

# Annual Progress Report (APR)



**North Ayrshire Council**  
**Comhairle Siorrachd Àir a Tuath**

2026 Air Quality Annual Progress Report (APR) for

North Ayrshire Council

In fulfilment of Part IV of the Environment Act 1995, as amended by the  
Environment Act 2022

Local Air Quality Management

June 2026

| <b>Information</b>             | <b>North Ayrshire Council Details</b>                           |
|--------------------------------|-----------------------------------------------------------------|
| <b>Local Authority Officer</b> | William McNish, Contaminated Land Officer                       |
| <b>Department</b>              | Environmental Health<br>Housing & Public Protection             |
| <b>Address</b>                 | Cunninghame House, Friar's Croft, Irvine,<br>Ayrshire, KA12 8EE |
| <b>Telephone</b>               | 01294 310000                                                    |
| <b>E-mail</b>                  | EnvironmentalHealth@north-ayrshire.gov.uk                       |
| <b>Report Reference Number</b> | 2026 NAC APR 001 Final                                          |
| <b>Date</b>                    | June 2026                                                       |

# Executive Summary: Air Quality in Our Area

## Air Quality in North Ayrshire Council

This report was prepared in accordance with the Local Air Quality Management (LAQM) Technical Guidance 2022 (TG22) and sets out the air quality monitoring carried out in North Ayrshire, with results and conclusions of data collected for 2025. Monitoring is carried out in North Ayrshire for Nitrogen Dioxide (NO<sub>2</sub>) and Particulate Matter (PM), particles of soot (carbon), metals or inorganic salts of sizes less than or equal to 10micrometers, PM<sub>10</sub>; and less than or equal to 2.5micrometers, PM<sub>2.5</sub>.

Monitoring in previous years identified that the main air quality issue in North Ayrshire was associated with NO<sub>2</sub> and related to a) traffic congestion in High Street, Irvine and b) queuing traffic in New Street, Dalry. Mitigation projects were completed successfully in 2020 for the two areas. Monitoring continues, to ensure that these measures have been successful.

NO<sub>2</sub> for the three diffusion tube monitors of previous years' concern in High Street, Irvine, seen a slight decrease at one tube from **9.7µg/m<sup>3</sup>** in 2024 to **9.2µg/m<sup>3</sup>** in 2025 whilst an increase was seen across the other two tubes from **8.5, 8.0µg/m<sup>3</sup>** in 2024 to **11.3, 12.2µg/m<sup>3</sup>** in 2025 respectively. A slight increase was also observed at the nearby automatic monitor station where NO<sub>2</sub> increased from **9.0µg/m<sup>3</sup>** in 2024 to **10.0µg/m<sup>3</sup>** for 2025. In New Street, Dalry, the two NO<sub>2</sub> diffusion tubes of interest also seen an increase from **9.9, 11.1µg/m<sup>3</sup>** in 2024 to **11.6, 15.8µg/m<sup>3</sup>** for 2025 respectively. Although there was an increase of NO<sub>2</sub> across North Ayrshire Council as a whole, all levels are still well below the Scottish annual mean air quality objective of 40µg/m<sup>3</sup> for this pollutant.

Following research into reporting of different monitoring instruments PM statistics are now presented as uncorrected and corrected values. A decrease of PM<sub>10</sub> was observed from an annual mean of 11.8µg/m<sup>3</sup> (**13.0µg/m<sup>3</sup>** corrected) in 2024 to 10.6µg/m<sup>3</sup> (**11.7µg/m<sup>3</sup>** corrected) in 2025 in High Street, Irvine. The Scottish annual mean air quality objective for PM<sub>10</sub> is **18µg/m<sup>3</sup>**. PM<sub>2.5</sub> seen a slight decreased from 6.4µg/m<sup>3</sup> (**6.8µg/m<sup>3</sup>** corrected) in 2024 to 5.8µg/m<sup>3</sup> (**6.1µg/m<sup>3</sup>** corrected) in 2025 for the same location. The Scottish annual mean air quality objective for PM<sub>2.5</sub> is **10µg/m<sup>3</sup>**. Recorded levels are well below the Scottish annual mean air quality objectives for particulate matter.

North Ayrshire Council has one officer located within Environmental Health who implements the LAQM requirements: ensuring monitoring equipment is maintained correctly; dealing with enquiries, planning permissions and complaints; report writing, liaising with relevant colleagues in other departments and partners as required e.g. SEPA and Transport Scotland.

Overall, monitoring results for 2025 have shown that all parameters remain well below the respective Air Quality Objectives. 2025 data shows that there are no ambient air quality issues within North Ayrshire Council.

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

North Ayrshire Council has Energy and Sustainability Officers, an Access Officer, a School Travel Plan Co-ordinator, Traffic and Transportation Managers, a Business Change Project Manager, Workplace Engagement Officers a Science, Technology, Engineering, and Mathematics (STEM) Education Officer and supporting teams who collectively promote modal shift and actions to improve air quality and wellbeing.

During the early part of 2025 a No Engine Idling campaign was promoted via social media as it was considered that this would be the most appropriate time to target this behaviour. A slogan was also highlighted on the side of refuse vehicles. Refuse vehicles are generally slow moving/stationary, visit many streets and therefore reach a large public audience. A photo of a refuse vehicle promotion is shown below.



Refuse vehicle promotion photo.

North Ayrshire Council operated a Sustainable Business Travel Plan Carpool Scheme alongside Enterprise Car Club. Across the January – October 2025 48,246 miles were travelled on our CarClub. Of this, a total of 5,697 miles were travelled on 100% Electric Vehicles – approximately 12% of the total CarClub miles. We had 8 vehicles (6 petrol-hybrid vehicles and 2 EVs) across 6 council office locations the 2 EV were removed in September 2025. The scheme was terminated in October 2025 as it was deemed to be no longer cost effective.

The Council is committed to promoting the uptake of electric vehicles and based on statistics from the Department for Transport, the Council is pleased to report that there were 2,908 Plug-in Vehicles (PiVs) licensed in North Ayrshire in 2025. This represents 3.91% of the total number of registered vehicles within North Ayrshire, based on a total count of 74,231 vehicles registered (cars, light goods vehicles, and other vehicle types).

As of 31 December 2025, there were 137 publicly available EV charge points across North Ayrshire, comprising 57 Council-owned charge points and 80 privately owned charge points. This equates to approximately one publicly accessible charge point for every 21 plug-in vehicles.

By December 2025, the Council's aspirational targets were to achieve:

- one publicly accessible charge point for every nine plug-in vehicles; and
- 2% of all registered vehicles in North Ayrshire being plug-in vehicles.

The Council has exceeded its target for plug-in vehicle uptake, with PiVs now accounting for 3.91% of all registered vehicles. However, we have fallen short on the target relating to publicly accessible charge point provision. This is primarily due to the rate of plug-in vehicle adoption increasing more rapidly than originally anticipated and the absence of grant funding for EV charging infrastructure from Transport Scotland since 2022.

The Ayrshire Authorities are at the final stages of procurement for the Ayrshire Electric Vehicle Infrastructure Fund project, with contract award anticipated in May 2026. This project will support the rollout of 107 additional EV charge points across North Ayrshire Council through a concession contract over a three-year delivery period.

Our Decarbonisation of Fleet project rolled out 87 electric vehicles with a further 24 to be delivered by the end of the 2026. This will take the number up to 111, which accounts for 28% of our fleet. We also have 56 workplace EV chargers installed, providing 107 sockets.

North Ayrshire landfill solar transformation project was completed in 2025 and across the Nethermains and Shewalton sites, the £12.8 million initiative repurposes 24.3 hectares of former landfill into renewable energy infrastructure, demonstrating how constrained land can be transformed into a powerful driver of renewable energy and aid progress toward net zero. Together, the Nethermains and Shewalton solar PV farms are expected to generate approximately 13,177 MWh of renewable electricity annually. The project transforms two former landfill sites into a 12.91 MW solar asset, capable of powering over 2,000 homes and cutting 3,030 tons of CO<sub>2</sub> annually. The project puts biodiversity at its heart, with the inclusion of mammal gates, bug hotel, bee boxes and the planting of 8,050 new trees on-site, showing that renewable energy development and ecological stewardship can go hand in hand.

During 2025 the Council's Travel Smart Project behaviour change project continued to promote modal shift to active and sustainable travel. One Workplace Engagement Officer is appointed within North Ayrshire Council to promote active and sustainable travel to/from work, and a Schools and Workplaces Active Travel Programme. A large audience was reached via weekly visits to existing partner organisation, NHS, engaging with new employees to promote and develop active travel plans.

In total 123 events were promoted, ranging from Information Stalls, Nordic Walking to Dr Bike Sessions attracting 2,164 participants.

Clean Air Day (CAD) is the UK's largest air pollution campaign, and the council was proud to once again support the annual awareness day on Thursday 19 June 2025. To support the annual campaign, The Trinity Active Travel Hub hosted a CAD pop-up event outside the Rivergate Shopping Centre. With a series of drop-in activities and sessions, the event saw various partners join forces with council's Active Travel, STEM and Sustainability teams alongside Dr Bike, KA: Leisure and Home Energy Scotland. Well attended, visitors had the chance to find out about how they could be more sustainable, make their own CAD pledges and have a chance to win prizes including free gym memberships and travel cards. A photo of a CAD stall promotion is shown below.



CAD stall promotion photo.

### Local Priorities and Challenges

The priorities for North Ayrshire Council in addressing air quality for the coming year are a) to continue with monitoring air quality within its area, particularly in High Street, Irvine and New Street, Dalry, to ensure concentrations remain below the relevant objective levels following the improvement works and to observe if post COVID-19 pandemic pollutant concentrations return to business as usual levels, b) respond timeously and investigate any complaints received regarding air quality, c) to continue improving on charging infrastructure so that we may further increase our use of EVs across NAC, d) continue to promote, support and help facilitate Active Travel and e) to implement the [Sustainable North Ayrshire Strategy 2025-2027](#).

The challenges will be to ensure that a) any monitoring equipment malfunction is rectified timeously, and the data capture rate is maintained at a high level and b) any targets with regard to improving air quality, directly or indirectly within North Ayrshire are achieved.

## How to Get Involved

If you would like to become involved and participate in helping improving air quality in the area, details of alternative modes of travel, route options and projects can be found at [The Trinity – Your active travel hub for North Ayrshire](#).

North Ayrshire Council will continue to support CAD and for information on how to become involved in air quality events around the UK and free promotional material please visit [Clean Air Day - the UK's largest clean air campaign](#).

Further information on our local air quality can also be found here [Home page | Scottish Air Quality](#) on the Air Quality in Scotland website where information is updated every hour. A free service to subscribers in Scotland (that may be of benefit to people whose breathing gets worse when air pollution increases) is Know & Respond – Scotland. The service sends an alert message to registered members if air pollution in their area is forecast to be moderate, high or very high and this may be of benefit to pollution sensitive individuals who want to take steps to minimise the effects of any pollution incidents. To register for Know & Respond – Scotland please visit: [Know & Respond - Scotland, the free air pollution alert messaging system - Air Quality in Scotland \(scottishairquality.scot\)](#).

Know and Respond can also be accessed via an iPhone and Android app which is free to download at: [Apps for iPhone and Android - Air Quality in Scotland \(scottishairquality.scot\)](#).

## Table of Contents

|                                                                                       |           |
|---------------------------------------------------------------------------------------|-----------|
| <b>Executive Summary: Air Quality in Our Area .....</b>                               | <b>i</b>  |
| Air Quality in North Ayrshire Council .....                                           | i         |
| Actions to Improve Air Quality .....                                                  | ii        |
| Local Priorities and Challenges .....                                                 | v         |
| How to Get Involved .....                                                             | vi        |
| <b>1 Local Air Quality Management.....</b>                                            | <b>1</b>  |
| <b>2 Actions to Improve Air Quality.....</b>                                          | <b>2</b>  |
| 2.1 Air Quality Management Areas .....                                                | 2         |
| 2.2 Implementation of measures to address air quality .....                           | 2         |
| 2.3 Air Quality Complaints Relating to Activities and / or Smoke Emissions .....      | 7         |
| <b>3 Air Quality Monitoring Data and Comparison with Air Quality Objectives .....</b> | <b>8</b>  |
| 3.1 Summary of Monitoring Undertaken .....                                            | 8         |
| 3.1.1 Automatic Monitoring Sites .....                                                | 9         |
| 3.1.2 Non-Automatic Monitoring Sites .....                                            | 9         |
| 3.1.3 Other Monitoring Activities .....                                               | 9         |
| 3.2 Individual Pollutants.....                                                        | 10        |
| 3.2.1 Nitrogen Dioxide (NO <sub>2</sub> ).....                                        | 10        |
| 3.2.2 Particulate Matter (PM <sub>10</sub> ) .....                                    | 11        |
| 3.2.3 Particulate Matter (PM <sub>2.5</sub> ) .....                                   | 11        |
| 3.2.4 Sulphur Dioxide (SO <sub>2</sub> ) .....                                        | 12        |
| 3.2.5 Carbon Monoxide, Lead and 1,3-Butadiene.....                                    | 12        |
| <b>4 New Local Developments .....</b>                                                 | <b>13</b> |
| 4.1 Road Traffic Sources.....                                                         | 13        |
| 4.2 Other Transport Sources .....                                                     | 13        |
| 4.3 Industrial Sources.....                                                           | 13        |
| 4.4 Commercial and Domestic Sources.....                                              | 14        |
| 4.5 New Developments with Fugitive or Uncontrolled Sources .....                      | 14        |
| <b>5 Planning Applications.....</b>                                                   | <b>15</b> |

|                                                                                         |           |
|-----------------------------------------------------------------------------------------|-----------|
| <b>6 Conclusions and Proposed Actions</b>                                               | <b>16</b> |
| 6.1 Conclusions from New Monitoring Data                                                | 16        |
| 6.2 Conclusions relating to New Local Developments                                      | 16        |
| 6.3 Proposed Actions                                                                    | 16        |
| <b>Appendix A: Monitoring Results</b>                                                   | <b>18</b> |
| <b>Appendix B: Full Monthly Diffusion Tube Results for 2025</b>                         | <b>31</b> |
| <b>Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC</b> | <b>34</b> |
| New or Changed Sources Identified Within North Ayrshire Council During 2025             | 34        |
| Additional Air Quality Works Undertaken by North Ayrshire Council During 2025           | 34        |
| QA/QC of Diffusion Tube Monitoring                                                      | 34        |
| Diffusion Tube Annualisation                                                            | 34        |
| Diffusion Tube Bias Adjustment Factors                                                  | 35        |
| NO <sub>2</sub> Fall-off with Distance from the Road                                    | 36        |
| QA/QC of Automatic Monitoring                                                           | 36        |
| PM <sub>10</sub> and PM <sub>2.5</sub> Monitoring Adjustment                            | 37        |
| Automatic Monitoring Annualisation                                                      | 37        |
| NO <sub>2</sub> Fall-off with Distance from the Road                                    | 37        |
| <b>Glossary of Terms</b>                                                                | <b>60</b> |
| <b>References</b>                                                                       | <b>61</b> |

