Moray Council

2025 Annual Progress Report

June 2025

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Annual Progress Report (APR)

2025 Air Quality Annual Progress Report (APR) for Moray Council.

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

Local Air Quality Management

June 2025

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Executive Summary: Air Quality in Our Area

The following Annual Progress Report (APR) was prepared and written by Bureau Veritas on behalf of Moray Council in accordance with Local Air Quality Management (LAQM) Technical Guidance (TG(22)), published by Defra on behalf of the devolved administrations.

Air Quality in Moray Council

There are no existing significant air quality issues identified within the Moray Council administrative area. The Council has examined the 2024 air quality monitoring results in its area and concludes that no new Detailed Assessments or Air Quality Management Areas (AQMAs) are required for any pollutant.

Atmospheric nitrogen dioxide (NO_2) is currently the only pollutant of concern within the Moray Council area and is monitored in urban areas via a network of passive diffusion tubes. The measured 2024 annual mean concentrations of NO_2 within the Moray Council area remain well below the Air Quality Standards (AQS) set by the Scottish Government. In summary, a maximum measured annual mean NO_2 concentration of 14.7 µg/m^3 was monitored at West Park Court, Elgin 1 (monitoring site DT1), well below the annual mean NO_2 Scottish Air Quality Standard of 40 µg/m^3. This was a decrease of approximately 2.0 µg/m^3 when compared to the 2023 monitoring results at the same site. Measured 2023 annual mean NO_2 concentrations show a decrease compared to the 2023 results at 18 out of the 19 monitoring locations.

All sources of emissions from industry and transport remain unchanged from those reported in the 2024 APR.

Actions to Improve Air Quality

Although there are currently no designated AQMAs within the Moray Council area and thus, no specific planned actions to implement air quality improvement measures, Moray Council is addressing air quality through local policies and plans and works to manage local air quality through a monitoring network within the Council area.

Moray council continue to actively utilise the 'Moray Council Active Travel Strategy', updated and adopted on 15th November 2022. The Moray Council Active Travel Strategy covers 2022-2027 and sets out how Moray Council will encourage more non-motorised travel within Moray through a series of programmes of direct measures and behaviour change programmes. The plan embeds the ethos that Active Travel has many benefits to both communities and individuals and has a number of positive outcomes for public health, social inclusion, reducing the environmental impact of transport and for supporting local economic activity. More information on the strategy can be found at:

http://www.moray.gov.uk/moray_standard/page_75724.html

The Elgin Transport Strategy was adopted in August 2017 and develops ways to help people become more active, walking and cycling more often, and promotes more use of public transport. The policy has developed for the Elgin area within Moray Council. The policy aims to achieve its transport goals over a 13-year period through improvements to the transport network, promotion of public transport and contribution to review of the Moray Local Development Plan.

The Zero Emission Fleet Replacement Strategy details the council's plans to decarbonise the remainder of the fleet in line with the Scottish Government's net zero targets. Progress on this measure has been slower than expected due to the slowing in the global EV market alongside limited funding within Moray Council.

During 2025, the pathfinder project has been initiated. This includes an awarded contract for a single contractor to install more EV charging points through Moray to encourage EV uptake. At the time of writing the works are yet to be completed, however the project is due to go live towards the end of 2025.

Local Priorities and Challenges

Moray Council has no specific priorities for the coming year for the improvement of air quality in its area but will continue monitoring at the existing diffusion tube sites in the area to identify any future changes in pollution concentrations.

How to Get Involved

Members of the public can contribute to improving local air quality by taking alternative modes of transport where possible, becoming part of a cycle to work scheme, walking short distances instead of driving and when driving is unavoidable, taking part in car sharing schemes. Detailed information on local transport and links to major travel means can be found at:
www.moray.gov.uk/moray_standard/page_1677.html

If you have any concerns or require further information on air quality, please contact Environmental Health or visit the Moray Council website at www.moray.gov.uk and search for “air quality”.

The previous LAQM reporting, including the 2023 APR, is available on the Moray Council website at: www.moray.gov.uk/moray_standard/page_1790.html.

Table of Contents

List of Tables

List of Figures

1 Local Air Quality Management

This report provides an overview of air quality in Moray Council during 2024. 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 Moray 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_2)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
Nitrogen dioxide (NO_2)	40 µg/m^3	Annual mean	31.12.2005
Particulate Matter (PM_{10})	50 µg/m^3, not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
Particulate Matter (PM_{10})	18 µg/m^3	Annual mean	31.12.2010
Particulate Matter ($PM_{2.5}$)	10 µg/m^3	Annual mean	31.12.2021
Sulphur dioxide (SO_2)	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
Sulphur dioxide (SO_2)	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
Sulphur dioxide (SO_2)	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005
Benzene	3.25 µg/m^3	Running annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m^3	Running annual mean	31.12.2003
Carbon Monoxide	10.0 mg/m^3	Running 8-Hour mean	31.12.2003

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

Moray Council currently does not have any AQMAs.

