside	Diffusion Tube	92.3	92.3	30.3	26.3	24.4	20.9	19.5
Renfrew57	Roadside	Diffusion Tube	100.0	100.0	24.1	24.4	18.1	19.0	12.9
Johnstone59	Kerbside	Diffusion Tube	100.0	100.0	**40.0**	37.9	39.5	34.4	30.9
Paisley60	Roadside	Diffusion Tube	100.0	100.0	34.4	33.6	30.1	24.5	22.3
Kilbarchan61	Roadside	Diffusion Tube	100.0	100.0	32.4	30.2	26.0	26.1	18.7
Renfrew62 (1) Renfrew62 (2) Renfrew62 (3)	Roadside	Diffusion Tube	100.0	100.0	36.8	34.3	30.5	25.3	21.9
Paisley63	Roadside	Diffusion Tube	92.3	92.3	33.2	29.4	25.2	25.2	20.9
Kilbarchan65	Roadside	Diffusion Tube	100.0	100.0	28.2	30.3	25.8	20.9	16.9
Kilbarchan66	Roadside	Diffusion Tube	75.0	75.0	19.3	22.3	18.1	15.9	14.1
Kilbarchan67	Roadside	Diffusion Tube	92.3	92.3	18.6	17.5	18.6	13.2	10.3
Renfrew68	Roadside	Diffusion Tube	100.0	100.0	27.4	23.8	21.0	16.4	17.4
Renfrew69	Roadside	Diffusion Tube	82.7	82.7	30.7	29.9	25.0	32.4	25.3
Renfrew70	Roadside	Diffusion Tube	57.7	57.7	31.7	25.4	26.9	17.4	18.1
Renfrew71	Roadside	Diffusion Tube	92.3	92.3	28.5	29.2	26.2	24.4	19.1
Johnstone72	Roadside	Diffusion Tube	100.0	100.0	22.9	23.4	20.2	19.9	13.6
Paisley73	Roadside	Diffusion Tube	100.0	100.0	32.0	26.1	27.0	22.5	17.7
Paisley74	Roadside	Diffusion Tube	100.0	100.0	30.9	27.8	28.6	23.0	18.7
Renfrew75	Roadside	Diffusion Tube	100.0	100.0	22.6	22.1	21.1	20.2	13.9
Paisley78	Roadside	Diffusion Tube	100.0	100.0	28.9	26.6	24.4	24.0	16.8
Paisley79	Roadside	Diffusion Tube	100.0	100.0	32.5	27.8	32.0	24.6	20.0
Paisley80	Roadside	Diffusion Tube	92.3	92.3	24.9	23.9	23.7	18.4	14.9
Paisley82	Roadside	Diffusion Tube	100.0	100.0	33.2	28.9	36.1	28.1	24.3
Paisley83	Kerbside	Diffusion Tube	100.0	100.0	31.1	33.2	25.1	22.7	21.8
Renfrew84	Roadside	Diffusion Tube	100.0	100.0	24.3	23.1	16.8	14.9	13.1
Johnstone85	Roadside	Diffusion Tube	92.3	92.3	26.1	25.0	30.2	24.5	19.9

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%)[1]	Valid Data Capture 2022 (%) [2]	2018	2019	2020	2021	2022
Johnstone86	Roadside	Diffusion Tube	92.3	92.3	28.1	27.0	29.9	19.0	19.2
Paisley89	Roadside	Diffusion Tube	100.0	100.0	22.4	30.4	24.9	23.2	20.0
Renfrew90 (1) Renfrew90 (2) Renfrew90 (3)	Roadside	Diffusion Tube	100.0	100.0	-	24.4	21.4	20.1	17.2
Lochwin92	Roadside	Diffusion Tube	100.0	100.0	-	-	14.8	14.3	13.5
Lochwin93	Roadside	Diffusion Tube	100.0	100.0	-	-	14.1	16.7	11.1
Paisley94	Roadside	Diffusion Tube	84.6	84.6	-	-	21.0	19.0	17.9
Paisley96	Roadside	Diffusion Tube	100.0	100.0	-	-	24.2	21.2	16.9
Renfrew97	Kerbside	Diffusion Tube	100.0	100.0	-	-	-	30.5	28.5
Johnstone99	Roadside	Diffusion Tube	82.7	82.7	-	-	-	35.4	25.7
Johnstone100	Roadside	Diffusion Tube	100.0	100.0	-	-	-	31.8	24.3
Renfrew101	Roadside	Diffusion Tube	90.4	90.4	-	-	-	19.5	17.8
Paisley102	Roadside	Diffusion Tube	92.3	92.3	-	-	-	-	19.1
Paisley103	Roadside	Diffusion Tube	100.0	100.0	-	-	-	-	13.1
Paisley105	Roadside	Diffusion Tube	100.0	100.0	-	-	-	-	16.6
Paisley106	Roadside	Diffusion Tube	81.0	75.0	-	-	-	-	17.7
Johnstone107	Roadside	Diffusion Tube	100.0	84.6	-	-	-	-	20.6
Paisley108	Roadside	Diffusion Tube	86.7	50.0	-	-	-	-	14.7

Notes:

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

For the Renfrew 8 exceedance in 2020 of 40.2 µg/m^3, following distance correction in line with LAQM guidance, DT8 reported just below the AQO at 39.9µg/m^3.

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

Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG(22) if valid data capture for the full calendar year is less than 75%.

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

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

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

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
REN1	Roadside	Automatic	99.7	99.7	0	0	0	0	0
REN03	Roadside	Automatic	98.2	98.2	-	0	0	0	0

Notes:

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

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

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

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

Table 5: Annual Mean PM_{10} Monitoring Results (µg/m^3)

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
REN02	Roadside	82.3	82.3	13.4	16.3	10.2	13.7	12.9
REN02 Corrected	Roadside	82.3	82.3	14.8	17.9	11.3	15.1	14.2

Notes:

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

All means have been "annualised" as per LAQM.TG(22), valid data capture for the full calendar year is less than 75%.

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

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

Table 6: 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m^3

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
REN02	Roadside	82.3	82.3	1	**14**	0	1	0

Notes:

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

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

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

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

Table 7: Annual Mean $PM_{2.5}$ Monitoring Results (µg/m^3)

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
REN02	Roadside	82.3	82.3	7.3	7.9	5.5	6.0	6.1
REN02 Corrected	Roadside	82.3	82.3	7.7	8.4	5.9	6.3	6.5

Notes:

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

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

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

Glossary of Terms

Abbreviation	Description
AMIDS	Advanced Manufacturing Innovation District Scotland
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority 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
AQS	Air Quality Strategy
APR	Annual Progress Report
EU	European Union
LAQM	Local Air Quality Management
LTS	Local Transport Strategy
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
SEPA	Scottish Environment Protection Agency
UTC	Urban Traffic Control

References

Air Quality in Scotland website available at http://www.scottishairquality.co.uk.

AMIDS South - https://www.renfrewshire.gov.uk/transport-links-amids-south-paisley.

Cleaner Air for Scotland 2. July 2021. Published by the Scottish Government.

Local Air Quality Management Policy Guidance LAQM.PG(S)(23). March 2023. Published by the Scottish Government.

Local Air Quality Management Technical Guidance LAQM.TG(22). August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.

Renfrewshire Council - Air Quality Action Plan 2019.

Renfrewshire Council - Annual Progress Reports (2018-2022).

Renfrewshire Council - Carbon Management Plan 2014/15-2019/20 (2014)

Renfrewshire Council - Renfrewshire's Community Plan 2017-2027 (2017)

Renfrewshire Council - Renfrewshire Cycling Strategy 2016-2025 (2016)

Renfrewshire Council - Renfrewshire Local Transport Strategy & Refresh February 2017 (2007)

Scottish Government - Part IV of the Environment Act 1995 Local Air Quality Management, Policy Guidance, PG(S)(16), March 2016