## List of Tables

|                                                                                                                                        |    |
|----------------------------------------------------------------------------------------------------------------------------------------|----|
| Table 1.1 – Summary of Air Quality Objectives in Scotland . <b>Error! Bookmark not defined.</b>                                        |    |
| Table 2.1 – Declared Air Quality Management Areas .....                                                                                | 2  |
| Table 2.2 – Progress on Measures to Improve Air Quality.....                                                                           | 5  |
| Table A.1 – Details of Automatic Monitoring Sites .....                                                                                | 18 |
| Table A.2 – Details of Non-Automatic Monitoring Sites .....                                                                            | 19 |
| Table A.3 – Annual Mean NO <sub>2</sub> Monitoring Results: Automatic Monitoring (µg/m <sup>3</sup> ).....                             | 22 |
| Table A.4 – Annual Mean NO <sub>2</sub> Monitoring Results: Non-Automatic Monitoring (µg/m <sup>3</sup> ) ....                         | 23 |
| Table A.5 – 1-Hour Mean NO <sub>2</sub> Monitoring Results, Number of 1-Hour Means > 200 µg/m <sup>3</sup><br>.....                    | 26 |
| Table A.6 – Annual Mean PM <sub>10</sub> Monitoring Results (µg/m <sup>3</sup> ) .....                                                 | 27 |
| Table A.7 – 24-Hour Mean PM <sub>10</sub> Monitoring Results, Number of PM <sub>10</sub> 24-Hour Means > 50<br>µg/m <sup>3</sup> ..... | 28 |
| Table A.8 – Annual Mean PM <sub>2.5</sub> Monitoring Results (µg/m <sup>3</sup> ) .....                                                | 29 |
| Table A.9 – SO <sub>2</sub> 2025 Monitoring Results, Number of Relevant Instances .....                                                | 30 |
| Table B.1 – NO <sub>2</sub> 2025 Monthly Diffusion Tube Results (µg/m <sup>3</sup> ).....                                              | 31 |
| Table C.1 – Bias Adjustment Factor .....                                                                                               | 35 |
| Table C.2 – Diffusion Tube Annualisation Summary (concentrations presented in µg/m <sup>3</sup> )                                      | 38 |
| Table C.3 – Local Bias Adjustment Calculations .....                                                                                   | 38 |
| Table C.4 – NO <sub>2</sub> Fall off With Distance Calculations (concentrations presented in µg/m <sup>3</sup> )                       | 39 |

## List of Figures

|                                                                                                                                           |    |
|-------------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 1: Automatic Monitoring Site Location, High Street, Irvine 2025 .....                                                              | 40 |
| Figure 2: Non-Automatic Monitoring Site Locations 2025 .....                                                                              | 41 |
| Figure 3: Zephyr Monitoring Locations, Ardrossan 2025 .....                                                                               | 42 |
| Figure 4: Zephyr Certificates of Calibration 2025.....                                                                                    | 43 |
| Figure 5: Trends in Annual Mean NO <sub>2</sub> Concentrations measured at Diffusion Tube<br>Monitoring Sites in Irvine 2021 - 2025 ..... | 47 |
| Figure 6: Trends in Annual Mean NO <sub>2</sub> Concentrations measured at Diffusion Tube<br>Monitoring Sites in Dalry 2021 - 2025 .....  | 48 |

|                                                                                                                                     |    |
|-------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 7: Trends in Annual Mean PM10 Concentrations measured at Automatic Station (ROMON) in High Street, Irvine 2021 - 2025 .....  | 49 |
| Figure 8: Trends in Annual Mean PM2.5 Concentrations measured at Automatic Station (ROMON) in High Street, Irvine 2021 - 2025 ..... | 50 |
| Figure 9: Tube Precision & AIR-PT Results .....                                                                                     | 51 |
| Figure 10: Bias Factor Spreadsheet (Glasgow Scientific) .....                                                                       | 52 |
| Figure 11: RICARDO - AEA Air Pollution Report .....                                                                                 | 53 |
| Figure 12: Ricardo - AEA Certificates of Calibration .....                                                                          | 55 |
| Figure 13: NOx & PM Service Reports .....                                                                                           | 58 |

# 1 Local Air Quality Management

This report provides an overview of air quality in North Ayrshire Council during 2025. 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 North Ayrshire Council to improve air quality and any progress that has been made.

**Table 1.1 - Summary of Air Quality Objectives in Scotland**

| Pollutant                               | Air Quality Objective Concentration                                  | Air Quality Objective Measured as | Date to be Achieved by |
|-----------------------------------------|----------------------------------------------------------------------|-----------------------------------|------------------------|
| Nitrogen dioxide (NO <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             |
| Nitrogen dioxide (NO <sub>2</sub> )     | 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             |
| Particulate Matter (PM <sub>10</sub> )  | 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             |
| Sulphur dioxide (SO <sub>2</sub> )      | 125 µg/m <sup>3</sup> , not to be exceeded more than 3 times a year  | 24-hour mean                      | 31.12.2004             |
| Sulphur dioxide (SO <sub>2</sub> )      | 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.

Monitoring in previous years identified that the main air quality issue in North Ayrshire was associated with NO<sub>2</sub> and related to a) traffic congestion caused by a small section of High Street, Irvine being used as a bus terminus and b) queuing traffic in New Street, Dalry because of traffic lights on the main A737 passing through the town. The history of these two areas and mitigation measures has been discussed in previous reports which can be found here [LAQM Reports | Scottish Air Quality](#). Mitigation projects were completed successfully in 2020 for both areas and monitoring results reflect the changes in ambient air quality, showing a downward trend accordingly.

North Ayrshire Council currently does not have any AQMAs.

**Table 2.1 – Declared Air Quality Management Areas**

| AQMA Name | Pollutants and Air Quality Objectives | City / Town | Description | Action Plan |
|-----------|---------------------------------------|-------------|-------------|-------------|
| N/A       | N/A                                   | N/A         | N/A         | N/A         |

### 2.2 Implementation of measures to address air quality

[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 aims to achieve the ambitious vision for Scotland "to have the best air quality in Europe".

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

North Ayrshire Council has a [Adopted Local Development Plan](#) (LDP) that was published in November 2020. The LDP sets out how we aim to guide development and investment in our area over the next 20 years and includes:

- Our **spatial development strategy**: the principles we will use to direct the right development to the right place.
- Our **placemaking policy**: the key criteria that will allow us to deliver the six qualities of successful places.
- Our **strategic development areas and the key factors**: we will consider in developing these major areas of change.

To support this our [Development Plan Scheme](#) (DPS) was published in November 2024 and sets out a planning authority's programme for preparing and reviewing their development plan. As the local planning authority, we are required to prepare a DPS every year. The DPS must also include a Participation Statement stating when, how and with whom consultation on the plan will take place.

In [Council Plan \(north-ayrshire.gov.uk\)](#) 2024 – 2028 our residents are at the heart of our plan; our mission is working together to improve the lives of our people in North Ayrshire.

North Ayrshire Council does not meet the criterion to have a LEZ but has a 2024 – 2028 Local Transport and Active Travel Strategy which can be accessed here: [Transport Strategy \(north-ayrshire.gov.uk\)](#)

North Ayrshire Council also has a commitment to work in partnership with government agencies to explore potential for further EV charging infrastructure. Encouraging the uptake of EVs will help reduce greenhouse gas emissions and help improve local air quality.

The Ayrshire Authorities are at the final stages of procurement for the Ayrshire Electric Vehicle Infrastructure Fund project, with contract award anticipated in May 2026. This project will support the rollout of 307 additional EV charge points across Ayrshire through a concession contract over a three-year delivery period.

[The Sustainable North Ayrshire Strategy](#) for 2024-2027 is a set of actions that explain how the Council will focus on fulfilling its commitment to achieve net zero carbon emissions by 2030 have been approved by the Cabinet.

The key actions completed, in progress or planned and outcomes in terms of benefits for air quality can be found in Appendix 1 of the current Strategy's Action Plan here:

[Sustainable North Ayrshire 2024 - 2027](#)

The Council's Travel Smart behaviour change project will also continue to promote modal shift to active and sustainable travel.

As intimated in Section 2.1 above, North Ayrshire Council does not have any AQMAs therefore does not meet the criterion to develop an Air Quality Action Plan.

Details of all measures completed, in progress or planned are set out in [Table 2.2](#).

Key completed measures for this reporting year are:

- Electric Vehicle Strategy.
- Two Solar Photovoltaic Farms.

North Ayrshire Council has identified the following new measures since the last reporting year:

- Realignment of B714 to connect trunk road network link road; Upgrade will bring long-term benefits by improving road safety, cutting journey times, reducing traffic, easing congestion and reducing pollution through the affected areas.

**Table 2.2 – Progress on Measures to Improve Air Quality**

| Measure No. | Measure                                                                                                                                                                    | Category                         | Expected/Actual Completion year | Organisations Involved                        | Measure Status | Funding Status                             | Key Milestones                                                                                                                                                                                                                                                          | Progress       | Barriers to implementation |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------|-----------------------------------------------|----------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------|
| 1           | Electric Vehicle Strategy: To increase the number of electric vehicles being used throughout North Ayrshire by creating a robust network of electric vehicle charge points | Promoting low emission transport | 2025                            | Local Authority/Transport Scotland            | Completed      | Partially funded Annual Transport Scotland | Establish (i) a best practice benchmark for the number of electric vehicle charge points for the Council's new build developments and (ii) a process so that electric vehicle charge points are included in the project brief for the council's new build developments. | 2025: Complete | N/A                        |
| 2           | Two Solar Photovoltaic Farms: To reduce carbon emissions.                                                                                                                  | Promoting low emission plants    | 2025                            | Local Authority/Scottish Power Energy Network | Completed      | Local Authority/Her Majesty's Treasury     | Scottish Power Energy Network distribution offers accepted Sep/Oct 2021; Design, Build, operate and Maintenance Feb 2023; Planning Granted Aug 2023; Completed 2025.                                                                                                    | 2025: Complete | N/A                        |

|   |                                                                                                                                       |                                       |      |                                |         |                                        |                                                                                                                                   |                   |                                                                                             |
|---|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------|--------------------------------|---------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------|
| 3 | Realignment of B714 to connect trunk road network from the A78 Sharphill roundabout (Three Towns bypass) to the A737, south of Dalry. | Transport planning and infrastructure | 2027 | Local Authority/<br>Wills Bros | Started | Local Authority/Her Majesty's Treasury | Options appraisal; detailed design; Secure Funding; Planning Applied Feb 2024; Planning Granted May 2024; Preparatory Works 2025. | Phase 1: ongoing. | Finance; legal agreements; procurement; Timescales; Road Closures/diversions/inconvenience. |
|---|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------|--------------------------------|---------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------|

### **2.3 Air Quality Complaints Relating to Activities and / or Smoke Emissions**

North Ayrshire Council has investigated a total of 69 air quality complaints related to burning activities and/or emissions of smoke during the reporting year. These complaints related primarily to smoke emissions from the burning of inappropriate materials. Of the complaints received, 69 (100%) have been fully resolved following investigation, with no cases remaining open or under further review.

Investigations were undertaken in accordance with the Environmental Protection Act 1990. Where necessary, officers provided advice, carried out site visits, gathered evidence, and engaged directly with householders to support compliance.

Enforcement actions undertaken during the reporting year include:

- No formal enforcement action was required.
- Informal warnings or advisory letters issued.

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

### 3.1 Summary of Monitoring Undertaken

A fixed automatic monitoring station is located on High Street, Irvine. It has contained a chemiluminescent NO<sub>x</sub> analyser monitor since its installation in 2009 and a Fidas 200 fine dust and monitoring emission measurement system for the continuous and simultaneous particular measurement of PM<sub>1</sub>, PM<sub>2.5</sub> as per EN 14907 and PM<sub>10</sub> as per EN12341 since 14th April 2015. This monitoring station is also the site being used for the triplicate co-location of NO<sub>2</sub> diffusion tubes which are part of a wider network of 22 NO<sub>2</sub> diffusion tubes monitors located throughout North Ayrshire Council.

Calibration checks are conducted every two weeks on site by Local Authority Officers and collected data is forwarded to Ricardo - AEA who validate and ratify the data. The unit is calibrated by Ricardo - AEA every six months. Ricardo - AEA reports are included in [Appendix C: QA/QC of Automatic Monitoring](#). Twenty-two diffusion tubes also monitor NO<sub>2</sub> at various locations in towns throughout North Ayrshire and the average data capture rate was 88.5%.

2025 results show that NO<sub>2</sub> at 20 out of 22 diffusion tube locations has increased, as well as those at the automatic monitor, throughout North Ayrshire but are well below the set air quality objective limit and have not returned to their pre-COVID 19 business-as-usual levels as may have been expected. This increase may have been due to prevailing weather conditions during 2025, and more monitoring will be required to establish any increasing long-term trend.

No monitoring results for 2025 within North Ayrshire has exceeded any relevant UK or EU Limit Value. None of these changes have led to the declaration of an AQMA, decision to amend or revoke an AQMA, or appropriate local strategy.

### 3.1.1 Automatic Monitoring Sites

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

North Ayrshire Council undertook automatic (continuous) monitoring at one site during 2025. [Table A.1](#) in Appendix A shows the details of the sites. National monitoring results are available at [Home page | Scottish Air Quality](#).

Maps showing the location of the monitoring sites are provided in Appendix C: [Figure 1: Automatic Monitoring Site Location, High Street, Irvine 2024](#). Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C. [Appendix C: QA/QC of Automatic Monitoring](#).

### 3.1.2 Non-Automatic Monitoring Sites

North Ayrshire Council undertook non-automatic (passive) monitoring of NO<sub>2</sub> at twenty-two sites during 2025. [Table A.2 in Appendix A](#) shows the details of the sites.

Maps showing the location of the monitoring sites are provided in [Appendix C: Figure 2: Non-Automatic Monitoring Site Locations 2024](#) and further details on Quality Assurance/Quality Control (QA/QC) and bias adjustment for the diffusion tubes are included in Appendix C. [Appendix C: QA/QC of Diffusion Tube Monitoring](#).

### 3.1.3 Other Monitoring Activities

North Ayrshire Council has two Zephyr low-cost air monitors produced by Earth Sense [Zephyr Air Quality Monitor | EarthSense](#). These monitors are solar-powered and measure NO, NO<sub>2</sub>, O<sub>3</sub>, PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub>, temperature, humidity, and pressure continuously. The monitors are not certified to Equivalence standards but are co-located with such instruments and their differences certificated. Low-cost sensors are only indicative of the ambient air quality but nonetheless useful tools to install in areas where there are no previous recordings. The monitors are currently located near the former bitumen terminal to the west of Montgomerie Street, Ardrossan and were deployed here to record the relevant background measurements prior to a major redevelopment of the site by North Ayrshire Council. Details of which can be found here:

[23/00319/PPM | Erection of community campus comprising early years, primary & secondary school with additional support needs, shared community facilities including; library, learning hub and integrated services, indoor sports facilities including swimming pool, sports hall, gymnasium, dance studio & fitness studio, outdoor sports facilities including 2 sports pitches and Multi-Use Games Area \(MUGA\); Outdoor learning landscape, recreational spaces and growing spaces, associated parking and infrastructure | Site At North Shore Adjacent To North Crescent Road Ardrossan Ayrshire \(north-ayrshire.gov.uk\)](#). Their purpose now is to record ongoing ambient air quality.

The Ardrossan Campus is due to open August 2028.

### 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.

[Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC](#)

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

[Table A.3](#) in Appendix A compares the ratified monitored NO<sub>2</sub> annual mean concentrations for the past five years with the air quality objective of 40 µg/m<sup>3</sup> at automatic monitoring sites.

[Table A.4](#) in Appendix A compares the adjusted monitored NO<sub>2</sub> annual mean concentrations for the past five years with the air quality objective of 40 µg/m<sup>3</sup> at non automatic monitoring sites.

For diffusion tubes, the full 2025 dataset of monthly mean values is provided in [Appendix B](#).

[Table A.5](#) in Appendix A compares the ratified continuous monitored NO<sub>2</sub> hourly mean concentrations for the past five years with the air quality objective of 200 µg/m<sup>3</sup>, not to be exceeded more than 18 times per year. There have been no exceedances recorded for the 2021 to 2025 reporting period.

None of these results have led to the declaration of an AQMA.

Annual Mean NO<sub>2</sub> concentrations measured at the automatic monitoring site in High Street, Irvine and diffusion tube monitoring sites located throughout North Ayrshire have

shown a downward trend from 2021 until 2024. There has been a particularly noticeable decline in the NO<sub>2</sub> concentrations in and around Irvine and Dalry following mitigation measures to ease traffic congestion, however, 2025 has seen an increase. As this appears to be widespread across the area, this may be due to prevailing weather conditions. A graph of these trends is included in Appendix C: [Figure 5: Trends in Annual Mean NO<sub>2</sub> Concentrations measured at Diffusion Tube Monitoring Sites in Irvine 2020 - 2024](#) & [Figure 6: Trends in Annual Mean NO<sub>2</sub> Concentrations measured at Diffusion Tube Monitoring Sites in Dalry 2020 - 2024](#).

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

[Table A.6](#) in Appendix A compares the ratified and adjusted monitored PM<sub>10</sub> annual mean concentrations for the past five years with the air quality objective of 18 µg/m<sup>3</sup>.