2.2 Implementation of Air Quality Action Plan(s) and/or measures to address air quality

In order to ensure that local authorities implement the measures within an action plan by the timescales stated within that plan, the Scottish Government expects authorities to submit updates on progress through the APR process. Moray Council has continued to progress a number of measures during the current reporting year of 2024 in pursuit of improving local air quality and meeting the air quality objectives within the shortest possible time. Details of all measures completed, in progress or planned are set out in

Table 2.1.

Moray Council continues to adopt the Active Travel Strategy (2022-2027), the main objectives are outlined below:

1. Further develop the Active Travel network.

2. Develop Active Travel Masterplans for key settlements in Moray.

3. Embed Active Travel opportunities within new developments.

4. Encourage and facilitate walking and cycling as leisure and tourist activities to provide benefits to health and local economy.

5. Provide new/improved cycle parking/ facilities at key destinations and transport interchanges in Moray.

6. Work with local employers (including Moray Council) and their staff to encourage more walking and cycling to and from work.

7. Work with students and school pupils, staff and parents to encourage more walking, cycling and scooting to and from school/ further education.

8. Continue to seek funding from existing sources and Identify new funding opportunities as they emerge to secure funding for Active Travel interventions, as appropriate.

The council's fleet is used by employees to conduct council business and deliver services for the people of Moray. It comprises over 500 cars, vans, buses, trucks, specialist vehicles and vessels. The Zero Emission Fleet Replacement Strategy details the council's plans to decarbonise the remainder of the fleet in line with the Scottish Government's net zero targets. Progress on this measure has been slower than expected due to the slowing in the global EV market alongside limited funding within Moray Council.

The Pathfinder Project has three key objectives which align with Moray Council's approach to the provision of publicly available charging infrastructure:

- Community Wealth Building, Community Benefits and Economic Social Governance including training and the development of local supply chains for repairs and servicing;
- Net Zero Journey, ensuring operations and expansion support a Just Transition; and
- Commercial development, retaining an interest in the existing and future sites, but with a fair share of any profit coming back to the Councils, including a share of any new revenue streams other than charging in the future.

While works on this measure are yet to start, it is expected that works will go live towards the end of 2025.

Table 2.1 – 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	Active Travel Strategy	Policy guidance and development control	N/A	Moray Council	In Progress	Partially Funded	N/A	Further development to the Active Travel network.	None
2	Council Fleet Decarbonisation	Vehicle fleet efficiency	N/A	Moray Council	In Progress	Partially Funded	N/A	Electric pool cars are now available for council staff to use for work visits.	Difficulties in the global vehicle market has led to a slowdown in the availability of electric vehicles for the council's planned fleet replacement programme.
3	Pathfinder Project	Promoting low emission transport	N/A	Moray Council	In Progress	Partially Funded	N/A	Contract awarded to install EV charging points through Moray.	None

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

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

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

3.1.2 Non-Automatic Monitoring Sites

Moray Council undertook non-automatic (passive) monitoring of NO_2 at 19 sites during 2024. Table A.1 in Appendix A shows the details of the sites.

Maps showing the location of the monitoring sites are provided in Appendix D.

Further details on Quality Assurance/Quality Control (QA/QC) and bias adjustment for the diffusion tubes are included in Appendix C.

3.1.3 Other Monitoring Activities

No additional monitoring activities were undertaken by Moray Council in 2024.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for annualisation and bias. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO_2)

Table A.4 in Appendix A compares the adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40 µg/m^3 at non-automatic monitoring sites. In summary, a maximum measured annual mean NO_2

concentration of 14.7 µg/m^3 was monitored at West Park Court, Elgin 1 (monitoring site DT1), well below the annual mean NO_2 Scottish Air Quality Standard of 40 µg/m^3. This was a decrease of approximately 2.0 µg/m^3 when compared to the 2023 monitoring results at the same site. Measured 2023 annual mean NO_2 concentrations show a decrease compared to the 2023 results at 18 out of the 19 monitoring locations.

For diffusion tubes, the full 2024 dataset of monthly mean values is provided in Appendix B.

No automatic monitoring has been undertaken within Moray Council's area of jurisdiction, and so it is not possible to directly compare the measured data to the 1-hour mean air quality objective. A proxy value of 60 µg/m^3 has been utilised to identify any potential exceedences of the 1-hour mean objective. Analysis of long-term monitoring data suggests that if a measured annual mean NO_2 concentration is less than 60 µg/m^3 then the 1-hour mean NO_2 ojective is likely to be met in accordance with LAQM.TG(22) (Ref-5). There are no monitored NO_2 annual average concentrations of 60 µg/m^3 or greater within Moray Council within 2024.

3.2.2 Particulate Matter (PM_{10})

Moray Council does not undertake any monitoring for PM_{10} and does not expect PM_{10} concentrations to exceed AQS(S) objectives.

3.2.3 Particulate Matter ($PM_{2.5}$)

Moray Council did not undertake $PM_{2.5}$ monitoring during 2024 and has no current future plans to undertake such. It is not anticipated that $PM_{2.5}$ concentrations within Moray Council exceed the relative air quality objective.

3.2.4 Sulphur Dioxide (SO_2)

Sulphur dioxide is not monitored within the Moray Council area. It is not expected that existing SO_2 emissions will cause SO_2 objectives to be exceeded.

3.2.5 Carbon Monoxide, Lead and 1,3-Butadiene

There is no monitoring of carbon monoxide, lead or 1,3-Butadiene within the Moray Council area. It is not expected that existing emissions of carbon monoxide, lead or 1,3-Butadiene will exceed the AQS(S) objectives.

4 New Local Developments

4.1 Road Traffic Sources

There have been no new planning applications for local developments of road traffic sources in 2024.

4.2 Other Transport Sources

There have been no planning applications for local developments of other transport sources in 2024.

4.3 Industrial Sources

There have been no planning applications for local developments of industrial sources in 2024.

4.4 Commercial and Domestic Sources

There have been no planning applications for local developments of commercial or domestic sources in 2024.

4.5 New Developments with Fugitive or Uncontrolled Sources

There have been no planning applications for local developments with fugitive or uncontrolled sources in 2024.

5 Planning Applications

24/00617/EIA - Land At Cairds Wood Moray

This application refers to the creation of a modest wind farm, which will form an extension to the operational Edintore Wind Farm. The Proposed Development site is located approximately 2km to the south of the settlement of Keith, Moray. Construction vehicle exhaust emissions will be limited to the construction and decommissioning phases of the development lifespan. Given the site location, adjacent to the main A96 arterial roadway, it is not expected that the modest increase in vehicle movements will have any impact on the current level of air quality in the local area. Given the limited potential impacts on the local air quality associated with dust and vehicle emissions during the construction and decommissioning phases of the development, it is anticipated that potential effects on Air Quality will be **not significant**.

25/00203/EIA - Land South Of Marypark Ballindalloch Moray

This application refers to the construction of a 70 MWe electrolytic hydrogen production facility and associated ancillary infrastructure including water supply and wastewater pipeline. An ES was generated to determine the potential for significant air quality effects arising from the Proposed Development as required by the Town and Country Planning (Environmental Impact Assessment) (EIA) (Scotland) Regulations 2017. According to the significance criteria adopted for the assessment, there are **no likely significant effects** for air quality at receptors due to emissions for the normal operation scenario.

6 Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

The results of the NO_2 monitoring across the Moray Council area during 2024 confirm that there are no exceedances of the annual average NO_2 objectives. A maximum measured annual mean NO_2 concentration of 14.7 µg/m^3 was monitored at West Park Court, Elgin 1 (monitoring site DT1), well below the annual mean NO_2 Scottish Air Quality Standard of 40 µg/m^3. During 2024, annual mean NO_2 concentrations show a decrease compared to the 2023 results at 18 out of the 19 monitoring locations. The average difference in NO_2 annual mean concentration across all sites from 2023 to 2024 is a decrease of 1.0 µg/m³. The only increase in NO_2 annual mean concentration from 2023 to 2024 occurred at Elgin 4, with an increase of 2.2 µg/m³.

6.2 Conclusions relating to New Local Developments

Recent developments in Moray include the extension of the Cairds Wood wind farm, and the construction of a 70 MWe electrolytic hydrogen production facility south of Marypark, Ballindalloch. Both projects have undergone environmental impact assessments to evaluate potential effects on air quality. The wind farm extension is expected to have minimal impact on local air quality due to managed vehicle exhaust emissions during construction and decommissioning phases. Similarly, the hydrogen production facility is anticipated to have no significant effects on air quality during normal operation, as per the Town and Country Planning (Environmental Impact Assessment) (EIA) (Scotland) Regulations 2017. Neither development is expected to introduce new exceedances of relevant objectives, exacerbate existing ones, or introduce new receptors or public exposure to significant air quality issues.

6.3 Proposed Actions

The monitoring data for 2024 does not identify any exceedances of the NO_2 objectives within the Moray administrative area. There are no other exceedances for other pollutants expected within the Moray administrative area within 2024.