[Table A.7](#) in Appendix A compares the ratified continuous monitored PM<sub>10</sub> daily mean concentrations for the past five years with the air quality objective of 50 µg/m<sup>3</sup>, not to be exceeded more than seven times per year. There have been no exceedances recorded for the 2021 to 2025 reporting period.

None of these results have led to the declaration of an AQMA.

At High Street, Irvine, PM<sub>10</sub> levels increased from 2021 to 2022 and remained steady until 2024 before returning to 2021 levels during 2025. A graph showing this trend is included in Appendix C: [Figure 7: Trends in Annual Mean PM<sub>10</sub> Concentrations measured at Automatic Station \(ROMON\) in High Street, Irvine 2020 – 2024](#).

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

[Table A.8](#) in Appendix A compares the ratified and adjusted monitored PM<sub>2.5</sub> annual mean concentrations for the past five years with the air quality objective of 10 µg/m<sup>3</sup>.

None of these results have led to the declaration of an AQMA.

PM<sub>2.5</sub> levels reflected those trends of PM<sub>10</sub> during 2021 – 2025 at High Street, Irvine. A graph showing this trend is included in Appendix C: [Figure 8: Trends in Annual Mean PM<sub>2.5</sub> Concentrations measured at Automatic Station \(ROMON\) in High Street, Irvine 2020 - 2024](#).

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

Monitoring for sulphur dioxide (SO<sub>2</sub>) and smoke has been discontinued in North Ayrshire since 2004. Historical monitoring data is available for nearly every town in the area and there is no indication from these results that the air quality standard is likely to be breached even around local industrial sources.

Further details of historic SO<sub>2</sub> monitoring can be found in North Ayrshire Council's previous Air Quality Reports which are available online at:

[LAQM Reports | Scottish Air Quality](#)

There has been no evidence of any change to SO<sub>2</sub> production or release in North Ayrshire. Similarly, there has been no development likely to result in any increase in SO<sub>2</sub> levels at locations where there could be relevant public exposure.

[Table A.9](#) in Appendix A compares the ratified continuous monitored SO<sub>2</sub> concentrations for year 2025 with the air quality objectives for SO<sub>2</sub> for which there are no data.

### 3.2.5 Carbon Monoxide, Lead and 1,3-Butadiene

No monitoring of Carbon monoxide, Lead and 1,3-Butadiene has been undertaken.

Further details of historic Carbon Monoxide, Lead and 1,3-Butadiene monitoring can be found in North Ayrshire Council's previous Air Quality Reports which are available online at: [LAQM Reports | Scottish Air Quality](#)

There has been no evidence of any change to Carbon Monoxide, Lead and 1,3- Butadiene production or release in North Ayrshire. Similarly, there has been no development likely to result in any increase in Carbon Monoxide, Lead and 1,3- Butadiene levels at locations where there could be relevant public exposure.

## 4 New Local Developments

### 4.1 Road Traffic Sources

North Ayrshire Council confirms that there are no new/newly: narrow congested streets with a flow above 5,000 vehicles per day and residential properties close to the pavement; busy streets where people may spend 1 hour or more close to traffic; roads with high flows of buses/heavy delivery vehicles; busy junctions/roads; roads with significantly changed traffic flows and no relevant bus stations in the Local Authority area identified during 2025.

### 4.2 Other Transport Sources

North Ayrshire Council confirms that there are no: airports in the Local Authority area; 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 significant number of movements of diesel locomotives, and potential long-term relevant exposure within 30m; or ports or shipping that meet the specified criteria within the Local Authority area identified during 2025.

### 4.3 Industrial Sources

North Ayrshire Council confirms that there are no new or proposed industrial installations: for which an air quality assessment has been carried out; existing installations where emissions have increased substantially, or new relevant exposure has been introduced; significantly changed installations with no previous air quality assessment; major fuel storage depots storing petrol; petrol stations or poultry farms that we are aware of during 2024.

In 2025 there were five relevant industrial sources that required a new or a substantial variation to an existing authorisation by SEPA. These are presented below.

#### **Authorisation No    Site**

|               |                                                                                                              |
|---------------|--------------------------------------------------------------------------------------------------------------|
| WML/W/0020175 | Enva Irvine Depot, Units 1-5 Shewalton Road, Irvine, KA11 5AW.                                               |
| PPC/A/1197167 | Oldhall EfW Energy Recovery Facility, 16-20 Murdoch Place, Oldhall West Industrial Estate, Irvine, KA11 5DG. |
| PPC/W/0020037 | DSM CHP, Drakemyre, Dalry, Ayrshire, KA24 5JJ.                                                               |

PPC/A/1016746 Arranview and Jameston Moss Poultry Farm, Dalry, KA24 4HB.  
 PPC/A/5010052 Lochwood Farm, Saltcoats, Ayrshire, KA21 6NG.

#### 4.4 Commercial and Domestic Sources

There was one development proposed in 2025 that was considered to have the potential to impact air quality. These are listed below together with their reporting status:

[25/00375/PP | Siting of 40 foot shipping container to rear of building for the housing of 4 no. 130kW biomass boilers with associated flues | Omni Tool Ltd Unit 9 7 Kyle Road Irvine Industrial Estate Irvine North Ayrshire KA12 8JF](#) Granted with no conditions.

#### 4.5 New Developments with Fugitive or Uncontrolled Sources

There were four developments proposed in 2025 that was considered to have a potential to have an impact on air quality from fugitive or uncontrolled Sources:

[25/00589/PP | Variation of condition 2 of planning permission N/15/00749/PP to extend the period of operations for a further 10 years until 31 March 2036 | Swinlees Quarry Dalry North Ayrshire](#) Approved subject to conditions.

[25/00465/PP | Change of use of vacant industrial land to form non-hazardous waste transfer station and associated developments including weighbridge, offices, canteen, maintenance shed, sifting/crushing/sorting/storage areas and fencing | Site To East Of Access From Portland Place To Moorpark Industrial Estate Stevenston North Ayrshire](#)  
 Approved subject to conditions.

[25/00226/PP | Infilling of former quarry with inert materials to restore ground level to the adjoining land | Former Auchenmade Quarry Kilwinning North Ayrshire](#) Approved subject to conditions.

[25/00175/PP | Formation of two forest tracks and extension to existing quarry | Site To North Of Gate Cottage Machrie Brodick Isle Of Arran North Ayrshire](#) Approved subject to conditions.

## 5 Planning Applications

There was three significant housing development proposed in 2024 that was considered to have the potential to increase traffic numbers and flows in and around the relevant area.

These are listed below together with their reporting status:

[25/00036/PP | Erection of residential development comprising of 22 semi-detached dwellings | Site Of The Former Ardchoille Hotel Ardchoille Lane Stevenston North Ayrshire](#)  
AQ assessment requested.

[25/00119/PP | Erection of 26 dwellings formation of new access road and parking to serve development, associated landscaping and services including erection of foul water pumping station and SUDs | Site To East Of Hillview Place Brodick Isle Of Arran North Ayrshire](#) AQ assessment requested.

[25/00287/PPM | Erection of 255 dwellinghouses to include associated roads, footpaths, drainage, open space, landscaping and ancillary service infrastructure | Site To West And South Of Mains Bungalow Eglinton Irvine North Ayrshire](#) AQ assessment done as part of Masterplan.

## 6 Conclusions and Proposed Actions

### 6.1 Conclusions from New Monitoring Data

Annual Mean NO<sub>2</sub> concentrations measured at the automatic monitoring site in High Street, Irvine and diffusion tube monitoring sites located throughout North Ayrshire have shown an upward trend in 2025. Particulate matter, both PM<sub>10</sub> and PM<sub>2.5</sub> showed a slight decline over the same period.

As this trend appears to be widespread across the North Ayrshire Council area and this may be due to prevailing weather conditions during 2025.

All NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> monitoring data within North Ayrshire Council for 2025 complied with the 40µg/m<sup>3</sup>, 18µg/m<sup>3</sup> and 10µg/m<sup>3</sup> respective Air Quality Objectives as set out in the Directive. Monitoring will continue at all the existing sites for 2026.

### 6.2 Conclusions relating to New Local Developments

Four planning applications were received for new developments that may have given rise to fugitive or uncontrolled sources that would have affected air quality, particularly dust. Conditions were attached to the permissions granted to control any potential dust emissions.

Planning permission was sought for three residential developments in 2025 that may have affected air quality. Consideration was given to the applications as they met the criterion of the relevant guidance for local air quality to be assessed. One application was determined at the Master Plan stage, and two air quality assessments are awaited and will be assessed accordingly when received.

### 6.3 Proposed Actions

2025 monitoring data has not identified any new exceedances of the objectives for any pollutant or any need for additional monitoring. It is anticipated that a review of the existing monitoring programme within North Ayrshire will be undertaken to ensure all monitoring points are relevant.

Following the introduction of mitigation measures to reduce congestion in 2020, a significant reduction in NO<sub>2</sub> has been recorded in High Street. Levels remained low but seen an increase during 2025. This may have been a result of prevailing weather conditions or a change in business-as-usual working patterns. It is proposed that NO<sub>2</sub> sampling continues in this area to observe this trend.

Monitoring has shown that the opening of the Dalry Bypass in May 2020 eased traffic congestion significantly through the town and NO<sub>2</sub> concentrations were seen to reduce accordingly. Levels remain low but an increase was seen in 2025. It is proposed that monitoring is continued in this area to establish normal levels.

It is proposed to engage with colleagues in Education and Road Safety to identify schools within North Ayrshire Council where congestion is a persistent issue to ascertain if any monitoring is required.

## Appendix A: Monitoring Results

**Table A.1 – Details of Automatic Monitoring Sites**

| Site ID | Site Name | Site Type | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored                                   | In AQMA? | Which AQMA? | Monitoring Technique                    | Distance to Relevant Exposure (m) <sup>(1,2)</sup> | Distance to kerb of nearest road (m) <sup>(2)</sup> | Inlet Height (m) |
|---------|-----------|-----------|---------------|---------------|--------------------------------------------------------|----------|-------------|-----------------------------------------|----------------------------------------------------|-----------------------------------------------------|------------------|
| ROM     | ROMON     | Roadside  | 232189        | 638857        | NO <sub>2</sub> ; PM <sub>10</sub> ; PM <sub>2.5</sub> | No       | N/A         | Chemiluminescent; Optical Light Scatter | 20                                                 | 4.88                                                | 2.15             |

**Notes:**

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

(2) N/A if not applicable.

**Table A.2 – Details of Non-Automatic Monitoring Sites**

| Site ID | Site Name                        | Site Type | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA? Which AQMA? | Distance to Relevant Exposure (m) <sup>(1)</sup> | Distance to kerb of nearest road (m) <sup>(2)</sup> | Tube co-located with a Continuous Analyser? | Tube Height (m) |
|---------|----------------------------------|-----------|---------------|---------------|----------------------|----------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------|-----------------|
| DT1     | 35 East Road, Irvine             | Roadside  | 232323        | 638892        | NO <sub>2</sub>      | N                    | 1                                                | 2.5                                                 | N                                           | 2.5             |
| DT2     | 22 Bank Street, Irvine           | Roadside  | 232216        | 638961        | NO <sub>2</sub>      | N                    | 2.5                                              | 1.6                                                 | N                                           | 2.5             |
| DT3     | 147 High Street, Irvine          | Roadside  | 232077        | 638990        | NO <sub>2</sub>      | N                    | 0                                                | 4                                                   | N                                           | 2.5             |
| DT4     | 85 High Street, Irvine           | Roadside  | 232158        | 638882        | NO <sub>2</sub>      | N                    | 0                                                | 3.7                                                 | N                                           | 3               |
| DT5     | 79 High St, Irvine               | Roadside  | 232169        | 638878        | NO <sub>2</sub>      | N                    | 3.5                                              | 1.5                                                 | N                                           | 2.5             |
| DT6     | 75 High St, Irvine (HIGH)        | Roadside  | 232170        | 638871        | NO <sub>2</sub>      | N                    | 0                                                | 5                                                   | N                                           | 3               |
| DT7     | 65a High Street, Irvine, (ROMON) | Roadside  | 232194        | 638859        | NO <sub>2</sub>      | N                    | 4.7                                              | 1.7                                                 | Y                                           | 2.15            |

| Site ID | Site Name                       | Site Type        | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA? Which AQMA? | Distance to Relevant Exposure (m) <sup>(1)</sup> | Distance to kerb of nearest road (m) <sup>(2)</sup> | Tube co-located with a Continuous Analyser? | Tube Height (m) |
|---------|---------------------------------|------------------|---------------|---------------|----------------------|----------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------|-----------------|
| DT8     | 65 High Street, Irvine, (ROMON) | Roadside         | 232194        | 638859        | NO <sub>2</sub>      | N                    | 4.7                                              | 1.7                                                 | Y                                           | 2.15            |
| DT9     | 63 High Street, Irvine, (ROMON) | Roadside         | 232194        | 638859        | NO <sub>2</sub>      | N                    | 4.7                                              | 1.7                                                 | Y                                           | 2.15            |
| DT10    | 34 Kirkgate Irvine              | Urban Background | 232085        | 638774        | NO <sub>2</sub>      | N                    | 10                                               | 0.5                                                 | N                                           | 2.5             |
| DT11    | 25 Main Rd, Springside          | Kerbside         | 236824        | 638654        | NO <sub>2</sub>      | N                    | 5                                                | 1                                                   | N                                           | 2.5             |
| DT12    | Auchengate (Bridge)             | Urban Background | 233337        | 635565        | NO <sub>2</sub>      | N                    | N/A                                              | 32                                                  | N                                           | 2.5             |
| DT13    | Dalry Rd, Kilwinning            | Kerbside         | 229936        | 643390        | NO <sub>2</sub>      | N                    | 2                                                | 1                                                   | N                                           | 2.5             |
| DT14    | 12 Garnock St, Dalry            | Urban Background | 229318        | 649253        | NO <sub>2</sub>      | N                    | 10                                               | 0.5                                                 | N                                           | 2.5             |
| DT15    | 67 New St, Dalry                | Kerbside         | 229338        | 649337        | NO <sub>2</sub>      | N                    | 0                                                | 0.5                                                 | N                                           | 2.5             |

| Site ID | Site Name                         | Site Type        | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA? Which AQMA? | Distance to Relevant Exposure (m) <sup>(1)</sup> | Distance to kerb of nearest road (m) <sup>(2)</sup> | Tube co-located with a Continuous Analyser? | Tube Height (m) |
|---------|-----------------------------------|------------------|---------------|---------------|----------------------|----------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------|-----------------|
| DT16    | 45 New St, Dalry                  | Kerbside         | 229286        | 649365        | NO <sub>2</sub>      | N                    | 0                                                | 0.5                                                 | N                                           | 2.5             |
| DT17    | 15-17 Townhead St, Dalry          | Roadside         | 229150        | 649292        | NO <sub>2</sub>      | N                    | 0                                                | 3                                                   | N                                           | 2               |
| DT18    | Highfield Hamlet, Dalry           | Urban Background | 230911        | 650259        | NO <sub>2</sub>      | N                    | 10                                               | 1                                                   | N                                           | 2               |
| DT19    | 85 Main Street, Largs             | Kerbside         | 220336        | 659313        | NO <sub>2</sub>      | N                    | 1.5                                              | 0                                                   | N                                           | 2               |
| DT20    | Hunterston Road                   | Rural            | 219588        | 652044        | NO <sub>2</sub>      | N                    | N/A                                              | N/A                                                 | N                                           | 2               |
| DT21    | Princess St/Glasgow St, Ardrossan | Kerbside         | 222942        | 642101        | NO <sub>2</sub>      | N                    | 0                                                | 0.5                                                 | N                                           | 2.5             |
| DT22    | 21 Vernon St, Saltcoats           | Kerbside         | 224708        | 641339        | NO <sub>2</sub>      | N                    | 0                                                | 1                                                   | N                                           | 2.5             |

**Notes:**

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

(2) N/A if not applicable.