The NO_2 concentration data from 2020 to 2024 shows variability and minor fluctuations, influenced by various local factors such as traffic, weather, and other activities. While the data does not indicate a consistent pattern of stabilisation, it does provide insights into the dynamic nature of air quality within the Moray administrative area. For instance, NO_2 levels increased from 2020 to 2021, decreased from 2021 to 2022, increased slightly from 2022 to 2023, and then decreased again from 2023 to 2024. These fluctuations highlight the complexity of air quality management and the need for ongoing monitoring to understand the underlying factors influencing NO_2 levels.

Appendix A: Monitoring Results

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

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
Elgin 1	Lamp Post West Park Court	Kerbside	321107	862668	NO_2	NO	<5	1.0	No	3.0
Elgin 2	Junction East & Maisondieu Rd	Kerbside	322348	862745	NO_2	NO	<2	1.0	No	3.0
Elgin 3	Thornhill Road	Roadside	322328	861206	NO_2	NO	<22	6.0	No	3.0
Elgin 4	Barlink Road	Roadside	323557	826356	NO_2	NO	<18	3.0	No	3.0
Elgin 5	Main Street New Elgin	Kerbside	322233	861869	NO_2	NO	<5	1.0	No	3.0
Elgin 6	Queen Street Roundabout	Kerbside	322029	862832	NO_2	NO	<5	1.0	No	3.0
Elgin 7	Hay Street	Roadside	321615	862307	NO_2	NO	<5	1.0	No	3.0

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
Elgin 8	Newmill Road	Roadside	322492	863309	NO_2	NO	<5	2.0	No	3.0
Elgin 9	37 Sandy Road	Kerbside	321775	861115	NO_2	NO	5.0	2.0	No	3.0
Elgin 10	47 Wittet Drive	Kerbside	320641	862291	NO_2	NO	5.0	1.0	No	3.0
Elgin 11	Lamp Post Bishopmill	Roadside	321447	863764	NO_2	NO	<21	5.0	No	3.0
Fochabers 1	50A High Street	Kerbside	334634	858726	NO_2	NO	<2	2.0	No	3.0
Buckie 1	Cluny Square	Roadside	342562	865535	NO_2	NO	0.0	5.0	No	3.0
Forres	Tolbooth, High Street	Urban Background	303726	858931	NO_2	NO	<2	n/a	No	3.0
Keith 1	30 Regent St Fife Keith	Roadside	342592	850894	NO_2	NO	0.0	6.0	No	3.0

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
Keith 2	87 Moss Street	Kerbside	343329	850415	NO_2	NO	<5	2.0	No	3.0
Lossie 1	7 James Street	Kerbside	323515	870931	NO_2	NO	<5	2.0	No	3.0
Aberlour 1	108 High St	Roadside	326571	842899	NO_2	NO	<3	4.0	No	3.0
Rothes 1	Police Station	Kerbside	327740	849239	NO_2	NO	<5	2.0	No	3.0

Notes:

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

(2) N/A if not applicable.

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

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
Elgin 1	321107	862668	Kerbside	100.0	100.0	15.4	17.3	16.0	16.7	14.7
Elgin 2	322348	862745	Kerbside	84.2	84.2	14.9	16.2	15.3	15.9	13.3
Elgin 3	322328	861206	Roadside	100.0	100.0	6.0	6.4	5.6	6.1	5.2
Elgin 4	323557	826356	Roadside	100.0	100.0	7.1	8.1	7.4	8.1	10.3
Elgin 5	322233	861869	Kerbside	100.0	100.0	10.4	10.9	10.8	10.8	9.7
Elgin 6	322029	862832	Kerbside	100.0	100.0	9.8	12.4	10.0	10.7	9.8
Elgin 7	321615	862307	Roadside	100.0	100.0	7.0	8.8	7.7	8.5	6.8
Elgin 8	322492	863309	Roadside	100.0	100.0	9.4	9.8	9.2	8.9	8.6
Elgin 9	321775	861115	Kerbside	100.0	100.0	5.2	7.6	4.9	4.8	4.4
Elgin 10	320641	862291	Kerbside	100.0	100.0	9.5	10.7	8.6	11.3	9.6

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
Elgin 11	321447	863764	Roadside	90.7	90.7	13.7	13.7	13.5	13.7	11.9
Fochabers 1	334634	858726	Kerbside	100.0	100.0	6.1	6.7	6.3	6.9	5.8
Buckie 1	342562	865535	Roadside	100.0	100.0	7.4	8.0	7.1	7.6	7.4
Forres	303726	858931	Urban Background	100.0	100.0	7.4	8.7	6.5	7.4	6.5
Keith 1	342592	850894	Roadside	100.0	100.0	12.7	14.6	12.4	13.6	11.4
Keith 2	343329	850415	Kerbside	100.0	100.0	12.4	13.5	13.0	13.4	11.8
Lossie 1	323515	870931	Kerbside	90.7	90.7	4.5	4.4	4.0	4.0	3.9
Aberlour 1	326571	842899	Roadside	100.0	100.0	8.1	9.1	9.2	9.3	8.7
Rothes 1	327740	849239	Kerbside	92.1	92.1	9.1	10.5	9.3	8.7	7.6

☒ **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_2 annual mean objective of 40 µg/m^3 are shown in bold.

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

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

Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO_2 2024 Monthly Diffusion Tube Results (µg/m^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 (0.76)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Elgin 1	321107	862668	25.0	25.0	18.0	20.0	15.0	14.0	13.0	15.0	18.0	23.0	23.0	23.0	19.3	14.7		
Elgin 2	322348	862745	21.0	21.0	19.0	22.0	21.0	15.0	11.0	8.0	18.0	19.0			17.5	13.3		
Elgin 3	322328	861206	7.0	6.0	7.0	7.0	7.0	6.0	5.0	6.0	7.0	7.0	7.0	10.0	6.8	5.2		
Elgin 4	323557	826356	11.0	10.0	9.0	9.0	8.0	7.0	5.0	7.0	61.0	11.0	11.0	13.0	13.5	10.3		
Elgin 5	322233	861869	15.0	19.0	12.0	12.0	11.0	9.0	5.0	9.0	13.0	17.0	14.0	17.0	12.8	9.7		
Elgin 6	322029	862832	15.0	16.0	13.0	11.0	10.0	7.0	7.0	16.0	13.0	16.0	13.0	17.0	12.8	9.8		
Elgin 7	321615	862307	11.0	12.0	10.0	10.0	8.0	6.0	5.0	6.0	10.0	11.0	9.0	10.0	9.0	6.8		
Elgin 8	322492	863309	15.0	14.0	9.0	9.0	7.0	7.0	8.0	9.0	11.0	16.0	14.0	17.0	11.3	8.6		
Elgin 9	321775	861115	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	7.0	5.0	8.0	5.8	4.4		
Elgin 10	320641	862291	15.0	15.0	11.0	11.0	10.0	8.0	8.0	9.0	12.0	15.0	15.0	22.0	12.6	9.6		

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 (0.76)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Elgin 11	321447	863764	19.0	20.0	14.0	17.0	15.0	11.0	12.0	10.0	16.0	0.0	17.0	21.0	15.6	11.9		
Fochabers 1	334634	858726	7.0	9.0	8.0	5.0	16.0	6.0	5.0	5.0	8.0	8.0	7.0	7.0	7.6	5.8		
Buckie 1	342562	865535	11.0	11.0	9.0	11.0	10.0	7.0	6.0	7.0	10.0	11.0	12.0	12.0	9.8	7.4		
Forres	303726	858931	10.0	13.0	8.0	8.0	6.0	5.0	5.0	6.0	9.0	10.0	10.0	12.0	8.5	6.5		
Keith 1	342592	850894	15.0	18.0	15.0	17.0	13.0	10.0	11.0	11.0	18.0	18.0	16.0	18.0	15.0	11.4		
Keith 2	343329	850415	15.0	18.0	14.0	17.0	14.0	11.0	12.0	11.0	19.0	18.0	19.0	18.0	15.5	11.8		
Lossie 1	323515	870931	6.0	5.0	5.0	5.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0	6.0	5.2	3.9		
Aberlour 1	326571	842899	14.0	13.0	11.0	10.0	10.0	7.0	7.0	9.0	12.0	13.0	17.0	14.0	11.4	8.7		
Rothes 1	327740	849239	Lost	11.0	11.0	10.0	10.0	7.0	7.0	9.0	11.0	12.0	11.0	11.0	10.0	7.6		

☒ **All erroneous data has been removed from the NO_2 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.**

☒ **Moray Council confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.**

Notes:

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

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

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within Moray Council During 2024

Moray Council has not identified any new sources relating to air quality within the reporting year of 2024.

Additional Air Quality Works Undertaken by Moray Council During 2024

Moray Council has not completed any additional works within the reporting year of 2024.

QA/QC of Diffusion Tube Monitoring

The NO_2 diffusion tubes used by Moray Council in 2024 were prepared and analysed by the Aberdeen Scientific Services Laboratory (ASSL), 20% TEA in water method. The laboratory is United Kingdom Accreditation Service (UKAS) accredited and has good performance in both the LGC Standards Proficiency Testing Scheme (AIR NO_2 PT) and National Physical Laboratory (NPL) QA schemes. The deployment of diffusion tubes has been completed in adherence with the Diffusion Tube Monitoring Calendar.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Moray 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

Moray Council have applied a national bias adjustment factor of 0.76 to the 2024 monitoring data. A summary of bias adjustment factors used by Moray Council over the past five years is presented in Table C.1.