**Table A.3 – Annual Mean NO<sub>2</sub> Monitoring Results: Automatic Monitoring (µg/m<sup>3</sup>)**

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) <sup>(1)</sup> | Valid Data Capture 2025 (%) <sup>(2)</sup> | 2021 | 2022 | 2023 | 2024 | 2025 |
|---------|-------------------------|--------------------------|-----------|-------------------------------------------------------------|--------------------------------------------|------|------|------|------|------|
| ROMON   | 232189                  | 638857                   | Roadside  | -                                                           | 96                                         | 13   | 11   | 10   | 9    | 10   |

**Notes:**

Exceedances of the NO<sub>2</sub> annual mean objective of 40 µg/m<sup>3</sup> are shown in bold.

NO<sub>2</sub> annual means exceeding 60 µg/m<sup>3</sup>, indicating a potential exceedance of the NO<sub>2</sub> 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.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

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

**Table A.4 – Annual Mean NO<sub>2</sub> Monitoring Results: Non-Automatic Monitoring (µg/m<sup>3</sup>)**

| Diffusion Tube ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type        | Valid Data Capture for Monitoring Period (%) <sup>(1)</sup> | Valid Data Capture 2025 (%) <sup>(2)</sup> | 2021 | 2022 | 2023 | 2024 | 2025 |
|-------------------|-------------------------|--------------------------|------------------|-------------------------------------------------------------|--------------------------------------------|------|------|------|------|------|
| DT1               | 232323                  | 638892                   | Roadside         | -                                                           | 100.0                                      | 15.0 | 13.1 | 12.1 | 10.2 | 12.6 |
| DT2               | 232216                  | 638961                   | Roadside         | -                                                           | 100.0                                      | 11.0 | 9.2  | 9.1  | 7.1  | 8.6  |
| DT3               | 232077                  | 638990                   | Roadside         | -                                                           | 100.0                                      | 16.0 | 11.0 | 12.0 | 9.0  | 8.6  |
| DT4               | 232158                  | 638882                   | Roadside         | -                                                           | 100.0                                      | 11.0 | 11.5 | 10.7 | 9.8  | 9.2  |
| DT5               | 232169                  | 638878                   | Roadside         | -                                                           | 92.3                                       | 13.0 | 11.2 | 11.4 | 8.6  | 11.3 |
| DT6               | 232170                  | 638871                   | Roadside         | -                                                           | 100.0                                      | 14.0 | 11.3 | 11.1 | 8.0  | 9.0  |
| DT7,<br>DT8, DT9  | 232194                  | 638859                   | Roadside         | -                                                           | 100.0                                      | 12.0 | 10.7 | 10.0 | 9.2  | 9.9  |
| DT10              | 232085                  | 638774                   | Urban Background | -                                                           | 100.0                                      | 8.0  | 5.7  | 6.2  | 4.8  | 5.7  |
| DT11              | 236824                  | 638654                   | Kerbside         | -                                                           | 100.0                                      | 8.0  | 7.8  | 7.2  | 5.8  | 6.2  |
| DT12              | 233337                  | 635565                   | Urban Background | -                                                           | 82.7                                       | 8.0  | 7.3  | 6.3  | 5.5  | 6.1  |
| DT13              | 229936                  | 643390                   | Kerbside         | -                                                           | 100.0                                      | 15.0 | 11.9 | 11.4 | 8.3  | 11.7 |

| Diffusion Tube ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type        | Valid Data Capture for Monitoring Period (%) <sup>(1)</sup> | Valid Data Capture 2025 (%) <sup>(2)</sup> | 2021 | 2022 | 2023 | 2024 | 2025 |
|-------------------|-------------------------|--------------------------|------------------|-------------------------------------------------------------|--------------------------------------------|------|------|------|------|------|
| DT14              | 229318                  | 649253                   | Urban Background | -                                                           | 100.0                                      | 6.0  | 5.1  | 5.5  | 4.5  | 5.2  |
| DT15              | 229338                  | 649337                   | Kerbside         | -                                                           | 100.0                                      | 14.0 | 10.7 | 9.0  | 9.9  | 11.7 |
| DT16              | 229286                  | 649365                   | Kerbside         | -                                                           | 100.0                                      | 14.0 | 13.8 | 14.0 | 11.1 | 15.8 |
| DT17              | 229150                  | 649292                   | Roadside         | -                                                           | 90.4                                       | 11.0 | 9.1  | 8.9  | 7.1  | 9.3  |
| DT18              | 230911                  | 650259                   | Urban Background | -                                                           | 100.0                                      | 6.0  | 5.9  | 6.0  | 4.9  | 6.0  |
| DT19              | 220336                  | 659313                   | Kerbside         | -                                                           | 82.7                                       | 13.0 | 10.8 | 11.3 | 8.5  | 9.8  |
| DT20              | 219588                  | 652044                   | Rural            | -                                                           | 100.0                                      | 3.0  | 2.9  | 2.7  | 2.3  | 2.8  |
| DT21              | 222942                  | 642101                   | Kerbside         | -                                                           | 100.0                                      | 11.0 | 10.6 | 10.5 | 7.5  | 9.3  |
| DT22              | 224708                  | 641339                   | Kerbside         | -                                                           | 100.0                                      | 13.0 | 11.5 | 10.5 | 8.2  | 10.3 |

☐ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.

☒ Diffusion tube data has been bias adjusted.

☒ Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction.

**Notes:**

Exceedances of the NO<sub>2</sub> annual mean objective of 40 µg/m<sup>3</sup> are shown in **bold**.

NO<sub>2</sub> annual means exceeding 60 µg/m<sup>3</sup>, indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective are shown in **bold and underlined**.

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

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

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

**Table A.5 – 1-Hour Mean NO<sub>2</sub> Monitoring Results, Number of 1-Hour Means > 200 µg/m<sup>3</sup>**

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) <sup>(1)</sup> | Valid Data Capture 2025 (%) <sup>(2)</sup> | 2021 | 2022 | 2023 | 2024 | 2025 |
|---------|-------------------------|--------------------------|-----------|-------------------------------------------------------------|--------------------------------------------|------|------|------|------|------|
| ROMON   | 232189                  | 638857                   | Kerbside  | -                                                           | 96                                         | 0    | 0    | 0    | 0    | 0    |

**Notes:**

Exceedances of the NO<sub>2</sub> 1-hour mean objective (200 µg/m<sup>3</sup> not to be exceeded more than 18 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 99.8<sup>th</sup> 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 A.6 – Annual Mean PM<sub>10</sub> Monitoring Results (µg/m<sup>3</sup>)**

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) <sup>(1)</sup> | Valid Data Capture 2025 (%) <sup>(2)</sup> | 2021 <sup>(3)</sup> | 2022 <sup>(3)</sup> | 2023 <sup>(3)</sup> | 2024 <sup>(3)</sup> | 2025 <sup>(3)</sup> |
|---------|-------------------------|--------------------------|-----------|-------------------------------------------------------------|--------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| ROMON   | 232189                  | 638857                   | Kerbside  | -                                                           | 76                                         | 11.9                | 13.8                | 12.8                | 13.0                | 11.7                |

**Notes:**

Exceedances of the PM<sub>10</sub> annual mean objective of 18 µg/m<sup>3</sup> are shown in **bold**.

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

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

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

(3) Collected ratified PM10 data has been corrected by **dividing the ratified data by 0.909**. See [Appendix C](#) for details.

**Table A.7 – 24-Hour Mean PM<sub>10</sub> Monitoring Results, Number of PM<sub>10</sub> 24-Hour Means > 50 µg/m<sup>3</sup>**

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) <sup>(1)</sup> | Valid Data Capture 2025 (%) <sup>(2)</sup> | 2021 | 2022 | 2023 | 2024 | 2025 |
|---------|-------------------------|--------------------------|-----------|-------------------------------------------------------------|--------------------------------------------|------|------|------|------|------|
| ROMON   | 232189                  | 638857                   | Kerbside  | -                                                           | 76                                         | 0    | 0    | 0    | 0    | 0    |

**Notes:**

Exceedances of the PM<sub>10</sub> 24-hour mean objective (50 µg/m<sup>3</sup> 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 A.8 – Annual Mean PM<sub>2.5</sub> Monitoring Results (µg/m<sup>3</sup>)**

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) <sup>(1)</sup> | Valid Data Capture 2025 (%) <sup>(2)</sup> | 2021 <sup>(3)</sup> | 2022 <sup>(3)</sup> | 2023 <sup>(3)</sup> | 2024 <sup>(3)</sup> | 2025 <sup>(3)</sup> |
|---------|-------------------------|--------------------------|-----------|-------------------------------------------------------------|--------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| ROMON   | 232189                  | 638857                   | Kerbside  | -                                                           | 76                                         | 6.3                 | 7.1                 | 6.4                 | 6.8                 | 6.1                 |

**Notes:**

Exceedances of the PM<sub>2.5</sub> annual mean objective of 10 µg/m<sup>3</sup> are shown in **bold**.

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

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

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

(3) Collected ratified PM<sub>2.5</sub> data has been corrected by **multiplying the ratified data by 1.06**. See [Appendix C](#) for details.

**Table A.9 – SO<sub>2</sub> 2025 Monitoring Results, Number of Relevant Instances**

| Site ID | Site Type | Valid Data Capture for monitoring Period (%) <sup>(1)</sup> | Valid Data Capture 2025 (%) <sup>(2)</sup> | Number of 15-minute Means > 266 µg/m | Number of 1-hour Means > 350 µg/m | Number of 24-hour Means > 125 µg/m |
|---------|-----------|-------------------------------------------------------------|--------------------------------------------|--------------------------------------|-----------------------------------|------------------------------------|
| N/A*    | N/A       | N/A                                                         | N/A                                        | N/A                                  | N/A                               | N/A                                |

**Notes:**

Exceedances of the SO<sub>2</sub> objectives are shown in bold (15-min mean = 35 allowed a year, 1-hour mean = 24 allowed a year, 24-hour mean = 3 allowed a year)

If the period of valid data is less than 85%, the relevant percentiles are provided in brackets (15-Minute means: 99.9<sup>th</sup> percentile, 1-hour means: 99.7<sup>th</sup> percentile, 24-hour means: 99.2<sup>nd</sup> percentile).

(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%).

\* No SO<sub>2</sub> monitoring has not been undertaken within North Ayrshire Council since 2004.

## Appendix B: Full Monthly Diffusion Tube Results for 2025

Table B.1 – NO<sub>2</sub> 2025 Monthly Diffusion Tube Results (µg/m<sup>3</sup>)

| DT ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Jan  | Feb  | Mar | Apr | May  | Jun | Jul | Aug  | Sep  | Oct  | Nov  | Dec  | Annual Mean: Raw Data | Annual Mean: Annualised and Bias Adjusted (1.25) | Annual Mean: Distance Corrected to Nearest Exposure | Comment                                                                   |
|-------|-------------------------|--------------------------|------|------|-----|-----|------|-----|-----|------|------|------|------|------|-----------------------|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------------|
| DT1   | 232323                  | 638892                   | 14.2 | 13.2 | 7.4 | 8.8 | 6.7  | 4.8 | 3.6 | 10.0 | 14.1 | 10.6 | 15.1 | 12.9 | 10.1                  | 12.6                                             |                                                     |                                                                           |
| DT2   | 232216                  | 638961                   | 8.9  | 12.9 | 6.5 | 4.6 | 4.3  | 3.2 | 2.2 | 8.1  | 10.5 | 5.9  | 11.5 | 3.7  | 6.9                   | 8.6                                              |                                                     |                                                                           |
| DT3   | 232077                  | 638990                   | 7.4  | 6.8  | 7.9 | 5.4 | 5.4  | 2.1 | 2.6 | 7.6  | 11.0 | 7.6  | 14.0 | 4.9  | 6.9                   | 8.6                                              |                                                     |                                                                           |
| DT4   | 232158                  | 638882                   | 9.5  | 7.6  | 2.3 | 5.9 | 7.5  | 4.3 | 1.8 | 6.8  | 11.4 | 7.0  | 14.3 | 9.6  | 7.3                   | 9.2                                              |                                                     |                                                                           |
| DT5   | 232169                  | 638878                   | 13.0 | 9.5  | 5.9 | 6.5 | 8.7  |     | 3.1 | 6.8  | 11.5 | 11.7 | 14.8 | 7.9  | 9.0                   | 11.3                                             |                                                     |                                                                           |
| DT6   | 232170                  | 638871                   | 10.9 | 2.1  | 2.0 | 1.9 | 37.6 | 3.0 | 3.0 | 2.1  | 22.4 | 9.4  | 12.6 | 9.7  | 9.7                   | 12.2                                             |                                                     |                                                                           |
| DT7   | 232194                  | 638859                   | 11.4 | 6.6  | 8.0 | 5.5 | 8.4  | 4.9 | 2.6 | 5.1  | 11.3 | 1.7  | 12.7 | 13.6 | -                     | -                                                |                                                     | Triplicate Site with DT7, DT8 and DT9 - Annual data provided for DT9 only |
| DT8   | 232194                  | 638859                   | 10.7 | 9.0  | 7.3 | 7.0 | 5.7  | 5.3 | 2.7 | 5.4  | 12.2 | 8.2  | 14.0 | 7.6  | -                     | -                                                |                                                     | Triplicate Site with DT7, DT8 and DT9 - Annual data provided for DT9 only |
| DT9   | 232194                  | 638859                   | 14.0 | 8.2  | 6.9 | 7.4 | 6.9  | 6.3 | 4.0 | 6.9  | 11.3 | 7.3  | 13.8 | 6.8  | 8.0                   | 10.0                                             |                                                     | Triplicate Site with DT7, DT8 and DT9 - Annual data provided for DT9 only |

| DT ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Jan  | Feb  | Mar  | Apr | May  | Jun | Jul | Aug  | Sep  | Oct  | Nov  | Dec | Annual Mean: Raw Data | Annual Mean: Annualised and Bias Adjusted (1.25) | Annual Mean: Distance Corrected to Nearest Exposure | Comment |
|-------|-------------------------|--------------------------|------|------|------|-----|------|-----|-----|------|------|------|------|-----|-----------------------|--------------------------------------------------|-----------------------------------------------------|---------|
| DT10  | 232085                  | 638774                   | 6.8  | 5.8  | 4.9  | 2.7 | 3.9  | 1.9 | 1.7 | 2.3  | 5.1  | 3.4  | 11.0 | 5.6 | 4.6                   | 5.7                                              |                                                     |         |
| DT11  | 236824                  | 638654                   | 7.5  | 5.8  | 5.0  | 3.5 | 4.5  | 2.2 | 1.7 | 3.9  | 5.3  | 4.4  | 10.0 | 5.5 | 4.9                   | 6.2                                              |                                                     |         |
| DT12  | 233337                  | 635565                   | 12.0 | 5.5  | 3.9  | 4.1 | 1.9  | 2.4 | 2.7 | 5.9  | 5.8  |      |      | 4.5 | 4.9                   | 6.1                                              |                                                     |         |
| DT13  | 229936                  | 643390                   | 16.9 | 14.9 | 8.4  | 7.7 | 7.8  | 4.1 | 2.9 | 7.4  | 12.8 | 8.8  | 15.0 | 5.3 | 9.3                   | 11.7                                             |                                                     |         |
| DT14  | 229318                  | 649253                   | 9.7  | 7.3  | 4.6  | 2.7 | 3.4  | 1.9 | 1.7 | 2.3  | 2.1  | 2.9  | 7.6  | 3.4 | 4.1                   | 5.2                                              |                                                     |         |
| DT15  | 229338                  | 649337                   | 14.3 | 7.9  | 11.9 | 6.3 | 11.8 | 5.1 | 4.1 | 8.2  | 11.5 | 9.8  | 13.8 | 6.3 | 9.3                   | 11.6                                             |                                                     |         |
| DT16  | 229286                  | 649365                   | 17.7 | 16.6 | 11.1 | 8.4 | 10.6 | 8.4 | 6.8 | 14.6 | 17.0 | 14.9 | 16.5 | 8.9 | 12.6                  | 15.8                                             |                                                     |         |
| DT17  | 229150                  | 649292                   | 16.2 | 5.5  | 9.2  | 7.3 | 4.9  | 3.2 | 2.8 | 4.9  | 7.0  |      | 15.2 | 5.4 | 7.4                   | 9.3                                              |                                                     |         |
| DT18  | 230911                  | 650259                   | 8.9  | 10.0 | 5.1  | 2.0 | 2.4  | 2.3 | 1.7 | 4.1  | 6.8  | 4.3  | 6.2  | 3.8 | 4.8                   | 6.0                                              |                                                     |         |
| DT19  | 220336                  | 659313                   | 9.7  | 8.2  | 7.0  |     | 6.3  | 6.1 |     | 8.4  | 9.8  | 7.5  | 10.2 | 4.8 | 7.8                   | 9.8                                              |                                                     |         |
| DT20  | 219588                  | 652044                   | 2.6  | 2.7  | 2.0  | 2.0 | 1.8  | 1.9 | 1.7 | 2.1  | 2.7  | 2.1  | 3.0  | 1.8 | 2.2                   | 2.8                                              |                                                     |         |
| DT21  | 222942                  | 642101                   | 11.2 | 11.5 | 6.2  | 6.5 | 9.4  | 4.2 | 3.1 | 5.9  | 5.8  | 7.9  | 10.3 | 7.1 | 7.4                   | 9.3                                              |                                                     |         |

| DT ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug  | Sep | Oct | Nov  | Dec | Annual Mean: Raw Data | Annual Mean: Annualised and Bias Adjusted (1.25) | Annual Mean: Distance Corrected to Nearest Exposure | Comment |
|-------|-------------------------|--------------------------|------|-----|-----|-----|-----|-----|-----|------|-----|-----|------|-----|-----------------------|--------------------------------------------------|-----------------------------------------------------|---------|
| DT22  | 224708                  | 641339                   | 12.5 | 6.6 | 7.0 | 8.2 | 9.2 | 4.8 | 4.2 | 12.4 | 8.7 | 8.7 | 11.6 | 4.7 | 8.2                   | 10.3                                             |                                                     |         |

- ☒ All erroneous data has been removed from the NO<sub>2</sub> diffusion tube dataset presented in Table B.1.
- ☐ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.
- ☒ Local bias adjustment factor used.
- ☐ National bias adjustment factor used.
- ☐ Where applicable, data has been distance corrected for relevant exposure in the final column.
- ☒ North Ayrshire Council confirm that all 2025 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.

**Notes:**

Exceedances of the NO<sub>2</sub> annual mean objective of 40 µg/m<sup>3</sup> are shown in **bold**.

NO<sub>2</sub> annual means exceeding 60 µg/m<sup>3</sup>, indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective are shown in **bold and underlined**.

See [Appendix C](#) for details on bias adjustment and annualisation.

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

### **New or Changed Sources Identified Within North Ayrshire Council During 2025**

North Ayrshire Council identified a number of new potential sources relating to air quality within the reporting year of 2025 and are detailed in Section 4 [New Local Developments](#) and Section 5 [Planning Applications](#) above.<sup>3</sup>

### **Additional Air Quality Works Undertaken by North Ayrshire Council During 2025**

North Ayrshire Council has not completed any additional works within the reporting year of 2025.

### **QA/QC of Diffusion Tube Monitoring**

Glasgow Scientific Services (GSS) was the supplier used for diffusion tubes within 2025, and the method of preparation was 20% TEA in water. GSS has been supplying North Ayrshire Council's diffusion tubes since December 2013.

GSS are UKAS accredited, and their process is based on the AEA and DEFRA procedure. They participate in the AIR-PT analysis scheme and in the annual field inter-comparison exercise. The results of which are presented below in [Figure 9](#).

Monitoring was completed in adherence with the 2024 Diffusion Tube Monitoring Calendar.

### **Diffusion Tube Annualisation**

All diffusion tube monitoring locations within North Ayrshire Council recorded data capture of 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

## Diffusion Tube Bias Adjustment Factors

North Ayrshire Council have applied a local bias adjustment factor of **1.25** to the 2025 monitoring data. A summary of bias adjustment factors used by North Ayrshire Council over the past five years is presented in Table C.1 below.

**Table C.1 – Bias Adjustment Factor**

| Year | Local or National | If National, Version of National Spreadsheet | Adjustment Factor |
|------|-------------------|----------------------------------------------|-------------------|
| 2025 | Local             | -                                            | 1.25              |
| 2024 | Local             | -                                            | 0.81              |
| 2023 | Local             | -                                            | 0.89              |
| 2022 | Local             | -                                            | 0.82              |
| 2021 | Local             | -                                            | 1.03              |

## National Adjustment Factors

Diffusion tubes (20% TEA/Water) used in the sampling period for 2025 were supplied and analysed by Glasgow Scientific Services (GSS). Diffusion Tube Bias Adjustment Factors for tubes provided by GSS are listed in the National Diffusion Tube Bias Adjustment Factor Spreadsheet Version 03/26 in [Figure 10](#) below. The resultant bias for GSS is **0.72** based on one study with “Good” precision.

## Factor from Local Co-location Studies.

The automatic monitoring station (ROMON) on High Street, Irvine has been operational since early 2009 and is the site being used for three co-location diffusion tubes. The unit is permanently located here and allows for full “calendar year” data to be collected.

The ROMON has fortnightly checks carried out in accordance with the prescribed methodology as issued by Ricardo - AEA. The unit is audited every 6 months by Ricardo - AEA and is serviced every 6 months under contract to a specialist company.

Corresponding data was entered into the Diffusion Tube Data Processing Tool v6.0 2025. The resulting Bias Factor for 2025 data is **1.25** using 11 periods ([Table C.3 – Local Bias Adjustment Calculations](#)).

## Discussion of Choice of Factor to Use

The diffusion tube co-location study for North Ayrshire Council shows “Good” overall Data Capture for all periods but “Poor” precision. Records show from [Table C.1](#) that previous derived bias factors over the last four years ranged from **0.81 – 1.03** between 2021 and 2024. The National Bias Adjustment Factor from GSS of **0.72** is based on one study with “Good” precision (Marlybone Road Intercomparison).

When carrying out a sensitivity assessment, applying the National Bias Adjustment Factor of **0.72** to the raw 2025 data would result in a value **27.72% less** eg **10.1** reduced to **7.3**, whilst applying the Local Bias Adjustment Factor of **1.25** would result in a value **24.75% greater** eg **10.1** to **12.6**. Considering the Annual Mean NO<sub>2</sub> Monitoring Results over the last four years (2021 – 2024) presented in [Table A.4](#), apply the local bias factor of **1.25** would result in values more in agreement with the overall data set values, whereas applying the national bias factor of **0.72** would result in values unusually less than them. The Local Bias Adjustment Factor of **1.25** has therefore been used for 2025 data. In addition to this, as a Local Bias Adjustment Factor has been used for the last four years, it provides consistency for more meaningful comparison.

### **NO<sub>2</sub> Fall-off with Distance from the Road**

No diffusion tube NO<sub>2</sub> monitoring locations within North Ayrshire Council required distance correction during 2025.

### **QA/QC of Automatic Monitoring**

The automatic monitoring instruments housed within the roadside cabinet has Local Site Operator (LSO) onsite calibration and data management checks conducted every two weeks by a Local Authority Officer. All checks are carried out in accordance with procedures laid out by Ricardo - AEA and calibration check sheets are forwarded to them after each visit. The site is visited by Ricardo - AEA engineers every six months to carry out calibration audit tests and the Annual Report and Certificates from these visits are included in [Figure 11](#) & [Figure 12](#) below. The instrument units are also serviced twice yearly by a specialist company and reports from these visits are included in [Figure 13](#) below. Data derived from the automatic monitors and presented within this report has all been ratified by Ricardo AEA. All live and historic data pertaining to North Ayrshire Council is available through the Air Quality in Scotland website [Home page | Scottish Air Quality](#).

## **PM<sub>10</sub> and PM<sub>2.5</sub> Monitoring Adjustment**

North Ayrshire Council operate a Fidas 200 type of PM<sub>10</sub>/PM<sub>2.5</sub> monitor(s) and following research [Equivalence Study to Investigate Particulate Matter Monitoring in Scotland Using the Fidas 200 | Scottish Air Quality](#) the application of a correction factor is required. In accordance with Scottish Government guidance [Local Authority Guidance Note for LAQM Reporting of Scottish PM Data | Scottish Air Quality](#).

Collected PM<sub>10</sub> data has been corrected by **dividing the** ratified data by **0.909**.

Collected PM<sub>2.5</sub> data has been corrected by **multiplying** ratified data **by 1.06**.

Both the corrected and uncorrected ratified data statistics has been presented where deemed appropriate.

## **Automatic Monitoring Annualisation**

All automatic monitoring locations within North Ayrshire Council recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

## **NO<sub>2</sub> Fall-off with Distance from the Road**

No automatic NO<sub>2</sub> monitoring locations within North Ayrshire Council required distance correction during 2025.

**Table C.2 – Diffusion Tube Annualisation Summary (concentrations presented in  $\mu\text{g}/\text{m}^3$ )**

| Site ID | Annualisation Factor Site 1 Name | Annualisation Factor Site 2 Name | Annualisation Factor Site 3 Name | Annualisation Factor Site 4 Name | Average Annualisation Factor | Raw Data Annual Mean | Annualised Annual Mean | Comments |
|---------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|------------------------------|----------------------|------------------------|----------|
| N/A*    | -                                | -                                | -                                | -                                | -                            | -                    | -                      | -        |

\* No automatic or non-automatic Annualisation calculations were required to be undertaken within North Ayrshire Council during 2025.

**Table C.3 – Local Bias Adjustment Calculations**

|                                                  | Local Bias Adjustment Input 1 | Local Bias Adjustment Input 2 | Local Bias Adjustment Input 3 | Local Bias Adjustment Input 4 | Local Bias Adjustment Input 5 |
|--------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Periods used to calculate bias                   | 11                            | -                             | -                             | -                             | -                             |
| Bias Factor A                                    | 1.24 (1.03 - 1.57)            | -                             | -                             | -                             | -                             |
| Bias Factor B                                    | -20% (-36% - -3%)             | -                             | -                             | -                             | -                             |
| Diffusion Tube Mean ( $\mu\text{g}/\text{m}^3$ ) | 8.1                           | -                             | -                             | -                             | -                             |
| Mean CV (Precision)                              | 10.6%                         | -                             | -                             | -                             | -                             |
| Automatic Mean ( $\mu\text{g}/\text{m}^3$ )      | 10.1                          | -                             | -                             | -                             | -                             |
| Data Capture                                     | 100%                          | -                             | -                             | -                             | -                             |
| Adjusted Tube Mean ( $\mu\text{g}/\text{m}^3$ )  | 10 (8 - 13)                   | -                             | -                             | -                             | -                             |

Notes:

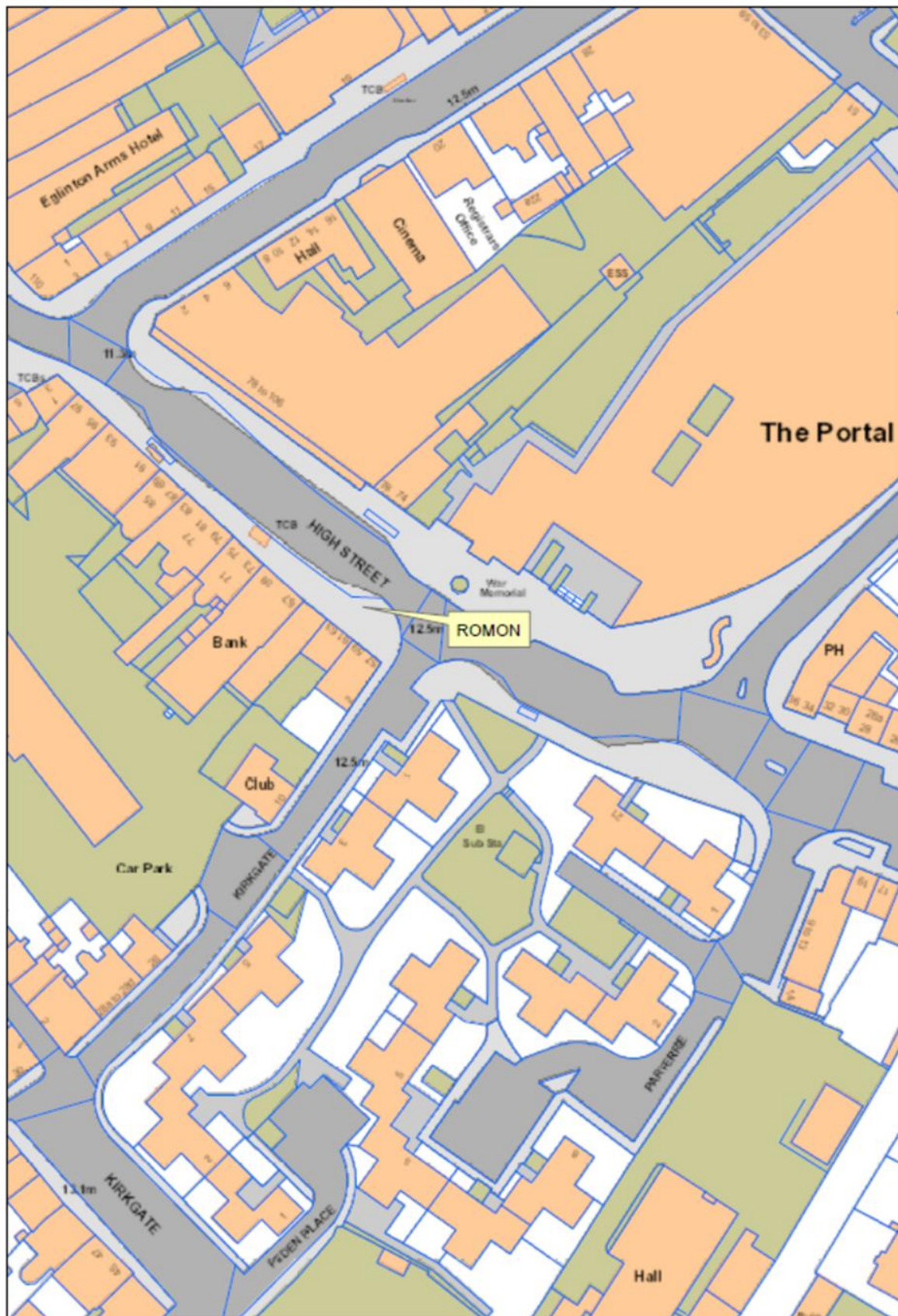
A single local bias adjustment factor has been used to bias adjust the 2025 diffusion tube results.