The national factor was taken from the latest version of the national spreadsheet, released in April 2025. The factor is applicable to a total of six studies. The national adjustment factor was chosen as it is not possible to calculate a local adjustment factor due to the absence of co-located monitoring locations.

Table C.1 – Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	04/25	0.76
2023	National	03/24	0.73
2022	National	03/23	0.76
2021	National	09/22	0.77
2020	National	09/22	0.78

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 04/25

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

This spreadsheet will be updated at the end of June 2025
LAQM Helpdesk Website

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

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

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

Analysed By[1]	Method (To update your selection, choose (All) from the pop-up list)	Year[5] (To update your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[6]	Bias Adjustment Factor (A) (Cm/Dm)
Aberdeen Scientific Services	20% TEA in water	2024	UB	Aberdeen City	13	19	14	37.3%	G	**0.73**
Aberdeen Scientific Services	20% TEA in water	2024	R	Aberdeen City	13	17	14	20.7%	G	**0.83**
Aberdeen Scientific Services	20% TEA in water	2024	R	Aberdeen City	13	32	22	43.8%	G	**0.70**
Aberdeen Scientific Services	20% TEA in water	2024	R	Aberdeen City	13	31	23	32.6%	G	**0.75**
Aberdeen Scientific Services	20% TEA in water	2024	R	Aberdeen City	13	32	25	30.7%	G	**0.77**
Aberdeen Scientific Services	20% TEA in water	2024	KS	Marylebone Road Intercomparison	11	46	36	28.2%	G	**0.78**
Aberdeen Scientific Services	20% TEA in water	2024		**Overall Factor[3] (6 studies)**				Use		**0.76**

NO_2 Fall-off with Distance from the Road

No diffusion tube NO_2 monitoring locations within Moray Council required distance correction during 2024.

Appendix D: Monitoring Locations Maps

Figure 1 Diffusion Tube Monitoring Locations (1)