**Table C.4 – NO<sub>2</sub> Fall off With Distance Calculations (concentrations presented in µg/m<sup>3</sup>)**

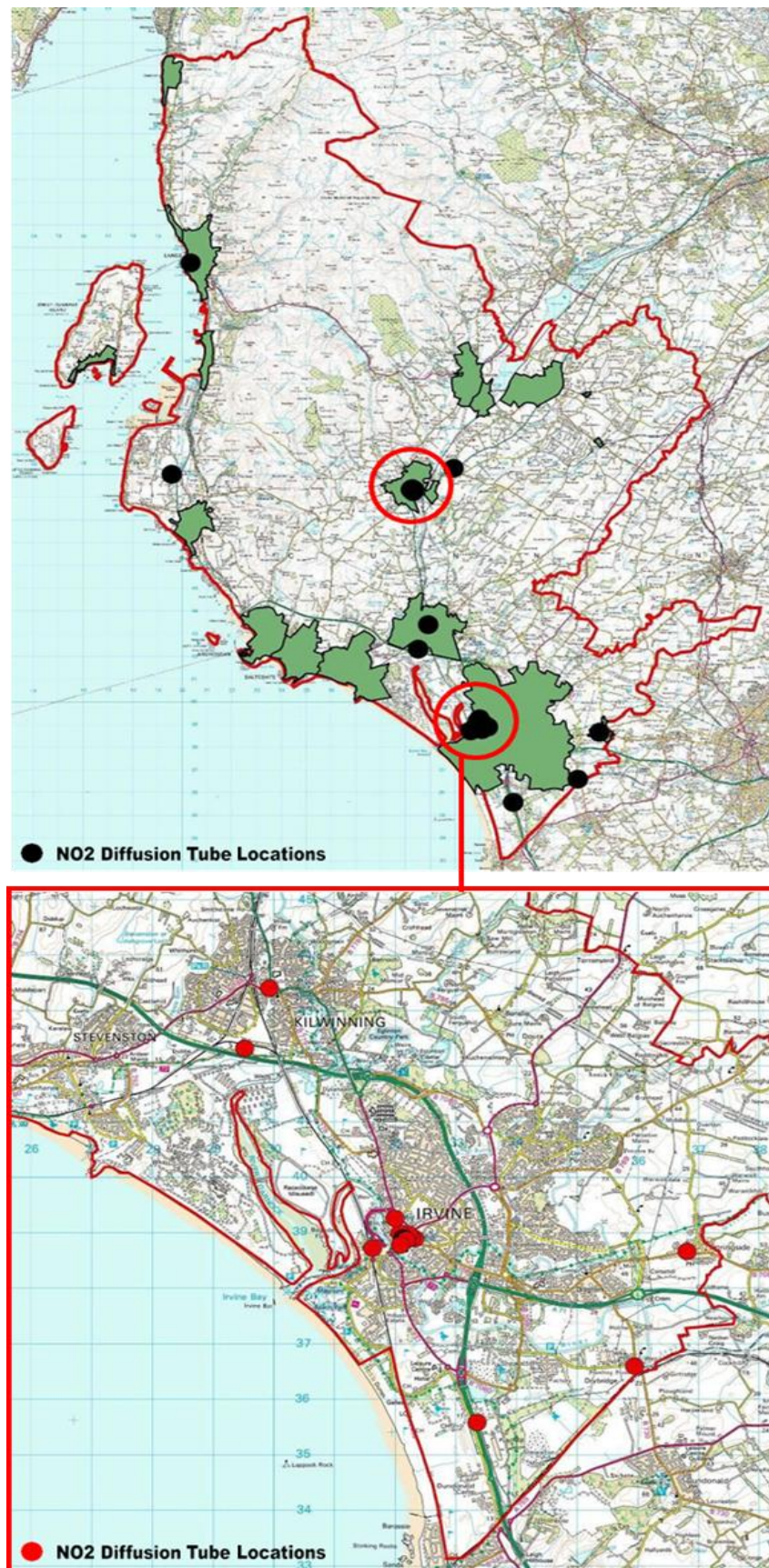
| Site ID | Distance (m):<br>Monitoring Site to<br>Kerb | Distance (m):<br>Receptor to Kerb | Monitored<br>Concentration<br>(Annualised and<br>Bias Adjusted) | Background<br>Concentration | Concentration<br>Predicted at<br>Receptor | Comments |
|---------|---------------------------------------------|-----------------------------------|-----------------------------------------------------------------|-----------------------------|-------------------------------------------|----------|
| N/A*    | -                                           | -                                 | -                                                               | -                           | -                                         | -        |

\* No NO<sub>2</sub> Fall off With Distance Calculations were required to be undertaken for automatic or non-automatic data within North Ayrshire Council during 2025.

Figure 1: Automatic Monitoring Site Location, High Street, Irvine 2025



**Figure 2: Non-Automatic Monitoring Site Locations 2025**



**Figure 3: Zephyr Monitoring Locations, Ardrossan 2025**

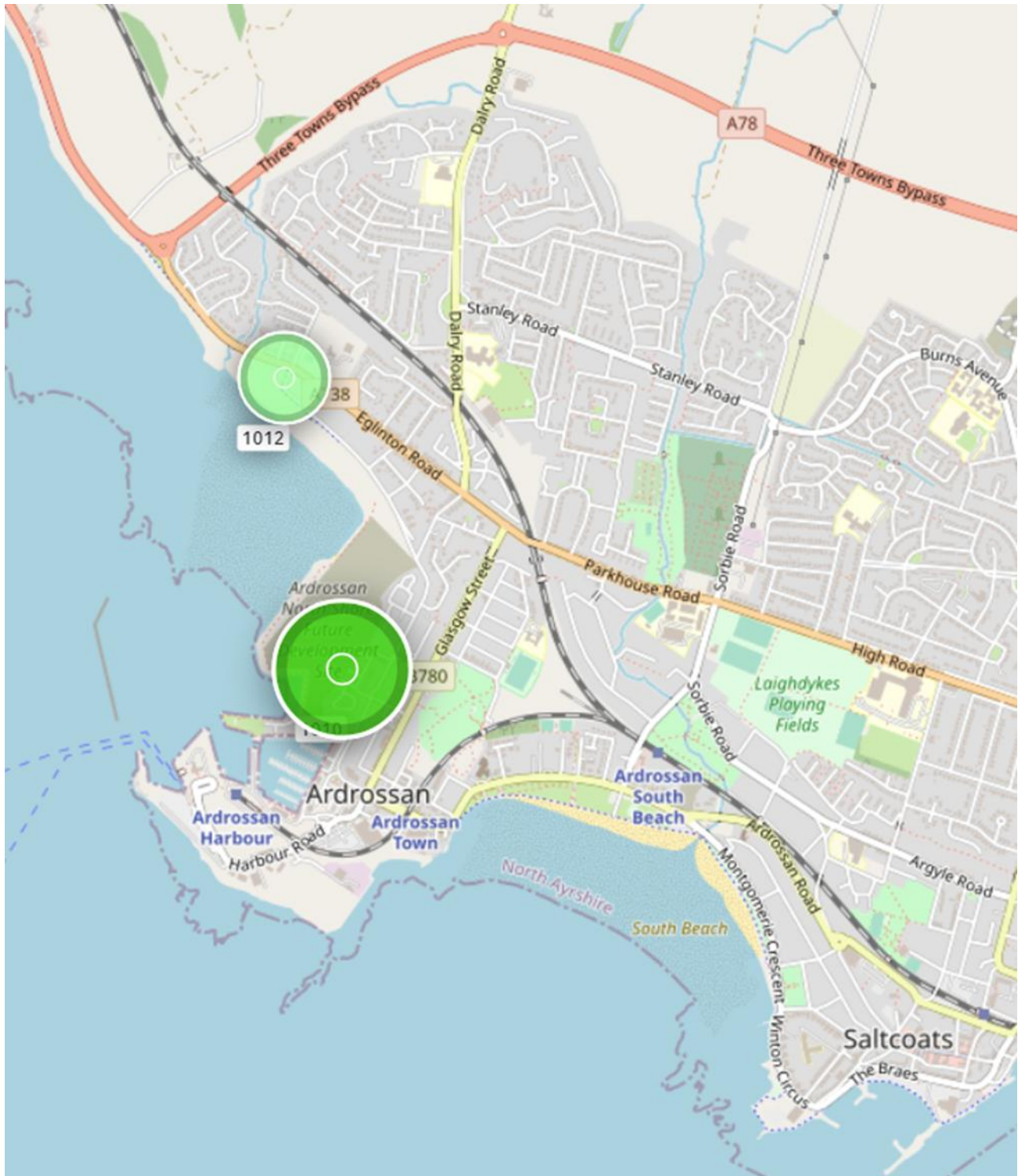


Figure 4: Zephyr Certificates of Calibration 2025





EarthSense Systems Ltd.

## **Zephyr Sensor Cartridge Calibration Certificate for Particulate Matter Sensor Cartridge BIC1286**

### **Calibration Summary**

Location: *EarthSense manufacturing facility*

Start Date: *2024-10-22 00:00:00*

End Date: *2024-10-29 00:00:00*

| Pollutant         | RMSE<br>( $\mu\text{g}/\text{m}^3$ ) | RMSE Pass<br>Criteria ( $\mu\text{g}/\text{m}^3$ ) | R <sup>2</sup> | R <sup>2</sup> Pass<br>Criteria | Status |
|-------------------|--------------------------------------|----------------------------------------------------|----------------|---------------------------------|--------|
| PM <sub>2.5</sub> | 3.56                                 | $\leq 5.0$                                         | 0.949          | $\geq 0.75$                     | Pass   |
| PM <sub>10</sub>  | 2.02                                 | $\leq 10.0$                                        | 0.910          | $\geq 0.5$                      | Pass   |

In compliance with our Indicative MCERTS accreditation, all particulate sensors are reviewed for a period against our reference equipment.

Sensor parameters are fixed following formal testing at the UK's National Physical Laboratory in 2022.

These tests confirm nominal sensor performance, either through RMS error or R<sup>2</sup> correlations.

**Approved for customer shipment:** *Roland Leigh*

**Quality standards approval:** *Dr. Roland Leigh*



EarthSense Systems Ltd.  
**Zephyr Gas Sensor Cartridge Calibration Certificate**  
Sensor Cartridge BIC2347

**Calibration Summary**

Location: *EarthSense manufacturing facility*  
Start Date: *2024-06-16 00:00:00*  
End Date: *2024-06-21 00:00:00*

| Pollutant       | Accuracy Specification (µg/m³) | RMSE (µg/m³) | RMSE Pass Criteria (µg/m³) | R²   | R² Pass Criteria | Slope of regression | Offset of regression (µg/m³) | Maximum Ref. Concentration (µg/m³) | Average Ref. Concentration (µg/m³) | Status |
|-----------------|--------------------------------|--------------|----------------------------|------|------------------|---------------------|------------------------------|------------------------------------|------------------------------------|--------|
| NO <sub>2</sub> | 8.0                            | 3.84         | ≤4.0                       |      |                  | 1.00                | 0.0                          | 48.7                               | 14.1                               | Pass   |
| NO              | 8.0                            | 3.88         | ≤4.0                       |      |                  | 0.97                | 0.6                          | 40.2                               | 2.7                                | Pass   |
| O <sub>3</sub>  | 15.0                           |              |                            | 0.84 | ≥0.7             | 1.00                | 0.0                          | 94.1                               | 59.9                               | Pass   |

All EarthSense cartridges are progressed through a strict quality and calibration assessment prior to shipping.  
All tests are performed in real-world conditions.  
In conditions with relatively low concentrations of the target gas, the RMS error must be less than half the specified accuracy.  
For higher ambient conditions, a strict R² criteria is applied. In all cases, the slope must be 1 ± 0.1 and the offset must be less than half of the specified accuracy of the sensor.

**Approved for customer shipment:** *Kiran Mistry*



**Quality standards approval:** *Dr. Roland Leigh*





EarthSense Systems Ltd.  
**Zephyr Sensor Cartridge Calibration Certificate for Particulate Matter**  
Sensor Cartridge BIC2347

**Calibration Summary**

Location: *EarthSense manufacturing facility*  
Start Date: *2024-06-16 00:00:00*  
End Date: *2024-06-21 00:00:00*

| Pollutant         | RMSE<br>(µg/m³) | RMSE Pass<br>Criteria (µg/m³) | R²    | R² Pass<br>Criteria | Status |
|-------------------|-----------------|-------------------------------|-------|---------------------|--------|
| PM <sub>2.5</sub> | 1.28            | ≤5.0                          | 0.854 | ≥0.75               | Pass   |
| PM <sub>10</sub>  | 2.30            | ≤10.0                         | 0.657 | ≥0.5                | Pass   |

In compliance with our Indicative MCERTS accreditation, all particulate sensors are reviewed for a period against our reference equipment.  
Sensor parameters are fixed following formal testing at the UK's National Physical Laboratory in 2022.  
These tests confirm nominal sensor performance, either through RMS error or R² correlations.

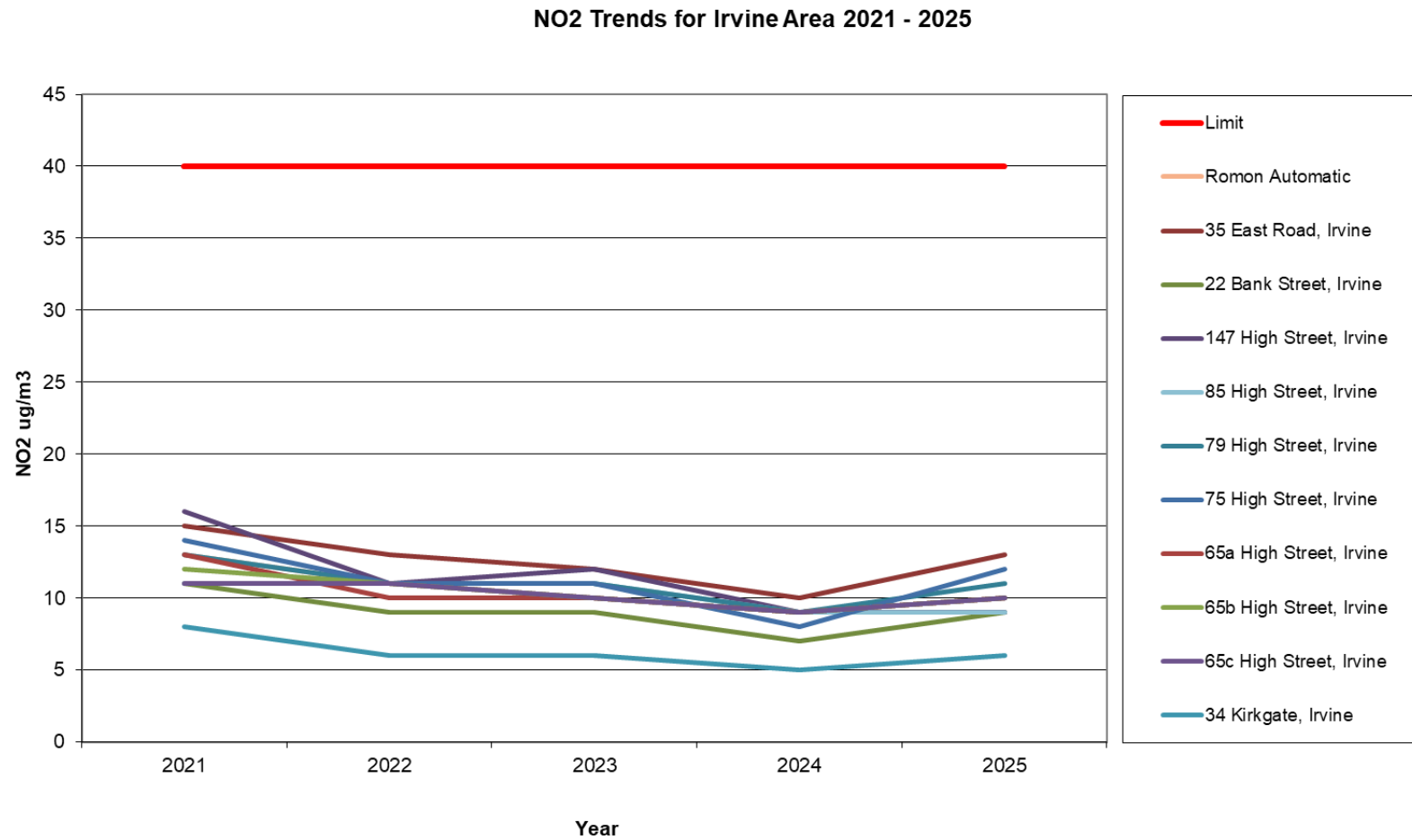
**Approved for customer shipment:** *Kiran Mistry*