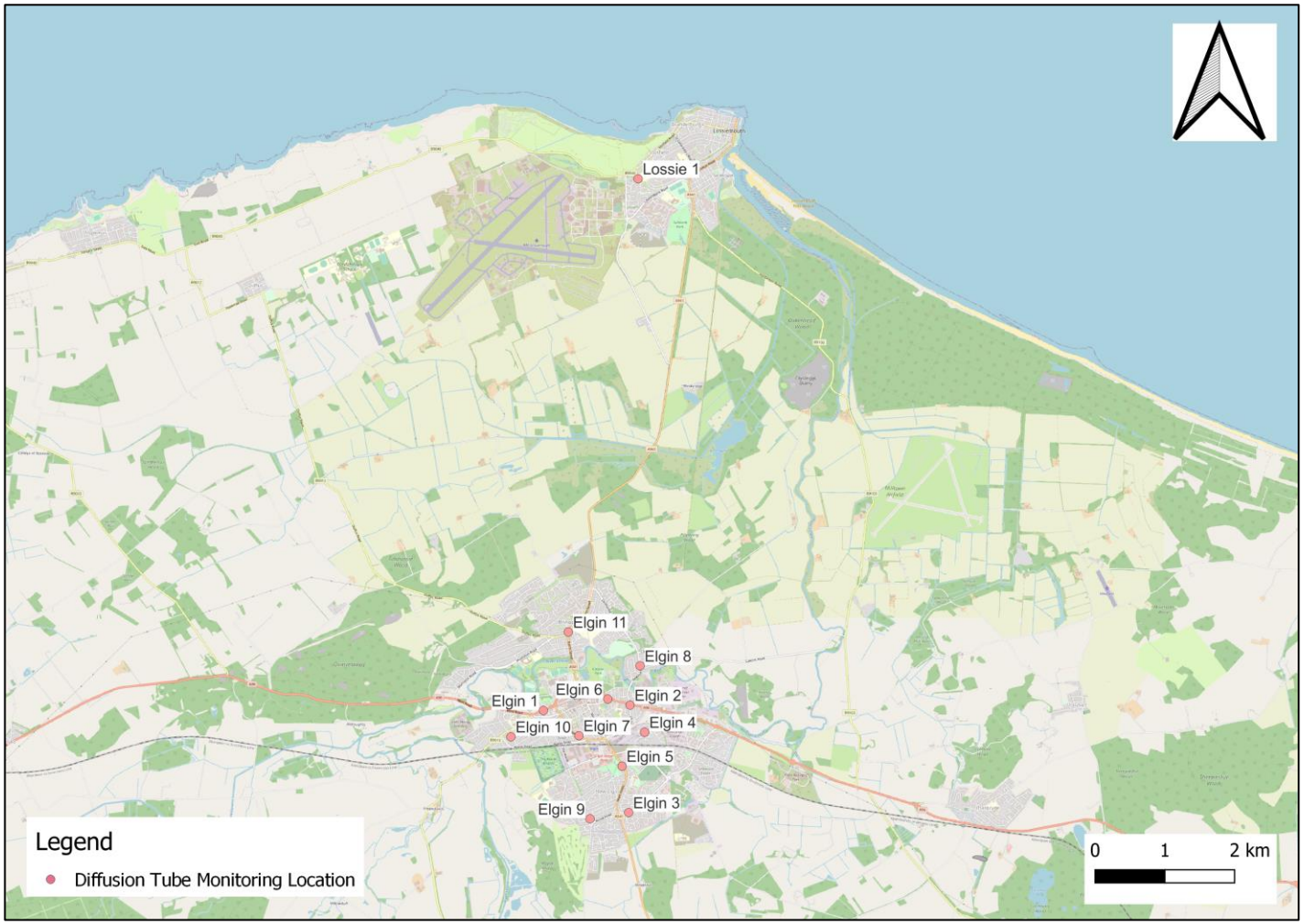


Figure 2 Diffusion Tube Monitoring Locations (2)