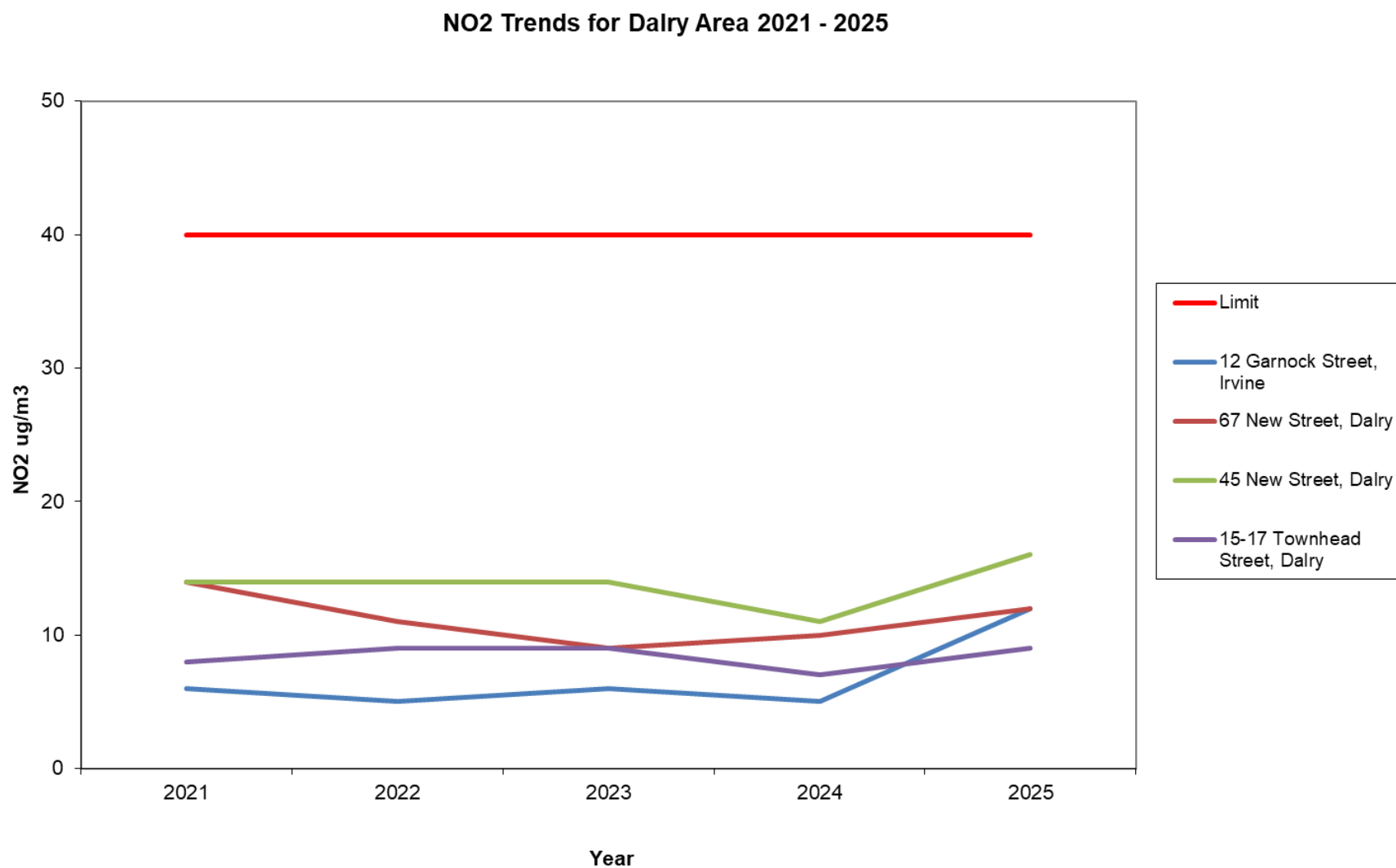


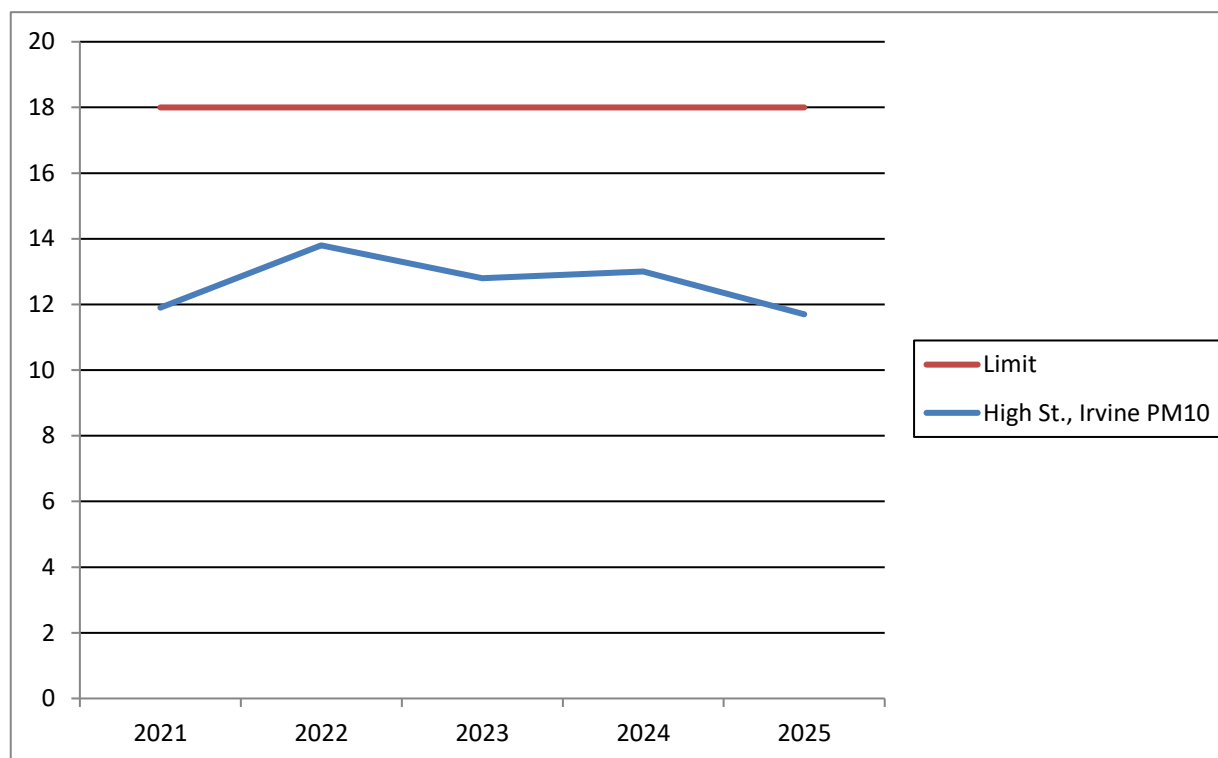
**Quality standards approval:** *Dr. Roland Leigh*



**Figure 5: Trends in Annual Mean NO<sub>2</sub> Concentrations measured at Diffusion Tube Monitoring Sites in Irvine 2021 - 2025**



**Figure 6: Trends in Annual Mean NO<sub>2</sub> Concentrations measured at Diffusion Tube Monitoring Sites in Dalry 2021 - 2025**

**Figure 7: Trends in Annual Mean PM10 Concentrations measured at Automatic Station (ROMON) in High Street, Irvine 2021 - 2025**

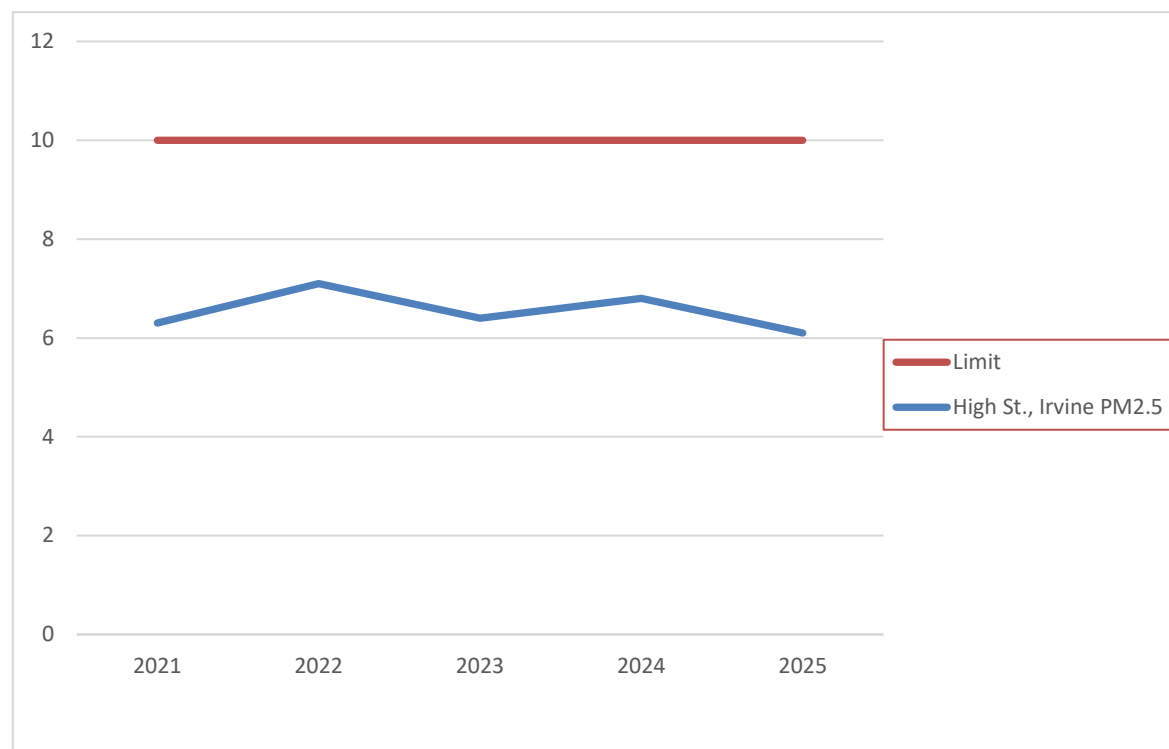
**Figure 8: Trends in Annual Mean PM2.5 Concentrations measured at Automatic Station (ROMON) in High Street, Irvine 2021 - 2025**

Figure 9: Tube Precision &amp; AIR-PT Results

Table 1: Laboratory summary performance for AIR NO<sub>2</sub> PT rounds AR062, 63, 65, 66, 68, 69, 71, 72 and 74

The following table lists those UK laboratories undertaking LAQM activities that have participated in recent AIR NO<sub>2</sub> PT rounds and the percentage (%) of results submitted which were subsequently determined to be **satisfactory** based upon a z-score of  $\leq \pm 2$  as defined above.

| AIR PT Round                                      | AIR PT AR062            | AIR PT AR063      | AIR PT AR065       | AIR PT AR066             | AIR PT AR068            | AIR PT AR069      | AIR PT AR071          | AIR PT AR072            | AIR PT AR074            |
|---------------------------------------------------|-------------------------|-------------------|--------------------|--------------------------|-------------------------|-------------------|-----------------------|-------------------------|-------------------------|
| Round conducted in the period                     | January – February 2024 | April – June 2024 | July – August 2024 | September – October 2024 | January – February 2025 | April – June 2025 | July – September 2025 | October – December 2025 | January – February 2026 |
| Aberdeen Scientific Services                      | 100 %                   | 100 %             | 100 %              | 100 %                    | 100 %                   | 100 %             | 100 %                 | 100 %                   | 100 %                   |
| Cardiff Scientific Services                       | NR [3]                  | NR [3]            | NR [3]             | NR [3]                   | NR [3]                  | NR [3]            | NR [3]                | NR [3]                  | NR [3]                  |
| Edinburgh Scientific Services                     | 100 %                   | 100 %             | 100 %              | 100 %                    | 100 %                   | 100 %             | 100 %                 | 100 %                   | 0 %                     |
| SOCOTEC                                           | 100 % [1]               | 100 % [1]         | 100 % [1]          | 100 % [1]                | 87.5 % [1]              | 100 % [1]         | 100 % [1]             | 87.5 % [1]              | 100 % [1]               |
| Exova (formerly Clyde Analytical)                 | NR [3]                  | NR [3]            | NR [3]             | NR [3]                   | NR [3]                  | NR [3]            | NR [3]                | NR [3]                  | NR [3]                  |
| Glasgow Scientific Services                       | 75 %                    | 100 %             | 100 %              | 100 %                    | 100 %                   | 75 %              | 100 %                 | 100 %                   | 100 %                   |
| Gradko International                              | 100 %                   | 100 %             | 100 %              | 100 %                    | 50 %                    | 75 %              | 100 %                 | 100 %                   | 100 %                   |
| Kent Scientific Services                          | NR [3]                  | NR [3]            | NR [3]             | NR [3]                   | NR [3]                  | NR [3]            | NR [3]                | NR [3]                  | NR [3]                  |
| Kirklees MBC                                      | NR [3]                  | NR [3]            | NR [3]             | NR [3]                   | NR [3]                  | NR [3]            | NR [3]                | NR [3]                  | NR [3]                  |
| Lambeth Scientific Services                       | 50 %                    | 50 %              | 50 %               | 50 %                     | 100 %                   | 100 %             | 75 %                  | 50 %                    | 100 %                   |
| Milton Keynes Council                             | 100 %                   | NR [2]            | 50 %               | 100 %                    | 100 %                   | 75 %              | 75 %                  | 50 %                    | 75 %                    |
| Northampton Borough                               | NR [3]                  | NR [3]            | NR [3]             | NR [3]                   | NR [3]                  | NR [3]            | NR [3]                | NR [3]                  | NR [3]                  |
| Somerset Scientific Services                      | 100 %                   | 100 %             | 100 %              | 100 %                    | 100 %                   | 100 %             | 100 %                 | 100 %                   | NR [2]                  |
| South Yorkshire Air Quality Samplers              | NR [2]                  | NR [2]            | NR [2]             | NR [2]                   | NR [2]                  | NR [2]            | NR [2]                | NR [2]                  | NR [2]                  |
| Staffordshire County Council, Scientific Services | 100 %                   | 100 %             | 100 %              | 100 %                    | 100 %                   | 100 %             | 100 %                 | 100 %                   | 100 %                   |
| Tayside Scientific Services (formerly Dundee CC)  | NR [2]                  | NR [2]            | 100 %              | NR [2]                   | NR [2]                  | NR [2]            | NR [2]                | 100 %                   | NR [2]                  |
| West Yorkshire Analytical Services                | NR [3]                  | NR [3]            | NR [3]             | NR [3]                   | NR [3]                  | NR [3]            | NR [3]                | NR [3]                  | NR [3]                  |

[1] Participant subscribed to two sets of test results (2 x 4 test samples) in each AIR PT round.

[2] NR, No results reported.

[3] Cardiff Scientific Services, Exova (formerly Clyde Analytical), Kent Scientific Services, Kirklees MBC, Northampton Borough Council and West Yorkshire Analytical Services; no longer carry out NO<sub>2</sub> diffusion tube monitoring and therefore did not submit results.

Figure 10: Bias Factor Spreadsheet (Glasgow Scientific)

| National Diffusion Tube Bias Adjustment Factor Spreadsheet                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                                                                                             |  |                                                                                             |  | Spreadsheet Version Number: 03/26                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                             |                                 |                                                                             |                                                                                                              |                 |                                   |                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------|-------------------------------------------|
| <p>Follow the steps below <u>in the correct order</u> to show the results of <u>relevant</u> co-location studies</p> <p>Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods</p> <p>Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet</p> <p>This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.</p> |  |                                                                                                                                                             |  |                                                                                             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                             |                                 |                                                                             | <p>This spreadsheet will be updated at the end of June 2026</p> <p><a href="#">LAQM Helpdesk Website</a></p> |                 |                                   |                                           |
| The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                             |  |                                                                                             |  | Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.                                                                                                                                                                                                                                                                                                                                                                                                   |                                             |                                 |                                                                             |                                                                                                              |                 |                                   |                                           |
| <b>Step 1:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | <b>Step 2:</b>                                                                                                                                              |  | <b>Step 3:</b>                                                                              |  | <b>Step 4:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                             |                                 |                                                                             |                                                                                                              |                 |                                   |                                           |
| <p>Select the Laboratory that Analyses Your Tubes from the Drop-Down List</p> <p>If a laboratory is not shown, we have no data for this laboratory.</p>                                                                                                                                                                                                                                                                                                                                                                              |  | <p>Select a Preparation Method from the Drop-Down List</p> <p>If a preparation method is not shown, we have no data for this method at this laboratory.</p> |  | <p>Select a Year from the Drop-Down List</p> <p>If a year is not shown, we have no data</p> |  | <p>Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor<sup>3</sup> shown in blue at the foot of the final column.</p> <p>If you have your own co-location study then see footnote<sup>4</sup>. If uncertain what to do then contact the Local Air Quality Management Helpdesk at <a href="mailto:LAQMHelpdesk@bureauveritas.com">LAQMHelpdesk@bureauveritas.com</a> or 0800 0327953</p> |                                             |                                 |                                                                             |                                                                                                              |                 |                                   |                                           |
| <b>Analysed By<sup>1</sup></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | <b>Method</b>                                                                                                                                               |  | <b>Year<sup>5</sup></b>                                                                     |  | <b>Site Type</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Local Authority</b>                      | <b>Length of Study (months)</b> | <b>Diffusion Tube Mean Conc. (Dm) (<math>\mu\text{g}/\text{m}^3</math>)</b> | <b>Automatic Monitor Mean Conc. (Cm) (<math>\mu\text{g}/\text{m}^3</math>)</b>                               | <b>Bias (B)</b> | <b>Tube Precision<sup>6</sup></b> | <b>Bias Adjustment Factor (A) (Cm/Dm)</b> |
| Glasgow Scientific Services                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 20% TEA in water                                                                                                                                            |  | 2025                                                                                        |  | KS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Marylebone Road Intercomparison             | 12                              | 44                                                                          | 31                                                                                                           | 39.7%           | G                                 | 0.72                                      |
| Glasgow Scientific Services                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 20% TEA in water                                                                                                                                            |  | 2025                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Overall Factor<sup>3</sup> (1 study)</b> |                                 |                                                                             |                                                                                                              |                 | <b>Use</b>                        | <b>0.72</b>                               |

**Figure 11: RICARDO - AEA Air Pollution Report****North Ayrshire Irvine High St****01/01/2024 to 31/12/2024****These data have been fully ratified****Correction Factor for Gravimetric Equivalence applied**

|                                               | High | Moderate | Low | Hourly Max<br>( $\mu\text{g m}^{-3}$ ) | Daily Max<br>( $\mu\text{g m}^{-3}$ ) | Max 8 Hour Mean<br>( $\mu\text{g m}^{-3}$ ) | Max 24 Hour Mean<br>( $\mu\text{g m}^{-3}$ ) | Mean<br>( $\mu\text{g m}^{-3}$ ) | Data Capture (%) |
|-----------------------------------------------|------|----------|-----|----------------------------------------|---------------------------------------|---------------------------------------------|----------------------------------------------|----------------------------------|------------------|
| <b>NO</b> ( $\mu\text{g/m}^3$ )               | -    | -        | -   | 103.8                                  | 23.1                                  | -                                           | -                                            | 4.3                              | 95.9             |
| <b>NO<sub>2</sub></b> ( $\mu\text{g/m}^3$ )   | 0    | 0        | 352 | 86.7                                   | 38.0                                  | -                                           | -                                            | 10                               | 95.8             |
| <b>NO<sub>x</sub></b> ( $\mu\text{g/m}^3$ )   | -    | -        | -   | 245.9                                  | 72.3                                  | -                                           | -                                            | 16.5                             | 95.8             |
| <b>PM<sub>10</sub></b> ( $\mu\text{g/m}^3$ )  | 0    | 0        | 279 | 53.1                                   | -                                     | -                                           | 30.1                                         | 10.6                             | 76               |
| <b>PM<sub>2.5</sub></b> ( $\mu\text{g/m}^3$ ) | 0    | 0        | 279 | -                                      | -                                     | -                                           | 24.5                                         | 5.8                              | 76               |

Particulate matter concentrations are reported at ambient temperature and pressure.  
All mass units are at 20°C and 1013mb.

|                                                                                                                                          | Air Quality Objective                                               | Exceedances | Days |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------|------|
| <b>NO<sub>2</sub></b>                                                                                                                    | Hourly mean > 200 $\mu\text{g/m}^3$                                 | None        | 0    |
| <b>NO<sub>2</sub></b>                                                                                                                    | Period mean > annual mean objective 40 $\mu\text{g/m}^3$            | None        | 0    |
| <b>PM<sub>10</sub></b>                                                                                                                   | Daily mean > 50 $\mu\text{g/m}^3$                                   | None        | 0    |
| <b>PM<sub>10</sub></b>                                                                                                                   | Period mean > annual mean objective 18 $\mu\text{g/m}^3$ (Scotland) | None        | 0    |
| <b>PM<sub>2.5</sub></b>                                                                                                                  | Period mean > annual mean objective 10 $\mu\text{g/m}^3$ (Scotland) | None        | 0    |
| <b>PM<sub>2.5</sub></b>                                                                                                                  | Period mean > annual mean objective 20 $\mu\text{g/m}^3$ (EU)       | None        | 0    |
| Note: When comparing site measurements against the air quality objectives data capture should meet or exceed 90% across a calendar year. |                                                                     |             |      |

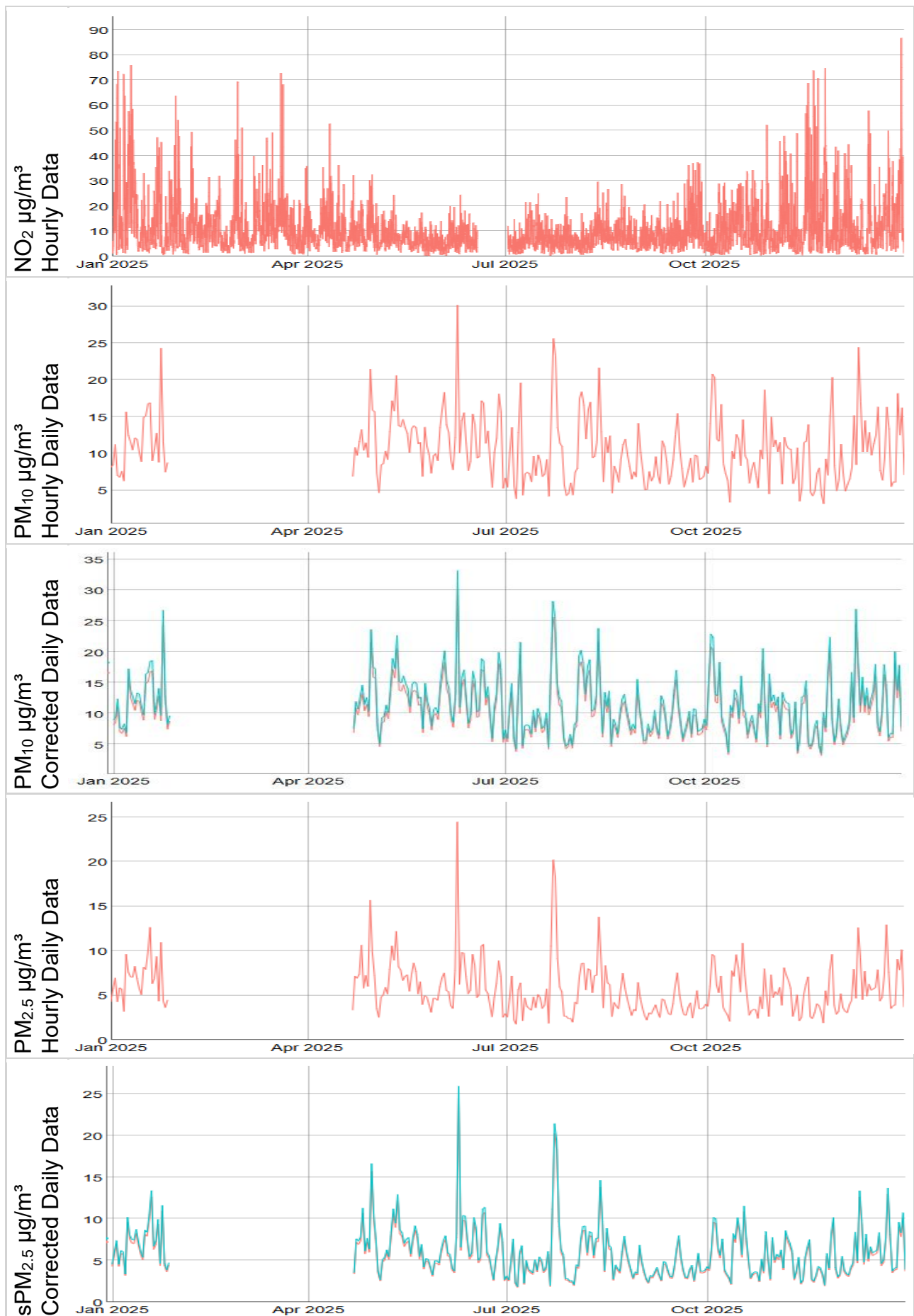


Figure 12: Ricardo - AEA Certificates of Calibration



Page 1 of 3

Approved Signatories:

- |                                   |                                            |
|-----------------------------------|--------------------------------------------|
| <input type="checkbox"/> S. Eaton | <input type="checkbox"/> B Stacey          |
| <input type="checkbox"/> S Copsey | <input type="checkbox"/> S Stratton        |
| <input type="checkbox"/> N Rand   | <input type="checkbox"/> S Telfer          |
| <input type="checkbox"/> B Davies | <input checked="" type="checkbox"/> S Gray |
| <input type="checkbox"/> D Lane   | <input type="checkbox"/> F. Elmer          |
| <input type="checkbox"/> A Nash   |                                            |

Signed:

Date of Issue:

04 September 2025

Certificate Number:

7609

Customer Name and Address:

Scottish Government  
 Water, Air, Soils and Flooding Division  
 Environmental Quality Directorate  
 Scottish Government  
 Victoria Quay  
 Edinburgh  
 EH6 6QQ

Description:

Calibration factors for the air monitoring station(s) at  
 North Ayrshire Council

Ricardo Energy &amp; Environment ID:

ED19050 /7609

The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor  $k=2$  providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

**Ricardo Energy & Environment**  
 18 Blythswood Square (2<sup>nd</sup> Floor),  
 Glasgow,  
 G2 4BG  
 Tel: 01235 753205

**Registered office**  
 Shoreham Technical Centre  
 Shoreham-by-Sea  
 West Sussex  
 BN43 5FG

**Registered in England No.**  
 06229264

**VAT Registration No.**  
 GB 212 9385 24

ee.ricardo.com



# CERTIFICATE OF CALIBRATION



Page 2 of 3

Date of issue: 04 September 2025

Certificate Number: 7609

Ricardo Energy &amp; Environment ID: ED19050 /7609

North Ayrshire Council

NOx analysers

| Station                           | Date of Audit | Species | Analyser Serial no | Zero Response <sup>1</sup> | Zero uncertainty nmol/mol | Calibration Factor <sup>2</sup> | Factor uncertainty % | Converter eff. (%) <sup>3</sup> | Converter uncertainty (%) |
|-----------------------------------|---------------|---------|--------------------|----------------------------|---------------------------|---------------------------------|----------------------|---------------------------------|---------------------------|
| North Ayrshire Irvine High Street | 04 June 2025  | NOx     | 19-2513            | 1.0                        | 2.9                       | 1.7200                          | 3.51                 | 99.5 (327 nmol/mol)             | 4.9                       |
|                                   |               | NO      |                    | 2.0                        | 2.9                       | 1.7390                          | 3.50                 | 99 (170 nmol/mol)               | 4.9                       |

Fidas analysers

| Station                           | Date of audit | Analyser Serial no | Zero (µg/m <sup>3</sup> ) | Caldust channel deviation | Total flow <sup>4</sup> | Uncertainty % | Deviation % |
|-----------------------------------|---------------|--------------------|---------------------------|---------------------------|-------------------------|---------------|-------------|
| North Ayrshire Irvine High Street | 04 June 2025  | 6251               | 0                         | 1.10                      | 4.75                    | 2.25          | -1.08       |





# CERTIFICATE OF CALIBRATION



Page 3 of 3

Date of issue: 04 September 2025

Certificate Number: 7609

Ricardo Energy &amp; Environment ID: ED19050 /7609

The gaseous ambient analysers listed above have been tested for zero response, calibration factor, linearity and converter efficiency (NO<sub>x</sub> analysers) by documented methods. The factors have been calculated using certified gas standards. The particulate analysers listed above have been tested for sample flow rates and k<sub>0</sub> (where appropriate) by documented methods. Note that the test results are valid on the day of test only, as analyser drift over time cannot be quantified. All results for gaseous species are reported in concentration units of nmol/mol or µmol/mol.

<sup>1</sup> The zero response is the zero reading on the data logging system of the analyser when audit zero gas was introduced to the analysers under test.

<sup>2</sup> The calibration factor is the multiplying factor required to scale the reading on the data logging system of the analyser into reported concentration units (nmol/mol for NO, NO<sub>x</sub>, SO<sub>2</sub>, O<sub>3</sub> and µmol/mol for CO). It should be used in conjunction with the zero response. A corrected concentration is calculated using the following equation:

Concentration = F(Output - Zero Response)

Where F = Calibration Factor provided on this certificate

Output = Reading on the data logging system of the analyser

Zero Response = Zero Response provided on this certificate

<sup>3</sup> Converter eff. is the measured efficiency of the NO<sub>2</sub> to NO converter within the oxides of nitrogen analyser under test.

<sup>4</sup> The measured main flow rate (where this is applicable) is the flow rate through the sensor unit of the TEOM particulate analyser under test. The measured aux flow rate (where this is applicable) is the flow rate through the bypass tubing of the TEOM particulate analyser under test. The measured total flow rate is the total flow rate through the particulate analyser under test. Units of flow are Lmin<sup>-1</sup>, reported at prevailing ambient conditions unless otherwise specified. Where flow rates are highlighted in bold, it indicates that measurements were not made at the analyser sample inlet. These measurements therefore may not accurately reflect analyser performance in normal operation.

<sup>5</sup> The calculated k<sub>0</sub> value (specifically for TEOM analysers) is the calculated k<sub>0</sub> spring constant based on tests undertaken with filters of known weight. The % deviation indicates the closeness of the calculated result to the manufacturer's specified value of k<sub>0</sub>.

The calibration results shaded are those that fall within our scope of accreditation, all other results on this certificate are not UKAS accredited, but have been included for completeness.

\*\*\*\*\*END OF CERTIFICATE\*\*\*\*\*

ee.ricardo.com



## ENGINEER'S REPORT

 Please consider the environment before printing this report

ET Ref No: CS 35801 Customer Order No:

|                |              |             |                 |
|----------------|--------------|-------------|-----------------|
| Engineer Name: | Colin Rennie | Visit Type: | Routine Service |
|----------------|--------------|-------------|-----------------|

|                                |                |
|--------------------------------|----------------|
| Enviro Client / Database Name: | North Ayrshire |
|--------------------------------|----------------|

|                                          |        |
|------------------------------------------|--------|
| Official AURN Site Name (if applicable): | Irvine |
|------------------------------------------|--------|

Site Visit Start Date: 25/07/2025 Time: 11:00 BST  
(Data Elimination)

Site Visit End Date: 25/07/2025 Time: 14:30 BST

Reported Fault / Task: Issues Found at Audit: Yes ☐ No ☐ NA ☒

Carry out routine service of Fidas, Nox & air con.

Engineer's Comments: Audit Issues Resolved: Yes ☐ No ☐ NA ☒

Fidas was in Calibration mode on arrival. All serviced, Tubing reworked on Nox sample and cal lines at request of auditors.. Both instruments are OK. Pat test carried out, all OK. AC cleaned and serviced, all OK.

Communications Tested: Yes ☒ No ☐ NA ☐

### Parts Used:

| Part Number | Description | Quantity |
|-------------|-------------|----------|
|-------------|-------------|----------|

[illegible]

Document No: FM-231 Rev Dec23

**Total Time:** 3.5hrs

To help us improve our service to you, please complete this short survey on how our Engineer did today

## Glossary of Terms

| Abbreviation      | Description                                                                                                                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AQAP              | Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the LA intends to achieve air quality limit values'                 |
| AQMA              | Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives |
| APR               | Annual Progress Report                                                                                                                                                                                |
| AURN              | Automatic Urban and Rural Network (UK air quality monitoring network)                                                                                                                                 |
| Defra             | Department for Environment, Food and Rural Affairs                                                                                                                                                    |
| DMRB              | Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England                                                                                                         |
| DT                | Diffusion Tube                                                                                                                                                                                        |
| FDMS              | Filter Dynamics Measurement System                                                                                                                                                                    |
| 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                                                                                                                                                                 |
| SO <sub>2</sub>   | Sulphur Dioxide                                                                                                                                                                                       |

## References

1. Environment Act 1995 Part IV.
2. Local Air Quality Management, Technical Guidance LAQM.TG (22), August 2022.
3. North Ayrshire Council Adopted Local Development Plan, November 2020.
4. North Ayrshire Council Development Plan Scheme, November 2024.
5. North Ayrshire Council Local Transport and Active Travel Strategy 2024-2028.
6. Sustainable North Ayrshire Strategy 2024 – 2027.