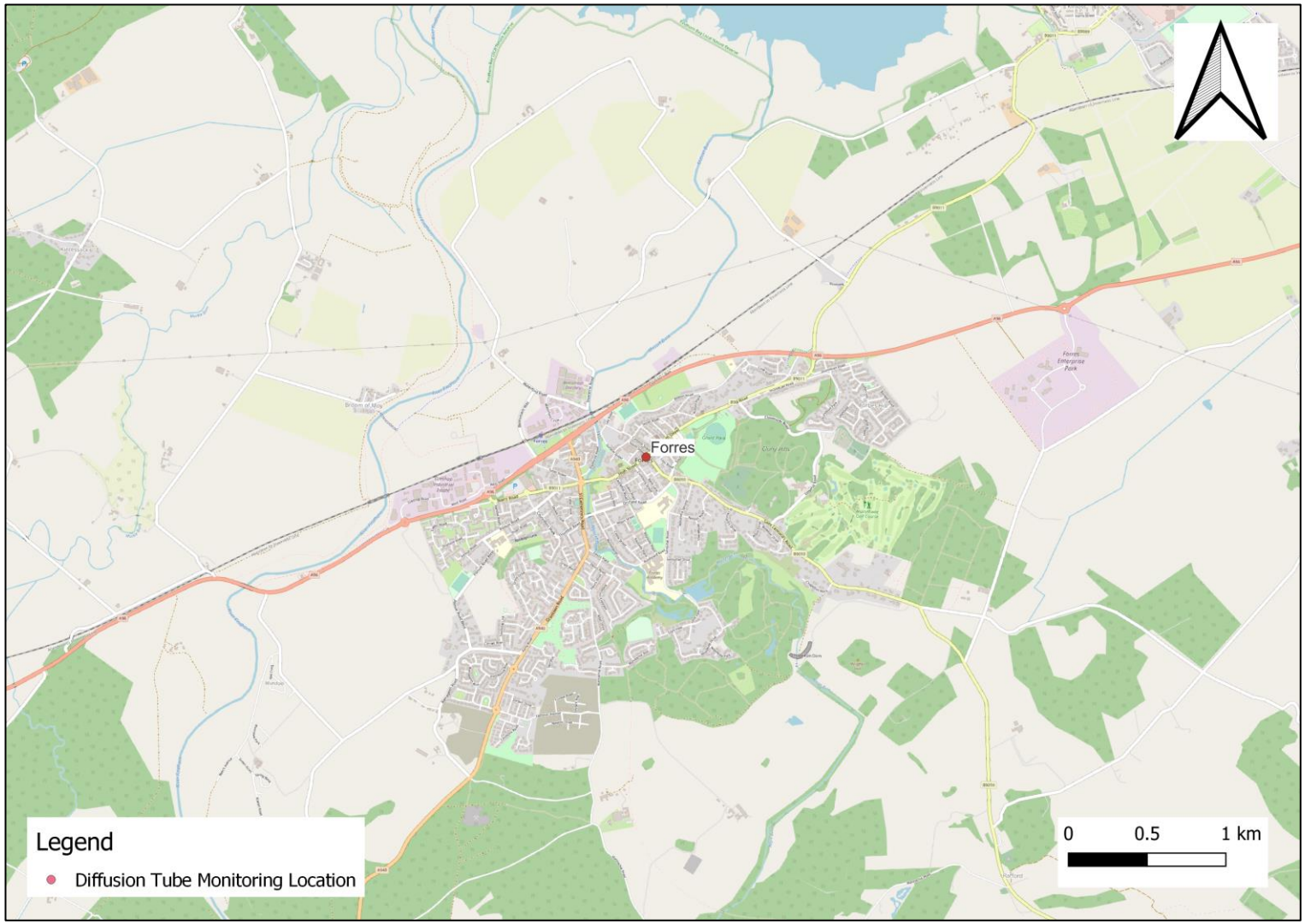
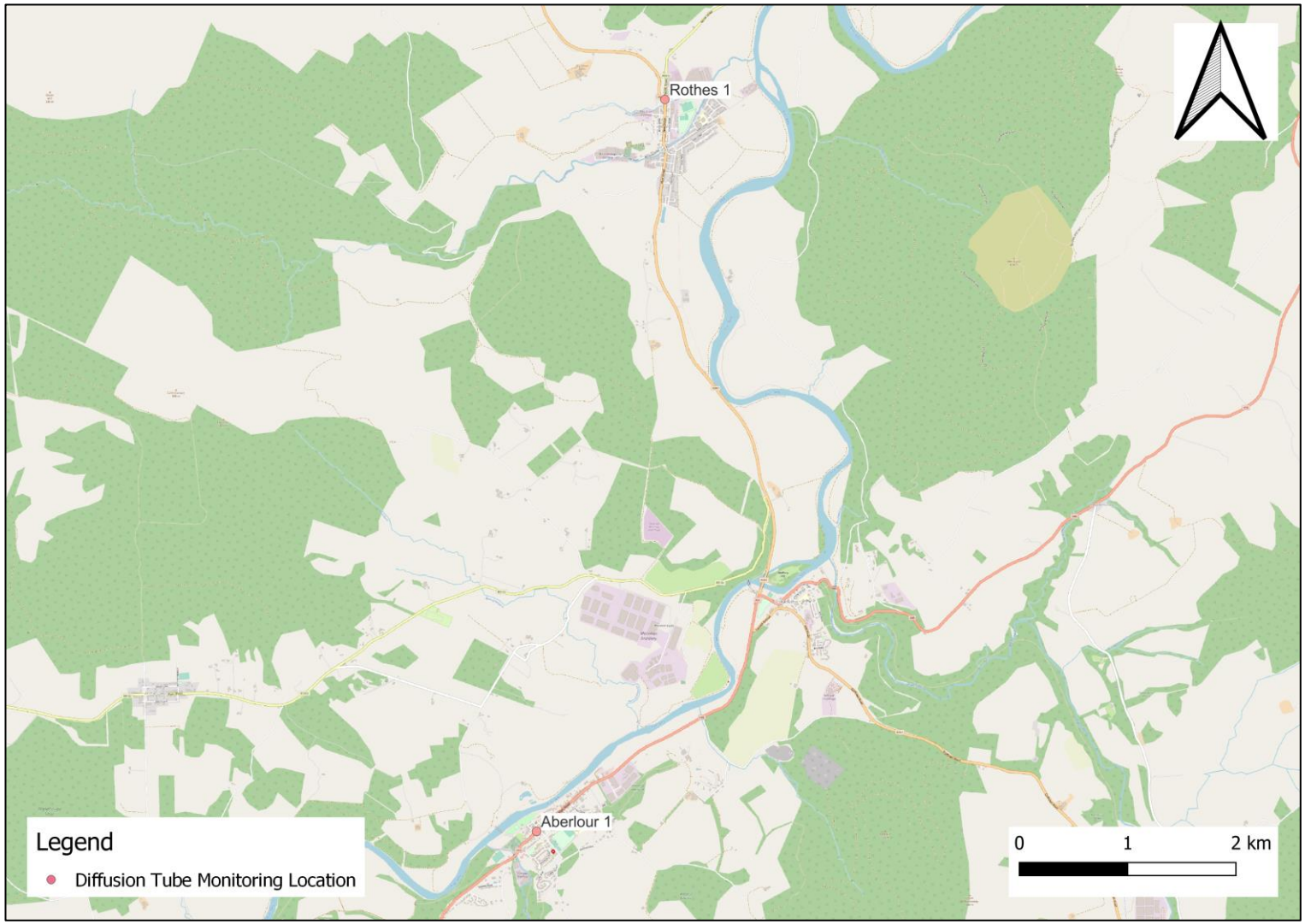


Figure 3 Diffusion Tube Monitoring Locations (3)

Figure 4 Diffusion Tube Monitoring Locations (4)



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_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

1. Moray Council (2020) Moray Local Development Plan. Available at: http://www.moray.gov.uk/moray_standard/page_133431.html
2. Moray Council (2022) Active Travel Strategy 2022 -2027. Available at: http://www.moray.gov.uk/moray_standard/page_139797.html
3. Moray Council (2011) Second Moray Local Transport Strategy. Available at: http://www.moray.gov.uk/moray_standard/page_75724.html
4. Defra, August 2022, Local Air Quality Management Technical Guidance 2022 (TG.22). Available at: https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf