



Derry City and Strabane District Council

2024 Updating Screening Assessment

In fulfilment of Environment (Northern Ireland) Order 2002

Local Air Quality Management

August 2026

Derry City and Strabane District Council

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Executive Summary

This report fulfils the requirements of the Local Air Quality Management process as set out in the Environment (Northern Ireland) Order 2002, the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents. Results from monitoring by the Council are presented and sources of air pollution are identified.

By undertaking this Updating and Screening Assessment, Derry City and Strabane District Council have undertaken a review of potential sources of air pollution across the district in order to identify new sources, sources with increased emissions and areas to exposed to pollution sources where public exposure did not previously exist. This Update and Screening Assessment has been prepared in accordance with the Northern Ireland Local Air Quality Management Policy Guidance Document LAQM.PGNI (22).

This report confirms that air quality within Derry City and Strabane District Council area continues to meet the relevant air quality objectives at locations of relevant exposure, with the exception of locations within existing Air Quality Management Areas (AQMAs). There were no exceedances of any objectives outside the existing AQMA boundaries.

In the 2019 Progress report, Council recommended that the Spencer Road AQMA should be revoked due to reduced pollutant concentrations, well below the limit value, over the previous number of years. DAERA subsequently advised that more recent monitoring results be compiled for this AQMA to determine if pollutant concentrations continued to decline: this has been shown to be the case and it is now hoped that this AQMA can be revoked. The remaining AQMAs are considered appropriate and should remain unchanged. Although the Buncrana Road AQMA has not had exceedances of the Nitrogen Dioxide (NO₂) annual mean limit value of 40 ug/m³ for the last 2 years, Council will observe trends at this location with the possibility of revocation of the AQMA should NO₂ levels remain lower. There is no requirement to proceed to a Detailed Assessment for any pollutant.

The report has not identified any significant changes in emissions sources within Derry City and Strabane District Council area. There have been no new relevant industrial installations and no new significant commercial, domestic or fugitive sources of emissions.

An update has also been provided on the measures contained in Council's Air Quality Action Plan. It is proposed to amend the Action Plan to take account of additional measures that Council has undertaken and to also account for the recommendations to be contained in the imminent Clean Air Strategy for Northern Ireland by DAERA.

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1 Introduction

1.1 Description of Local Authority Area

Derry City and Strabane District Council is located in the North West of Northern Ireland. Derry City is the second-largest city in Northern Ireland, situated on the River Foyle, and includes Foyle Port and the City of Derry Airport within its boundaries. Road transport emissions have previously been found to be the dominant source of air pollution in the Derry City area. The remainder of the district is largely rural in character, the largest population centre outside of Derry City being Strabane Town.

1.2 Purpose of Report

This report fulfils the requirements of the Local Air Quality Management process as set out in the Environment (Northern Ireland) Order 2002, the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 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 exceedances are considered likely, the local authority must then 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.

The aim of this Updating and Screening Assessment is to identify any matters that have changed which may lead to risk of an air quality objective being exceeded. A checklist approach and screening tools are used to identify significant new sources or changes and whether there is a need for a Detailed Assessment. The Updated Screening Assessment report should provide an update of any outstanding information requested previously in Review and Assessment reports.

If an Updating and Screening Assessment has not been submitted in accordance with the dates set in the DEFRA Local Air Quality Management Technical Guidance (currently LAQM TG22), DAERA will be unable to pay staff costs offered under the conditions of the LAQM Grant.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM in Northern Ireland are set out in the Air Quality Regulations (Northern Ireland) 2003, Statutory Rules of Northern Ireland 2003, no. 342, and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre $\mu\text{g}/\text{m}^3$ (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedances in each year that are permitted (where applicable).

Table 1.1 Air Quality Objectives included in Regulations for the purpose of LAQM in Northern Ireland

Pollutant	Air Quality Objective Concentration	Air Quality Objective Measured as	Date to be achieved by
Benzene	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	3.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
	0.25 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2005
Particles (PM₁₀) (gravimetric)	50 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

1.4 Summary of Previous Review and Assessments

As part of the review and assessment process, Derry City and Strabane District Council has prepared a number of air quality reports. A summary is provided in Table 1.2. In 2005 an AQMA was declared at the Creggan Road / Infirmary Road junction in Derry City, in 2011 two additional AQMAs were declared at Dale's Corner and at the Buncrana Road / Racecourse Road junction. In 2012/2013 two further AQMAs were declared at Spencer Road and Strand Road, all for exceedances of the annual mean NO₂ objective.

In October 2018 the Strand Road AQMA was revoked and the Spencer Road AQMA was reduced in size.

The remaining AQMAs are shown in Figures 1.1 to 1.4

Three AQMAs were declared in Strabane, Newtownstewart and Castlederg in 2004 for exceedances of the annual and 24-hour mean PM₁₀ objectives due to domestic heating. These 3 AQMA's were revoked in October 2018. An Action Plan was developed in order to identify measures to reduce ambient concentrations of particles and to attempt to comply with the objectives for PM₁₀

The Council has also completed updating and screening assessments that did not highlight any other areas of concern that required a detailed assessment to be undertaken.

Table 1.2 summarises the Review and Assessment work carried out by the former Derry City Council up to and including 2014. After the new DCSDC was formed in April 2015, a single report was produced – “the 2015 Updating and Screening Assessment, 2016 Progress Report and 2017 Progress Report” and showed all the required LAQM report data including updated monitoring. The 2018 Updating & Screening Assessment was then followed by the 2019 Progress Report. The current report amalgamates the 2020 Progress Report, 2021 Updating and Screening Assessment and 2022 Progress Report into one report.

Table 1.2 Summary of Previous Review and Assessments by Derry City and Strabane District Council

Report	Summary
2018 Updating & Screening Assessment	There were no exceedances of any objectives outside the existing AQMA boundaries, or within the Strand Road AQMA. No significant changes in emission sources or no new developments within the Derry and Strabane District Council area were identified that would significantly impact on air quality at relevant locations. In 2018, the Council revoked the Strabane, Newtownstewart and Castlederg AQMA's for particulates (PM₁₀). The former SDC Action Plan measures were realised and pollution levels reduced to well below health limit values. The Smoke Control Areas still remain. The Strand Road AQMA for nitrogen dioxide was revoked in 2018 and the Spencer Road AQMA was reduced in size to reflect updated monitoring and modelling results. The remaining AQMAs are considered appropriate for the time-being. The Council is revising the Air Quality Action Plan to reflect the new Council boundary. Measures shall be introduced to work towards achieving air quality objectives within the remaining AQMAs to improve health and wellbeing across the Council area.
2019 Progress Report	The report confirmed that air quality within the Council area continued to meet the relevant air quality objectives at locations of relevant exposure, with the exception of locations within the existing Air Quality Management Areas (AQMA's) at Creggan Road and Dale's Corner. There were no objectives exceedances outside the existing AQMA boundaries.

	Council recommended in the report that the Spencer Road AQMA should be revoked due to reduced pollutant concentrations, well below the limit value, over the last number of years. DAERA subsequently advised that more recent monitoring results be compiled for this AQMA to determine if pollutant concentrations continued to decline: this has been shown to be the case and it is now hoped that this AQMA can be revoked. The remaining AQMAs are considered appropriate and should remain unchanged. There is no requirement to proceed to a Detailed Assessment for any pollutant. The report has not identified any significant changes in emissions sources within Derry City and Strabane District Council area and there have been no new relevant industrial installations and no new significant commercial, domestic or fugitive sources of emissions. An update has also been provided on the measures contained in Council's Air Quality Action Plan. It is proposed to amend the Action Plan to take account of DAERA's imminent Clean Air Strategy for Northern Ireland and also additional measures that Council has proposed.
2020 Progress Report, 2021 Updating and Screening Assessment and 2022 Progress Report	The report confirmed that air quality within Derry City and Strabane District Council area continued to meet the relevant air quality objectives at locations of relevant exposure, with the exception of locations within existing Air Quality Management Areas (AQMAs). There were no exceedances of any objectives outside the existing AQMA boundaries.

	Council recommended that the Spencer Road AQMA should be revoked due to reduced pollutant concentrations, well below the limit value, over the previous number of years. DAERA subsequently advised that more recent monitoring results be compiled for this AQMA to determine if pollutant concentrations continued to decline and, in the Appraisal of the report, advised that a Detailed Assessment should be undertaken if necessary. It had further been shown that pollutant concentrations have continued to stay below the pollutant limit value and it is now hoped that this AQMA can be revoked. The remaining AQMAs are considered appropriate and should remain unchanged. The Buncrana Road AQMA had, in the previous 4 years only a marginal exceedance (40.8 $\mu\text{g}/\text{m}^3$ in 2019) of the Nitrogen Dioxide (NO_2) annual mean limit value of 40 $\mu\text{g}/\text{m}^3$. Council will observe trends at this location with the possibility of revocation of the AQMA should NO_2 levels remain lower. There was no requirement to proceed to a Detailed Assessment for any pollutant. The report did not identify any significant changes in emissions sources within Derry City and Strabane District Council area. There had been no new relevant industrial installations and no new significant commercial, domestic or fugitive sources of emissions. An update had also been provided on the measures contained in Council's Air Quality Action Plan. It is proposed to amend the Action Plan to take account
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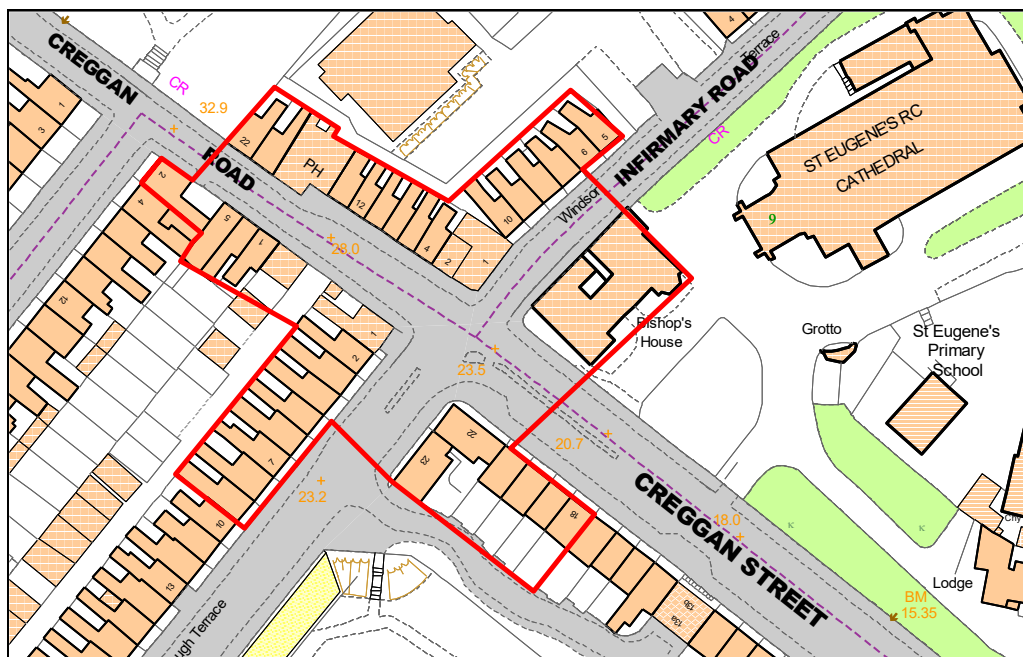
	of additional measures that Council has undertaken and to also account for the recommendations to be contained in the imminent Clean Air Strategy for Northern Ireland by DAERA.
2023 Progress Report	The report confirmed that air quality within Derry City and Strabane District Council area continued to meet the relevant air quality objectives at locations of relevant exposure, with the exception of locations within existing Air Quality Management Areas (AQMAs). There were no exceedances of any objectives outside the existing AQMA boundaries, or within Spencer Road AQMA. The report has not identified any significant changes in emissions sources within Derry City and Strabane District Council area. There have been no new relevant industrial installations and no new significant commercial, domestic or fugitive sources of emissions. An update has also been provided on the measures contained in Council's Air Quality Action Plan. It is proposed to amend the Action Plan to take account of additional measures that Council has undertaken and to also account for the recommendations to be contained in the imminent Clean Air Strategy for Northern Ireland by DAERA.

The following Figures 1.1 – 1.4 show the AQMA's in the Derry City and Strabane District Council area. These 4 AQMA's are within the Derry City area of the council.

They have been declared for NO₂ from traffic sources.

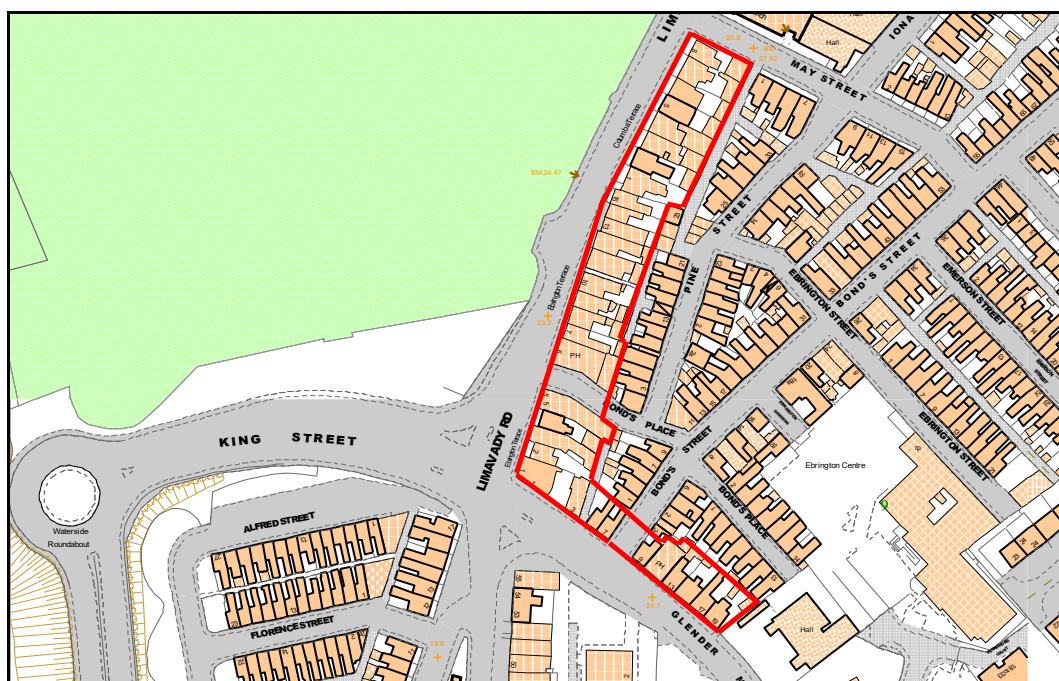
Figure 1.1 Map(s) of AQMA Boundaries

Figure 2.1 – Creggan Road Air Quality Management Area



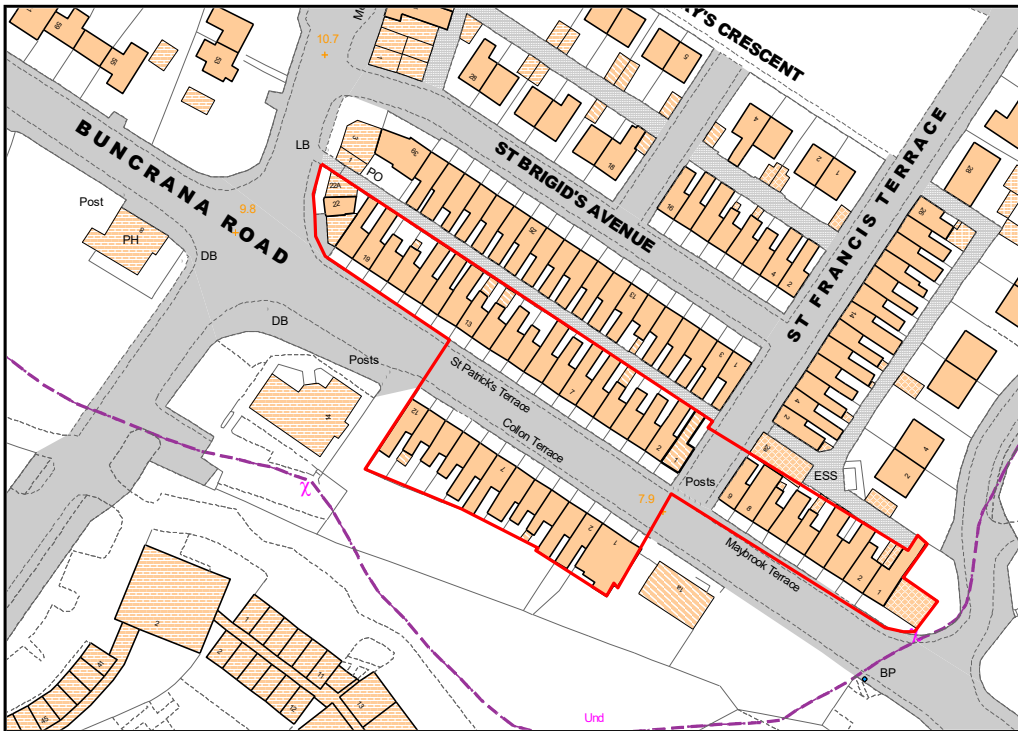
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Figure 1.3 – Dale’s Corner Air Quality Management Area



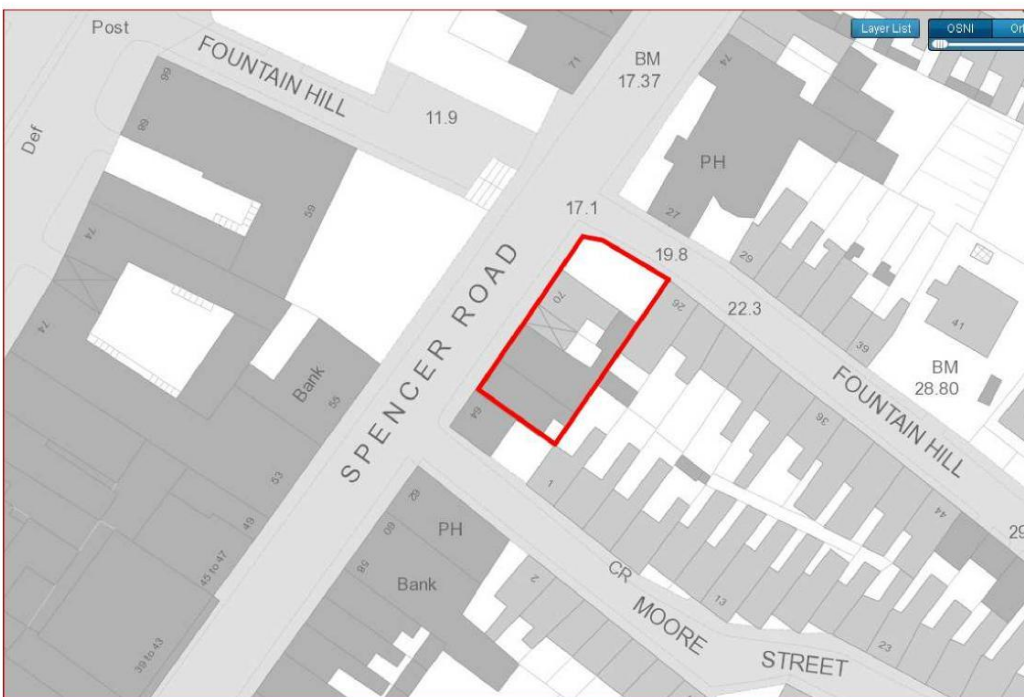
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Figure 1.4 – Buncrana Road Air Quality Management Area



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Figure 1.4 – Spencer Road Air Quality Management Area



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2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

The Council monitors NO₂ at two locations, Derry Rosemount and Dale's Corner. PM₁₀ was monitored at Derry Rosemount, Bawnmore Place at Strathfoyle and the Springhill Park site in Strabane. A new site at Newtownstewart was commissioned in April 2021 measuring PM₁₀. PM_{2.5} was also monitored at Derry Rosemount, as was Ozone. The Council monitors SO₂ at two locations, Derry Rosemount and Springhill Park. Details of the automatic monitoring sites are summarised in Table 2.1 and shown in Figures 2.1 to 2.3.

Monitoring techniques used at the sites include;

- Chemi-luminescence at Dale's Corner, Derry
- UV Fluorescence, Chemi-luminescent, UV Absorption, Beta Attenuation Monitor at Rosemount AURN, Brooke Park, Derry
- FIDAS PM Analyser and UV fluorescence at Springhill Park, Strabane
- FIDAS PM Analyser at Bawnmore Place, Strathfoyle, Derry; and
- FIDAS PM Analyser at Newtownstewart.

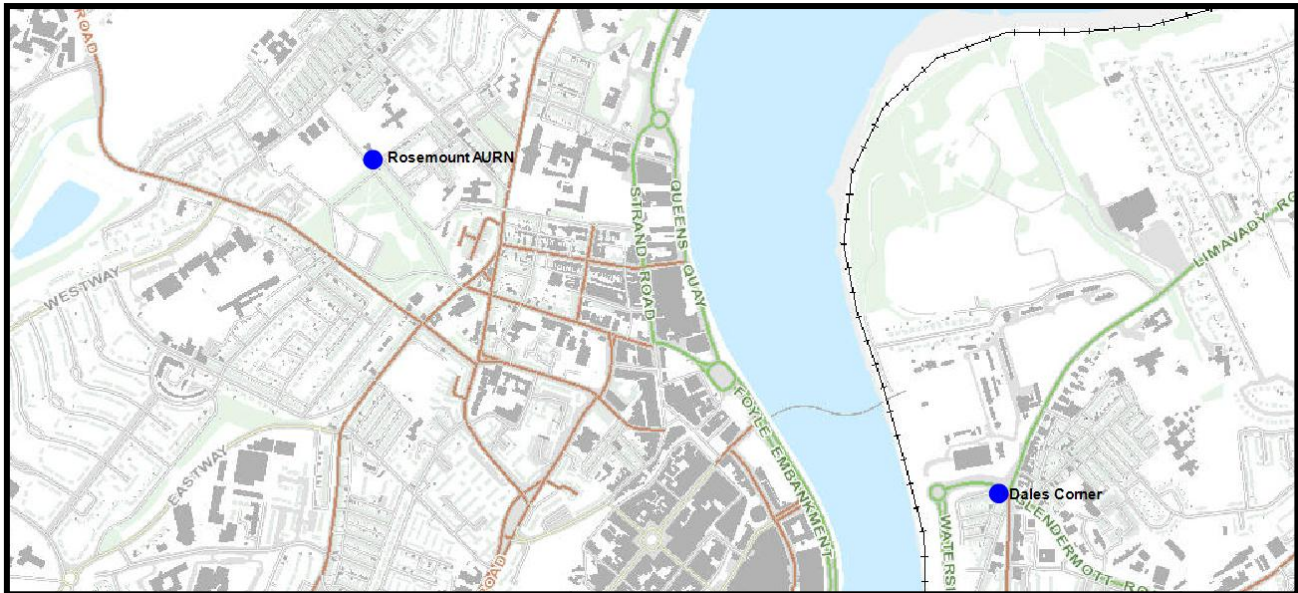
NO₂ concentrations were below both the annual mean at the Rosemount and Dale's Corner sites in all years and 1-hour objectives were below the threshold at both sites.

There were no exceedances of the 1-hour objective at any of the sites in 2019, 2020, 2021 or 2022.

The Rosemount AURN site is managed to the UK Automatic Urban and Rural Network (AURN) QA standards. QA/QC details and overview monitoring graphs and exceedance statistics for the non-AURN sites are included in the Appendices.

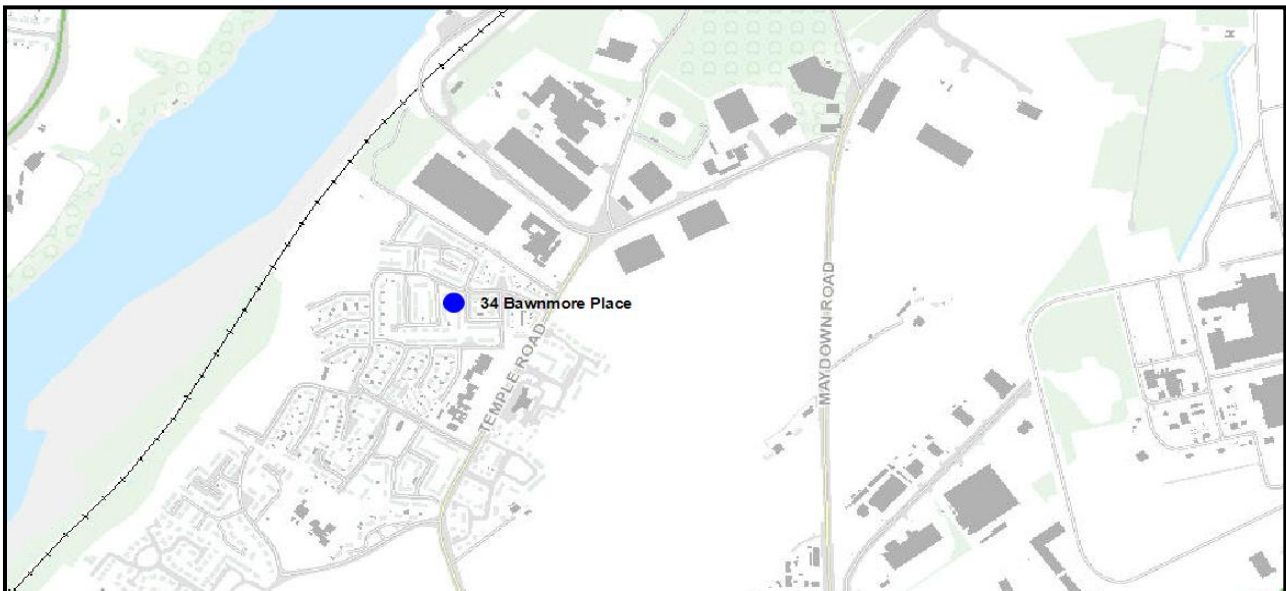
Figure 2.1 – Map of Automatic Monitoring Sites in Derry

Rosemount AURN and Dales Corner



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34 Bawnmore Place



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Figure 2.2 Map of Automatic Monitoring Site in Strabane

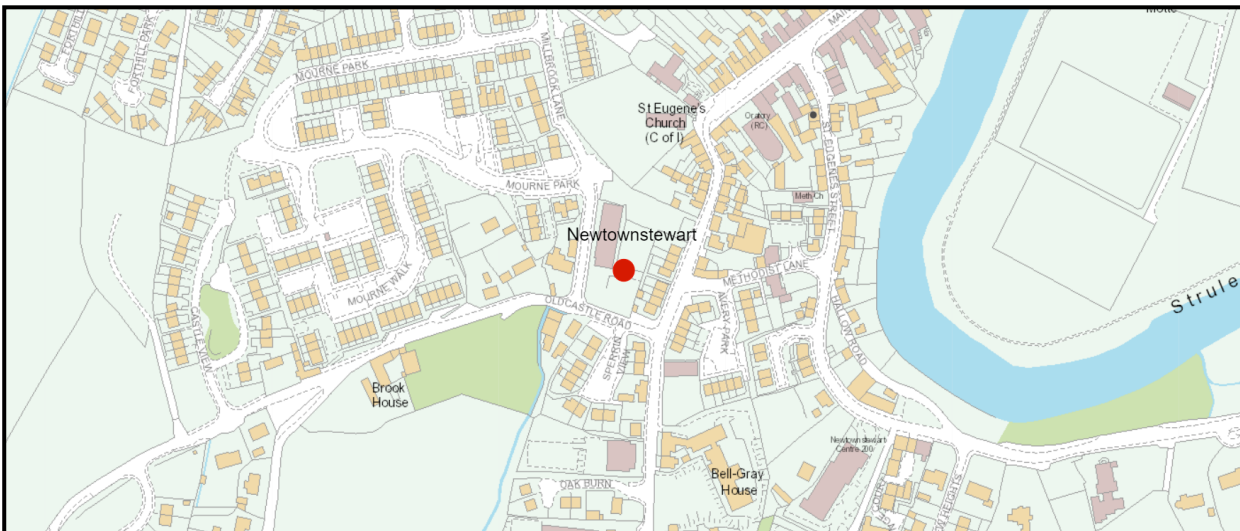
Springhill Park



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Figure 2.3 Map of Automatic Monitoring Site in Newtownstewart

Newtownstewart



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Table 2.1 Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Irish Grid Ref	Y OS Irish Grid Ref	Inlet Height (m)	Pollutants Monitored	In AQMA? Which AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (m) (N/A if not applicable)	Does this location represent worst-case exposure?
	Dales Corner	Roadside	244186	416761	1.5	NO ₂	N	Chemiluminescence monitor	Y	3	Y
	Derry Rosemount	Urban	242850	417468	3	O ₃ , NO ₂ PM ₁₀ , PM _{2.5} SO ₂	N	UV Fluorescence, Chemi-luminescent, UV Absorption and Beta Attenuation Monitor	Y	161	N/A
	Strathfoyle	Suburban	247007	421004	1.5	PM ₁₀ , PM _{2.5}	N	FIDAS PM Analyser	Y	27	N/A
	Springhill Park, Strabane	Urban Background	235175	397222	2.5	PM ₁₀ , SO ₂	N	FIDAS PM Analyser and UV florescence	Y	2	Y
	Newtownstewart	Urban	240015	385545	1.5	PM ₁₀ , PM _{2.5} ,	N	FIDAS PM Analyser	Y	22	Y

2.1.2 Non-Automatic Monitoring Sites

The Council operates 25 Nitrogen Dioxide (NO₂) diffusion tube monitoring sites within its area situated across Derry City. 52 tubes in all were exposed, with triplicate tubes at the continuous NO₂ monitoring stations at Dale's Corner and Rosemount and duplicate tubes at all other sites. The locations of these sites are shown in Figures 2.4 to 2.9 and described in detail in Table 2.2. The maps show current and historical monitoring locations since 2015.

It was decided to use the national bias correction factor for the NO₂ diffusion tubes and this is discussed later in Section 2.2.

Full details of the QA/QC procedure for the diffusion tubes are provided in Appendix A.

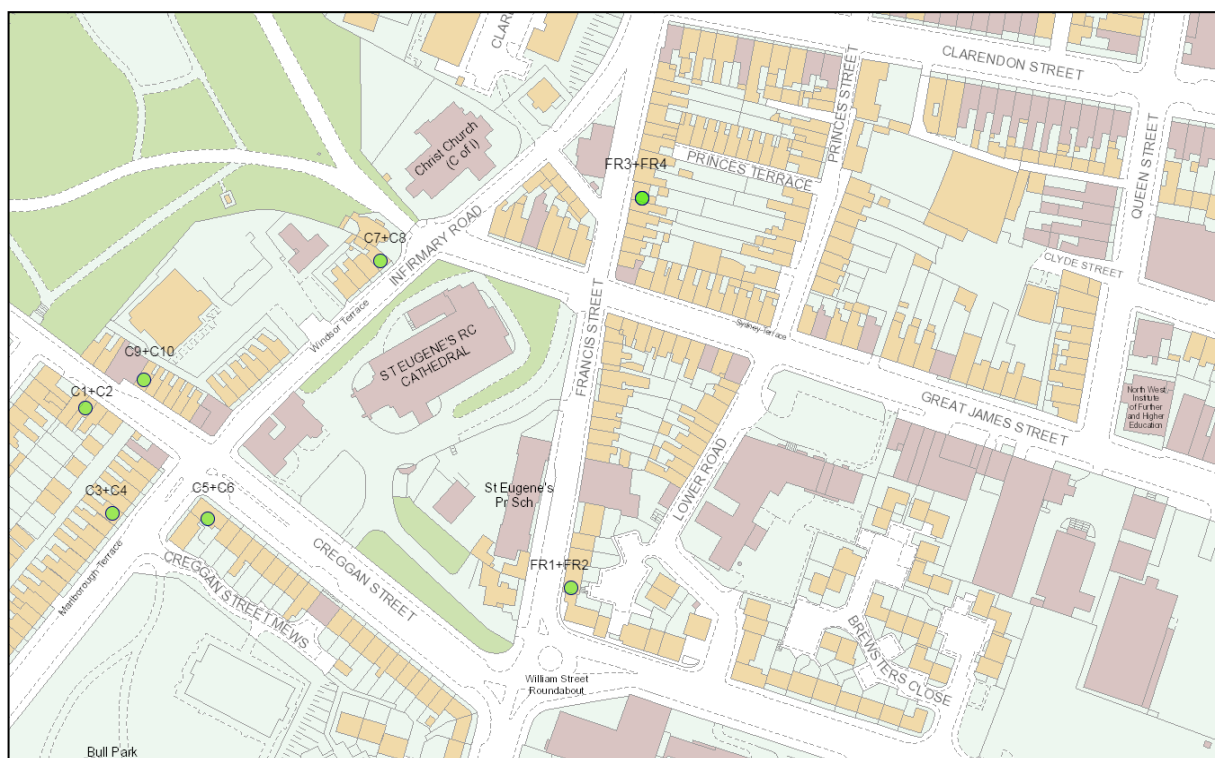
Figure 2.1 Map(s) of Non-Automatic Monitoring Sites

Figure 2.4 – Map of Brooke Park (AURN) Non-Automatic Monitoring Sites



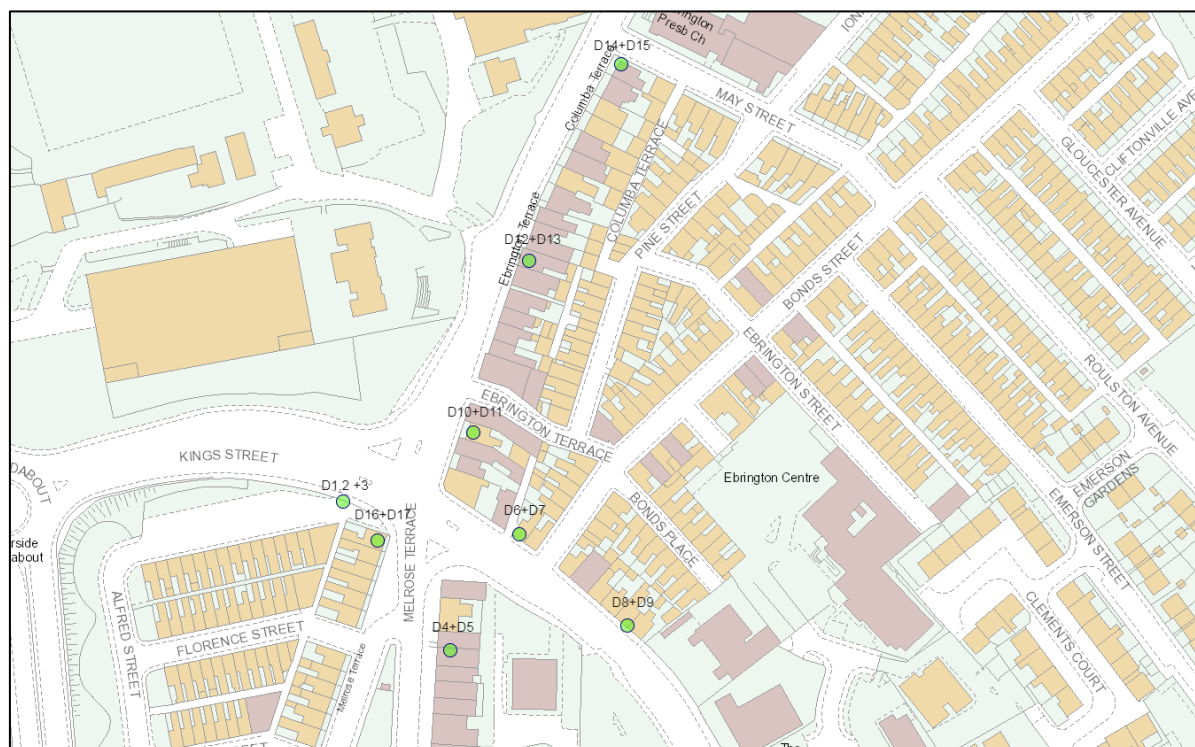
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Figure 2.5 - Map of Creggan Road, Marlborough Terrace, Windsor Terrace, Creggan Street and Francis Street Non- Automatic Monitoring Sites.



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Figure 2.6 – Map of Dales Monitor, Clooney Terrace, Glendermott Road, Ebrington Terrace,



Columba Terrace and Melrose Terrace Non – Automatic Monitoring Sites.

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Figure 2.7 – Map of Messines Park, Maybrook Terrace, St Patrick's Terrace and Collon Terrace Non – Automatic Monitoring Sites



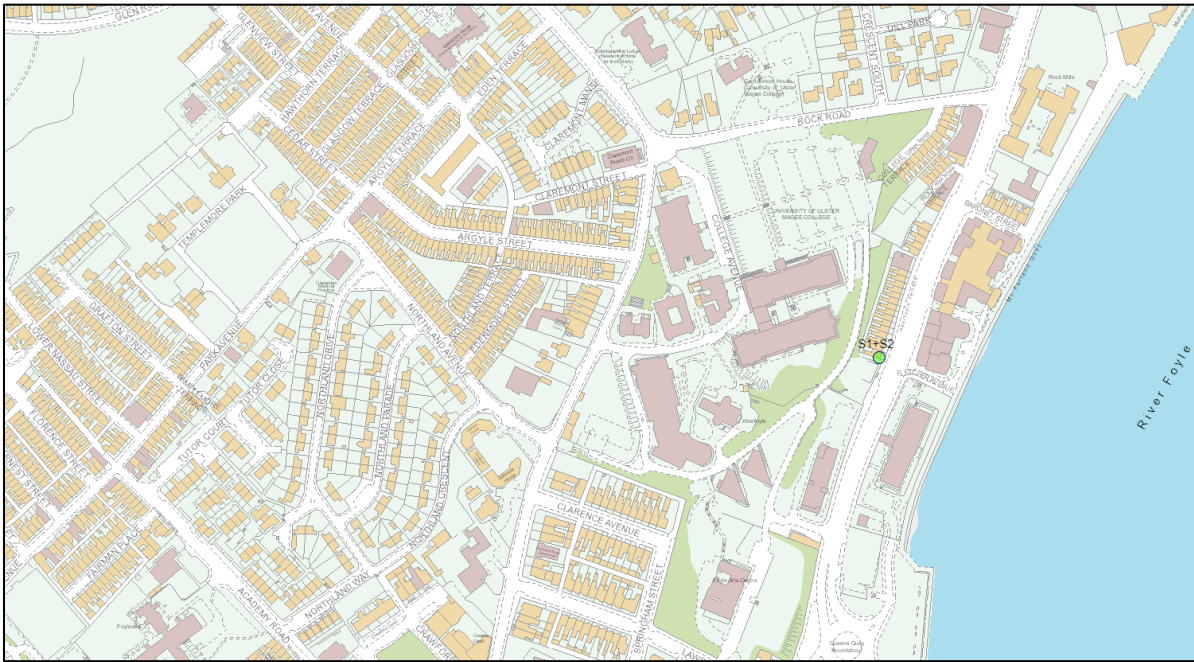
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Figure 2.8 Map of Spencer Road Non-Automatic Monitoring Site



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Figure 2.9 Map of Aberfoyle Terrace Non-Automatic Monitoring Site



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Table 2.2 Details of Non-Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Site Height (m)	Pollutants Monitored	In AQMA? Which AQMA?	Is monitoring co-located with a Continuous Analyser (Y/N)	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (m) (N/A if not applicable)	Does this location represent worst-case exposure?
A1-3	AURN	Urban background	59253	580590	2.5	NO ₂	N	Y (triplicate)	Y (161m)	161	Y
C1-2	3 Creggan road	Roadside	59291	580266	2.5	NO ₂	Y, Creggan AQMA	N (duplicate)	Y (0m)	1	Y
C3-4	6 Marlborough Terrace	Roadside	59298	580220	2	NO ₂	Y, Creggan AQMA	N (duplicate)	Y (0m)	4	Y
C5-6	22a Creggan Street	Roadside	59332	580229	2	NO ₂	Y, Creggan AQMA	N (duplicate)	Y (0m)	3	Y
C7-8	1 Windsor Terrace	Roadside	59404	580302	2	NO ₂	N	N (duplicate)	Y (0m)	3	Y
C9-10	14 Creggan Road	Roadside	59303	580267	2	NO ₂	Y, Creggan AQMA	N (duplicate)	Y (0m)	3	Y
D1-3	Dale's Corner	Roadside	60531	579772	1.5	NO ₂	N	N (triplicate)	Y (0m)	3	Y
D4-5	52 Clooney Terrace	Roadside	60543	579726	2.5	NO ₂	N	N (duplicate)	Y (0m)	5	Y
D6-7	5 Glendermott Road	Roadside	60580	579759	2.5	NO ₂	Y, Dales Corner AQMA	N (duplicate)	Y (0m)	1	Y
D8-9	19 Glendermott Road	Roadside	60615	579725	2.5	NO ₂	Y, Dales Corner AQMA	N (duplicate)	Y (0m)	1	Y
D10-11	4 Ebrington Terrace	Roadside	60564	579805	3	NO ₂	Y, Dales Corner AQMA	N (duplicate)	Y (0m)	4	Y

D12-13	12 Ebrington Terrace	Roadside	60590	579867	2	NO ₂	Y, Dales Corner AQMA	N (duplicate)	Y (0m)	4	Y
D14-15	9 Columba Terrace	Roadside	60632	579936	1.5	NO ₂	Y, Dales Corner AQMA	N (duplicate)	Y (0m)	4	Y
D16-17	17 Melrose Terrace	Roadside	60533	579764	2	NO ₂	N	N (duplicate)	Y (0m)	7.3	Y
P1-2	53 Messines Park	Roadside	59956	582076	2	NO ₂	N	N (duplicate)	Y (0m)	5	Y
P3-4	57 Messines Park	Roadside	59947	582083	2.5	NO ₂	N	N (duplicate)	Y (0m)	5	Y
P5-6	8 Maybrook Terrace	Roadside	60097	581965	2	NO ₂	Y, Buncrana Road	N (duplicate)	Y (0m)	5	Y
P7-8	19 St Patricks Terrace	Roadside	60011	582031	2	NO ₂	Y, Buncrana Road	N (duplicate)	Y (0m)	4	Y
P9-10	1 Collon Terrace	Roadside	60081	581964	2	NO ₂	Y, Buncrana Road	N (duplicate)	Y (0m)	4	Y
P11-12	5 Collon Terrace	Roadside	60068	581974	2	NO ₂	Y, Buncrana Road	N (duplicate)	Y (0m)	4	Y
S7-8	35 Aberfoyle Terrace	Roadside	59921	580863	2	NO ₂	N	N (duplicate)	Y (0m)	6	N
SP1-2	70 Spencer Road	Roadside	60297	579101	2.5	NO ₂	Y, Spencer Road AQMA	N (duplicate)	Y (0m)	2	Y
FR1-2	3 Francis Street	Roadside	59456	580186	3	NO ₂	N	N (duplicate)	Y (0m)	2	Y
FR3-4	45 Francis Street	Roadside	59493	580324	3	NO ₂	N	N (duplicate)	Y (0m)	2	Y
RO1-2	29 Rock Road	Roadside	59786	581064	2	NO ₂	N	N (duplicate)	Y (0m)	6	Y

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide

Automatic Monitoring Data

Details of results from both automatic monitoring sites, compared with the annual mean objective from 2019 to 2023, are documented in Table 2.3 and shown in Figure 2.9. The annual limit value of $40\mu\text{g}/\text{m}^3$ is shown by the red line. The number of exceedances of the 1-hour mean Objective is also documented in Table 2.4.

The monitoring results at both the Rosemount site and Dales Corner site showed a decrease in the annual mean from 2019 to 2020, however this increased again in 2021 at both sites. The annual mean remained the same in 2022 for the Dales Corner site and decreased in 2022 for the Rosemount site. Concentrations increased at the Dales Corner site in 2023 whilst the Rosemount site remained the same as 2022.

There were no exceedances of any of the pollutant limit values or AQ Objectives but it must be acknowledged that the results are indicative.

Table 2.3 Results of Automatic Monitoring for Nitrogen Dioxide: Annual Mean NO₂ Monitoring Results (µg/m³) for Comparison with the Annual Mean Objective

Site ID	Site Type	Within AQMA? Which AQMA?	Valid Data Capture for period of monitoring % ^a	Valid Data Capture 2023 % ^b	2019* ^c	2020* ^c	2021* ^c	2022* ^c	2023 ^c
Derry Dale's Corner	Roadside	N	-	90	33	27	30	30	33
Derry Rosemount	Urban background	N	-	85	11	8	9	8	8

In **bold**, exceedance of the NO₂ annual mean AQS objective of 40µg/m³.

^a i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

^b i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

^c Means should be “annualised” as per LAQM.TG22, if monitoring was not carried out for the full year.

*Annual mean concentrations for previous years are optional.

Figure 2.9 Trends in Annual Mean Nitrogen Dioxide Concentrations measured at Automatic Monitoring Sites

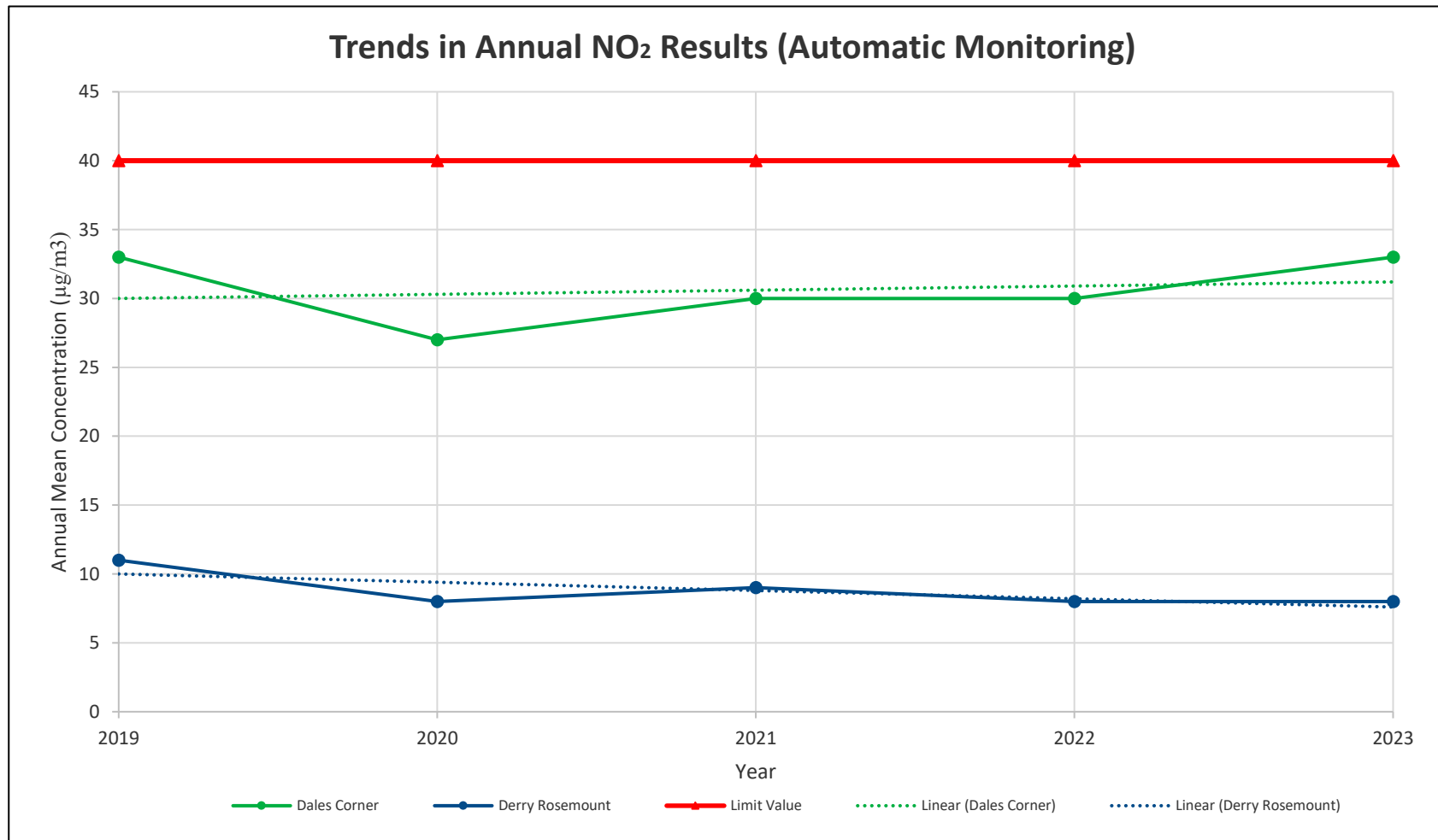


Table 2.4 Results of Automatic Monitoring for Nitrogen Dioxide: Number of Exceedances of 1-hour mean Objective (200µg/m³)

Site ID	Site Type	Within AQMA? Which AQMA?	Valid Data Capture for period of monitoring % ^a	Valid Data Capture 2023 % ^b	2019* ^c	2020* ^c	2021* ^c	2022* ^c	2023 ^c
Derry Dale's Corner	Roadside	N	-	90%	0	0	0	0	0
Derry Rosemount	Urban background	N	-	85%	0	0	0	0	0

In **bold**, exceedance of the NO₂ hourly mean AQS objective (200µg/m³ – not to be exceeded more than 18 times per year

^a i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

^b i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

^c If the period of valid data is less than 85%, include the 99.8th percentile of hourly means in brackets

* Number of exceedances for previous years are optional.

Diffusion Tube Monitoring Data

Derry City and Strabane District Council operate 25 Nitrogen Dioxide (NO₂) diffusion tube monitoring sites within its area situated across Derry City. 52 tubes in all were exposed, with triplicate tubes at the continuous NO₂ monitoring stations at Dale's Corner and Rosemount and duplicate tubes at all other sites.

Results at the NO₂ diffusion tube sites, situated within the council area are shown below in Table 2.5. They are sited in accordance with the technical guidance LAQM.TG (22). A diffusion tube co-location study has been undertaken at both the Rosemount and Dales Corner automatic monitoring station sites. The results of these studies have been submitted to the national database. The 2023 local bias adjustment factor was 0.83. A copy of the Defra Diffusion Tube Data Processing calculations is included within Appendix A of this report.

It was decided that the national bias adjustment factor of 0.78 would be used as this was deemed to be more realistic and had a higher degree of accuracy.

Long term trends have been illustrated in Table 2.6 below, for the different locations within the AQMA's. Monitoring results for 2020 decreased from 2019 to well below the air quality objective of 40ug/ m³. It was considered that this was as a result of the reduced traffic volumes due to the COVID pandemic. There was a small increase across all sites noted within 2021 and 2022. Monitoring results have then decreased again in 2023 with only one exceedance of the air quality objective of 40ug/ m³.

Table 2.5 Results of Nitrogen Dioxide Diffusion Tubes in 2023

Site ID	Location	Site Type	Within AQMA? Which AQMA?	Triplicate or Co-located Tube	Full Calendar Year Data Capture 2023 (Number of Months or %) ^a	2023 Annual Mean Concentration ($\mu\text{g}/\text{m}^3$) - Bias Adjustment factor = 0.78 ^b
A1-3	AURN	B	N	Triplicate	12 months	9.1
C1-2	3 Creggan road	R	Y, Creggan Road	Duplicate	12 months	47.4
C3-4	6 Marlborough Terrace	R	N	Duplicate	12 months	26.8
C5-6	22a Creggan Street	R	N	Duplicate	12 months	28.3
C7-8	1 Windsor Terrace	R	N	Duplicate	12 months	15.8
C9-10	14 Creggan Road	R	Y, Creggan Road	Duplicate	12 months	30.9
D1-3	Dale's Corner	R	N	Triplicate	12 months	24.7
D4-5	52 Clooney Terrace	R	N	Duplicate	12 months	22.3
D6-7	5 Glendermott Road	R	Y, Dale's Corner	Duplicate	12 months	39.6
D8-9	19 Glendermott Road	R	Y, Dale's Corner	Duplicate	12 months	39.6
D10-11	4 Ebrington Terrace	R	Y, Dale's Corner	Duplicate	12 months	38.8
D12-13	12 Ebrington Terrace	R	N	Duplicate	12 months	29.9
D14-15	9 Columba Terrace	R	N	Duplicate	12 months	26.9
D16-17	17 Melrose Terrace	R	N	Duplicate	12 months	23.0
.P1-2	53 Messines Park	R	N	Duplicate	12 months	18.0
P3-4	57 Messines Park	R	N	Duplicate	12 months	21.3
P5-6	8 Maybrook Terrace	R	N	Duplicate	12 months	23.3
P7-8	19 St Patricks Terrace	R	N	Duplicate	12 months	28.7
P9-10	1 Collon Terrace	R	Y, Buncrana Road	Duplicate	12 months	27.9
P11-12	5 Collon Terrace	R	Y, Buncrana Road	Duplicate	12 months	32.8
S7-8	35 Aberfoyle Terrace	R	N	Duplicate	12 months	25.9
SP1-2	70 Spencer Road	R	Y, Spencer Road	Duplicate	12 months	29.7
FR1-2	3 Francis Street	R	N	Duplicate	12 months	23.5
FR3-4	45 Francis Street	R	N	Duplicate	12 months	22.8
R01-2	29 Rock Road	R	N	Duplicate	12 months	14.8

In **bold**, exceedance of the NO₂ annual mean AQS objective of 40µg/m³.

Underlined, annual mean > 60µg/m³, indicating a potential exceedance of the NO₂ hourly mean AQS objective.

^a Means should be “annualised” as per LAQM.TG22, if full calendar year data capture is less than 75%.

^b If an exceedance is measured at a monitoring site not representative of public exposure, NO₂ concentration at the nearest relevant exposure should be estimated based on the NO₂ fall-off with distance calculator, and results should be discussed in a specific section.

**Table 2.6 Results of Nitrogen Dioxide Diffusion Tubes, adjusted for bias ($\mu\text{g}/\text{m}^3$):
2019 to 2023**

Site ID	Site Type	Within AQMA? Which AQMA?	2019 ^a (Bias Adjustment Factor = 0.77)	2020 ^a (Bias Adjustment Factor = 0.76)	2021 ^a (Bias Adjustment Factor = 0.88)	2022 ^a (Bias Adjustment Factor = 0.95)	2023 ^a (Bias Adjustment Factor = 0.78)
A1-3	B	N	11.5	8.2	10	17.1	9.1
C1-2	R	Y, Creggan Road	55.7	42.1	51.4	26.1	47.4
C3-4	R	N	32.5	25.7	31.3	32.1	26.8
C5-6	R	N	35.3	26	32.6	33.1	28.3
C7-8	R	N	20.9	15.1	18.7	17.8	15.8
C9-10	R	Y, Creggan Road	37.5	27.3	36	34.8	30.9
D1-3	R	N	29.9	22	27.8	28.3	24.7
D4-5	R	N	26.8	19.3	25.2	24.7	22.3
D6-7	R	Y, Dale's Corner	43.4	32	42	43.7	39.6
D8-9	R	Y, Dale's Corner	47.9	33.2	43.6	45.3	39.6
D10-11	R	Y, Dale's Corner	46.2	33	42	34	38.8
D12-13	R	N	35.9	23.5	31.2	41.8	29.9
D14-15	R	N	29.4	24.8	31.3	32	26.9
D16-17	R	N	28.6	21.6	26	27	23.0
P1-2	R	N	20.5	15.8	19	19.1	18.0
P3-4	R	N	25.3	18.7	23.4	24.3	21.3
P5-6	R	N	26	19.2	25.7	25.6	23.3
P7-8	R	N	32.1	24.2	31.6	31.5	28.7
P9-10	R	Y, Buncrana Road	33.6	26	32.6	33.5	27.9
P11-12	R	Y, Buncrana Road	40.8	31.1	37.8	40.6	32.8
S7-8	R	N	26.9	20.3	26	26.7	25.9
SP1-2	R	Y, Spencer Road	35.1	27.7	34.5	36.1	29.7
FR1-2	R	N	23.9	19.2	24.6	25.3	23.5
FR3-4	R	N	25.5	18.2	24	26.9	22.8
R01-2	29 Rock Road	N	N/A	N/A	N/A	13.1	14.8

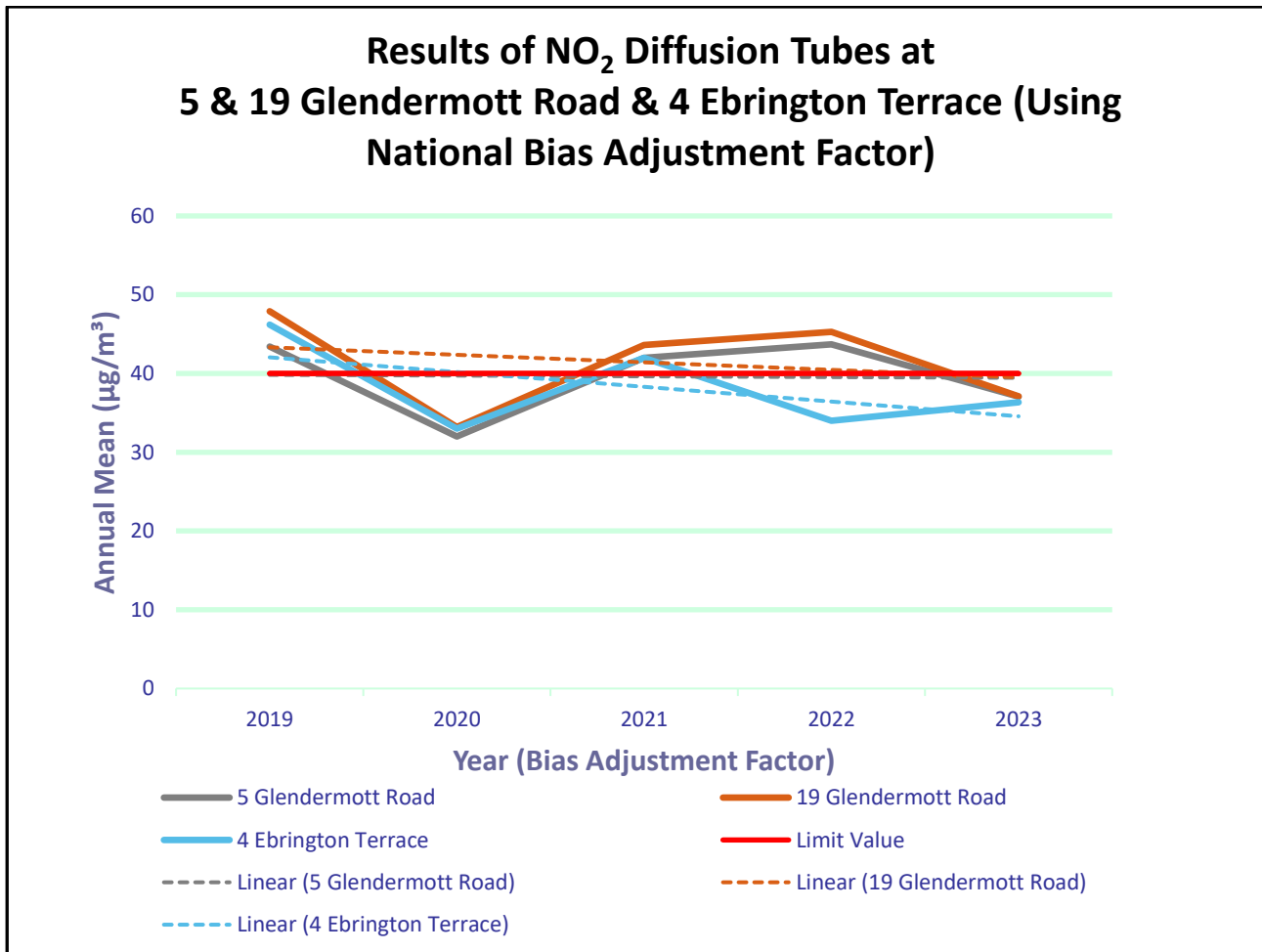
In **bold**, exceedance of the NO₂ annual mean AQS objective of 40 $\mu\text{g}/\text{m}^3$.

Underlined, annual mean > 60 $\mu\text{g}/\text{m}^3$, indicating a potential exceedance of the NO₂ hourly mean AQS objective.

^a Means should be “annualised” as per LAQM.TG22, if full calendar year data capture is less than 75%.

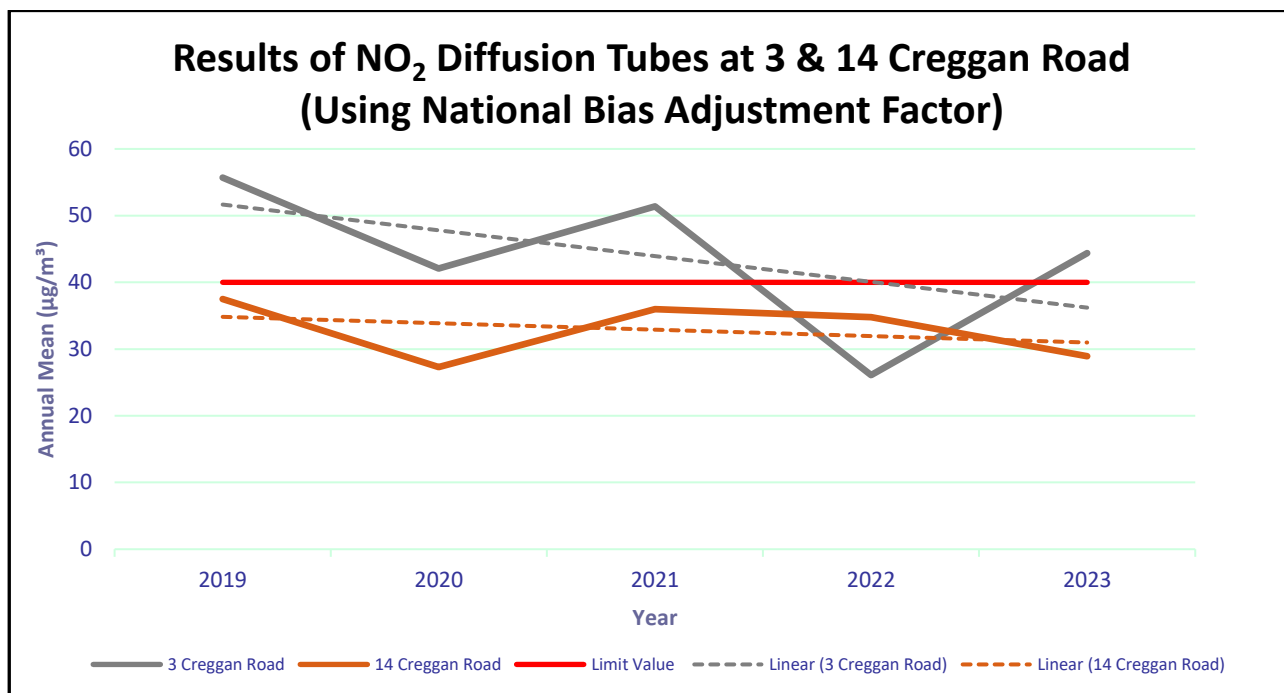
Figure 2.2 Trends in Annual Mean Nitrogen Dioxide Concentrations measured at Diffusion Tube Monitoring Sites

Dale's Corner AQMA trends



The graph above shows the 5-year average and trends for the NO₂ diffusion tubes at the Dales Corner AQMA. There was a slight fluctuation in results during 2020 and this was likely due to Covid Pandemic, but overall a decline in NO₂ levels between 2019 – 2023.

Creggan Road AQMA trends

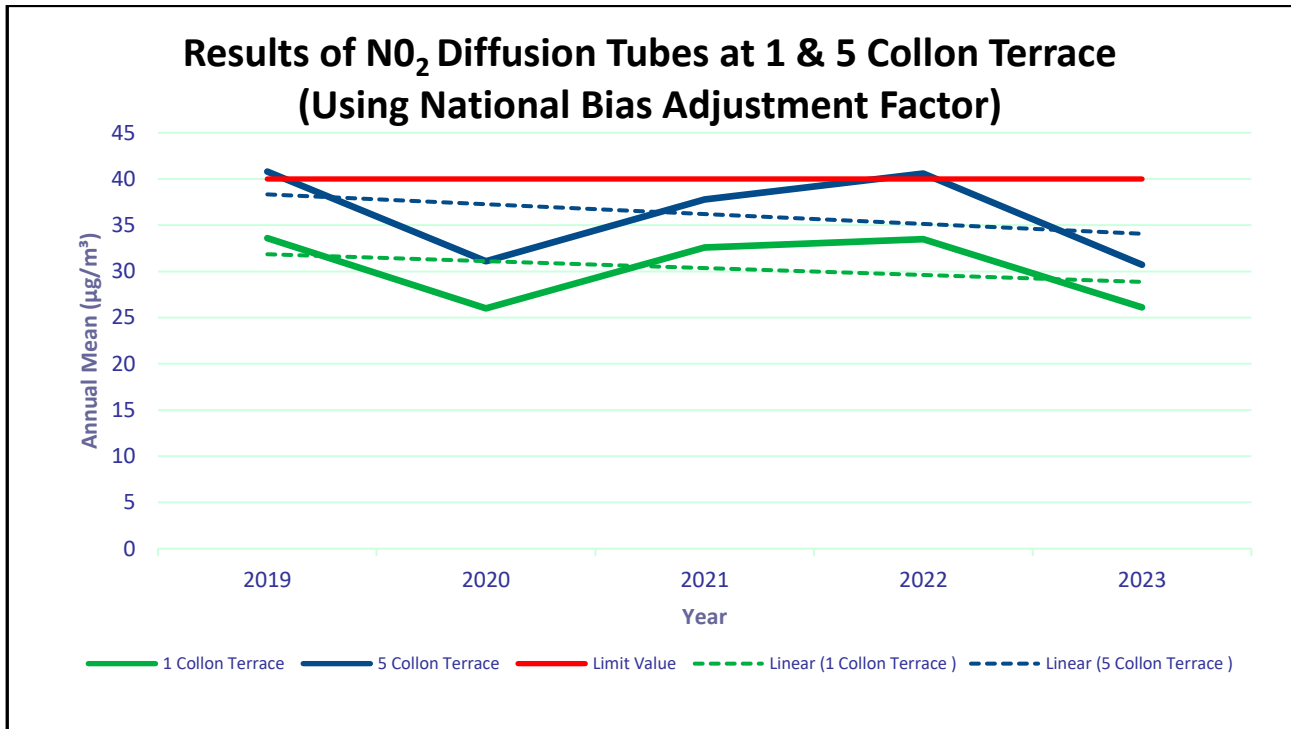


The graph above shows the 5-year average and trends for the NO₂ diffusion tubes at the Creggan Road AQMA. There was a slight fluctuation in results during the 5-year period, but overall a decline in NO₂ levels between 2019 – 2023.

No.14 Creggan Road, shows NO₂ levels consistently remain below the annual mean NO₂ air quality objective level.

2023 seen an exceedance of the annual mean NO₂ objective at 3 Creggan Road

It is therefore recommended that this AQMA remains as declared.

Buncrana Road AQMA trends

The graph above shows the 5-year average and trends for the NO₂ diffusion tubes at the Buncrana Road AQMA. There was a slight fluctuation in results during the 5-year period, but overall a decline in NO₂ levels between 2019 – 2023.

All sites show downward trends except for 3 Creggan Road and 4 Ebrington Terrace which showed a slight upward trend, though all sites have showed decreased levels between 2019 - 2023. 3 Creggan Road and 4 Ebrington Terrace had been below the annual mean NO₂ limit value of 40 µg/m³ during 2022.

2.2.2 Particulate Matter (PM₁₀)

The Council monitors PM₁₀ at four locations in the district;

- Derry AURN Rosemount
- Springhill Park, Strabane.
- Strathfoyle
- Newtownstewart

The monitoring data is summarised in Table 2.7 for PM₁₀ annual mean concentrations in comparison to its objective level and in Table 2.8 for the 24-hour mean in terms of number of exceedances. Prior to the installation of the FIDAS analysers, concentrations for Springhill, Strathfoyle and Newtownstewart have been automatically adjusted by Air Quality Data Management (AQDM) to gravimetric equivalent using the VCM methodology, where possible.

As 2023 data capture levels at the Derry Rosemount and Springhill Park Sites were below the Department's 85% data capture threshold for PM₁₀ (73 and 35%), annualisation of data from these sites was required and undertaken in accordance with LAQM.TG22 guidance.

The 90.4th percentiles of 24-hour mean PM₁₀ concentrations were also less than 50 µg/m³ at all sites with data capture lower than 85% indicating exceedances of the 24-hour mean PM₁₀ Air Quality Objective were very unlikely to have occurred.

Figure 2.3 shows the trends in annual mean PM₁₀ concentrations at all sites.

PM₁₀ concentrations at Derry Rosemount site have remain constant over the 5-year period with fluctuations in the intervening years.

Concentrations at Springhill Park have showed a steady decrease in PM₁₀ levels since 2019.

Bawnmore Place has shown a downward trend in PM₁₀ concentrations since 2019.

Newtownstewart monitoring station only became operational in 2021 and so historical data for this site is limited. Results between 2021 to 2022 have shown an increase in PM₁₀ concentrations, but these have reduced again in 2023.

There was 1 exceedance of the 24-hour Mean concentration at Rosemount in 2020 and none at Rosemount in 2019, 2021, 2022 or 2023.

There were 3 exceedances of the 24-hour mean concentration at Springhill in 2019, 1 exceedance in 2020, 2 exceedances in 2021, 5 exceedances in 2022 and none in 2023.

There were 0 exceedances of the 24-hour mean concentration at Bawnmore place between 2019 and 2023.

There were 0 exceedances of the 24-hour mean concentration at Newtownstewart in 2021 or 2023, however in 2022 there were 3 exceedances.

Table 2.7 Annual Mean PM₁₀ Monitoring Results (µg/m³) for Comparison with the Annual Mean Objective

Site ID	Site Type	Within AQMA? Which AQMA?	Valid Data Capture for monitoring Period % ^a	Valid Data Capture 2023 % ^b	Confirm Gravimetric Equivalent (Y or N/A)	2019	2020	2021	2022	2023 ^c
Derry Rosemount	Urban background	N	-	73%	Y	12	14	13	13	11 ^c
Springhill Park, Strabane	Urban background	N	-	35%	Y	17	15	14	12	11 ^c
Bawnmore Place Strathfoyle	Suburban	N	-	98%	Y	13	10	12	13	10
Newtownstewart	Urban background	N	-	98%	-	-	-	10	13	12

In **bold**, exceedance of the PM₁₀ annual mean AQS objective of 50µg/m³.

^a i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

^b i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

^c Means should be “annualised” as per LAQM.TG22, if monitoring was not carried out for the full year.

* Optional.

Table 2.8 Results of Automatic Monitoring for PM₁₀: Number of Exceedances of 24-hour mean Objective (50µg/m³)

Site ID	Site Type	Within AQMA? Which AQMA?	Valid Data Capture for monitoring Period % ^a	Valid Data Capture 2023 % ^b	Confirm Gravimetric Equivalent	2019* ^c	2020* ^c	2021* ^c	2022* ^c	2023 ^c
Derry Rosemount	Urban background	N	-	73%	Y	0	1	0	0	0 (17 ^c)
Springhill Park, Strabane	Urban background	N	-	35%	Y	3	1	2	5	0 (21 ^c)
Bawnmore Place Strathfoyle	Suburban	N	-	98%	Y	0	0	0	0	0
Newtownstewart	Urban Background	N	-	98%	Y	-	-	0	3	0

In **bold**, exceedance of the PM₁₀ daily mean AQS objective (50µg/m³ – not to be exceeded more than 35 times per year).

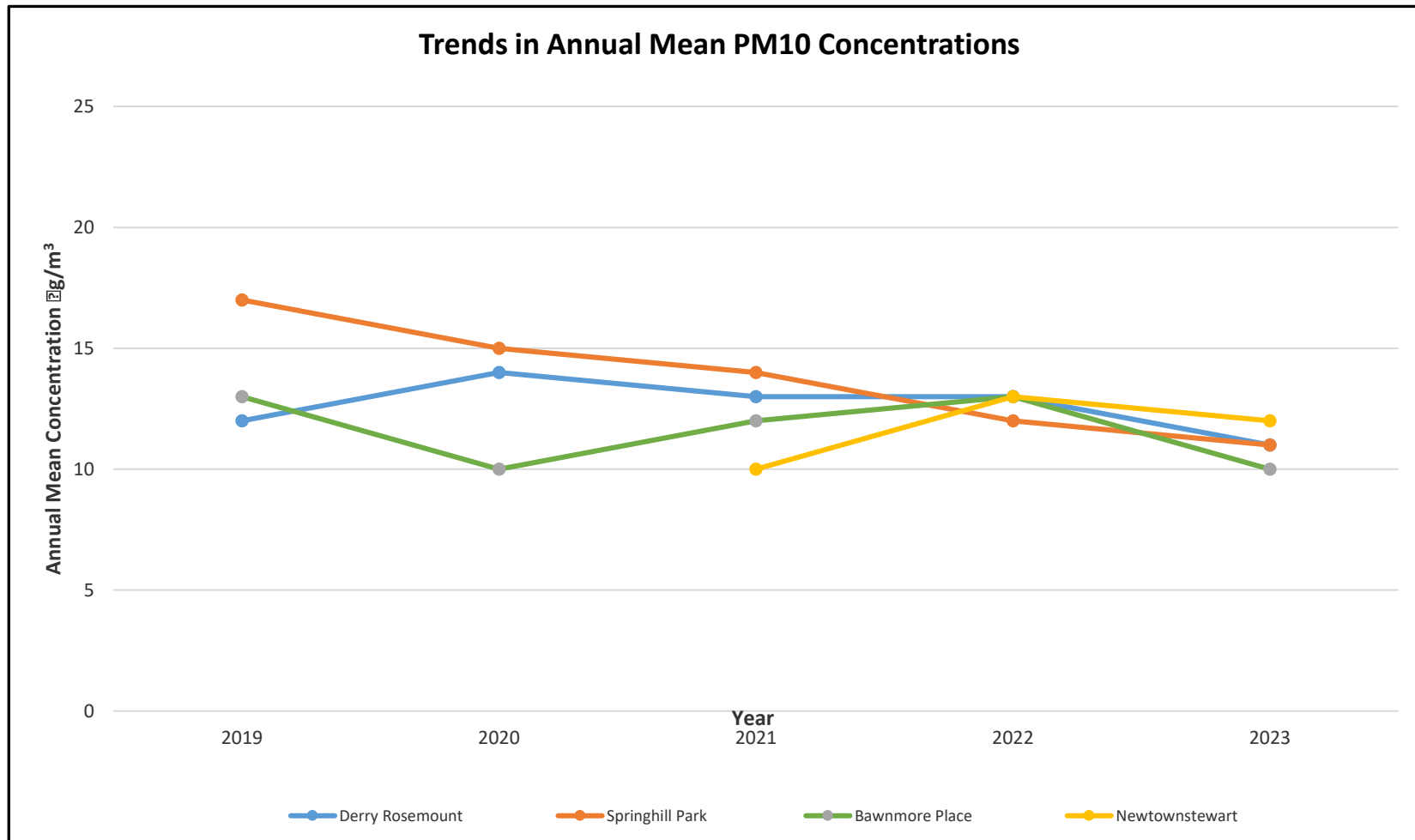
^a i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

^b i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

^c if data capture is less than 85%, include the 90.4th percentile of 24-hour means in brackets.

* Optional.

Figure 2.3 Trends in Annual Mean PM₁₀ Concentrations



2.2.3 Sulphur Dioxide

Concentrations of Sulphur Dioxide at both Derry Rosemount and Springhill Park sites have remained below the annual hourly mean objective between 2019 and 2023.

As 2023 data capture levels at the Derry Rosemount and Springhill Park Sites were below the Department's 85% data capture threshold for SO₂ (69 and 65%), annualisation of data from these sites was required and undertaken in accordance with LAQM.TG22 guidance.

The 99.9th percentile of the 15-min mean, 99.7th percentile of the 1-hour mean and 99.2th percentile of the 24-hour mean of SO₂ concentrations were also less than their respective Air Quality Objectives at all sites with data capture lower than 85% indicating exceedances of the SO₂ Air Quality Objective were very unlikely to have occurred

Table 2.9 Results of Automatic Monitoring of SO₂: Number of Exceedances of Objectives (percentile in bracket)

Site ID	Site Type	Within AQMA? Which AQMA?	Valid Data Capture for monitoring Period % ^a	Valid Data Capture 2023 % ^b	15-minute Means > 266µg/m ³	1-hour Means > 350µg/m ³	24-hour Means > 125µg/m ³
Derry Rosemount	Urban Background	N	-	69	0 (24 ^c)	0 (17 ^c)	0 (6 ^c)
Springhill Road, Strabane	Urban Background	N	-	65	0 (56 ^c)	0 (38 ^c)	0 (18 ^c)

In **bold**, exceedance of the relevant AQS objective (15-min mean = 35 allowed/year; 1-hour mean = 24 allowed/year; 24-hour mean = 3 allowed/year).

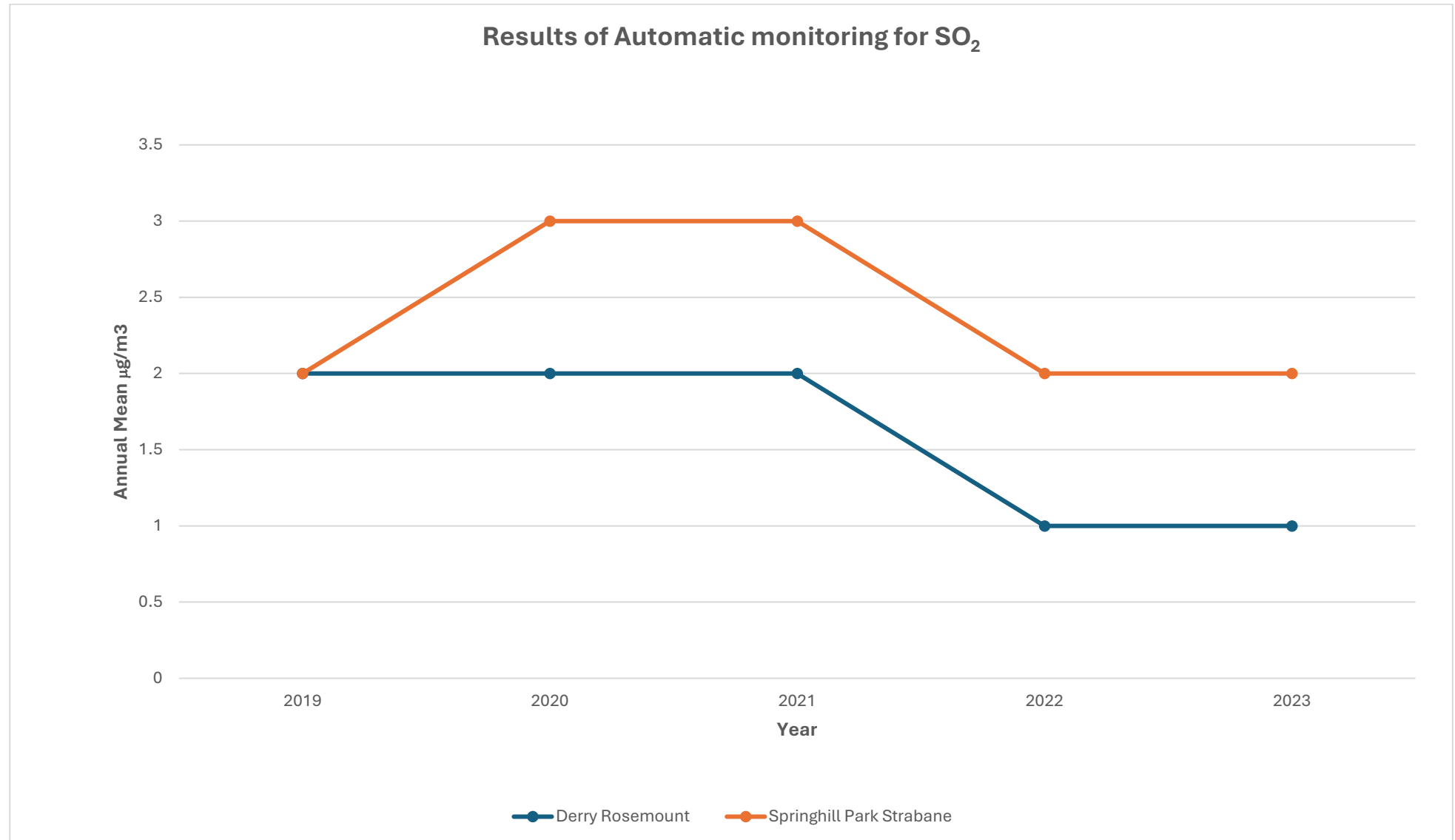
^a i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

^b i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

^c if data capture is less than 85%, include the relevant percentile in brackets (in µg/m³): 15-min mean = 99.9th ; 1-hour mean = 99.7th ; 24-hour mean = 99.2th percentile.

Table 2.10 Results of Automatic Monitoring for Sulphur Dioxide: Comparison with Annual Hourly Mean Objective

Site ID	Site Type	Withi n AQMA?	Valid Data Capture for monitorin g Period % ^a	Valid Data Captur e 2019 % ^b	Valid Data Captur e 2020 % ^b	Valid Data Captur e 2021 % ^b	Valid Data Captur e 2022% ^b	Valid Data Captur e 2023% ^b	Confirm Gravime tric Equivale nt (Y or NA)	Annual Mean Concentration $\mu\text{g}/\text{m}^3$				
										2019* c	2020* c	2021* c	2022 *c	2023* c
Derry Rosemount	Urban background	N	-	96%	96%	96%	94%	69%	Y	2	2	2	1	1
Springhill Park, Strabane	Urban background	N	-	99%	99%	93%	97%	65%	Y	2	3	3	2	2

Figure 2.4 Trends in Annual Hourly Mean SO₂ Concentrations

2.2.4 Benzene

No benzene monitoring takes place within Derry City and Strabane District Council area.

2.2.5 Other pollutants monitored

PM_{2.5}

PM_{2.5} is measured at Derry Rosemount, Bawnmore Place Strathfoyle, Springhill Strabane and Newtownstewart. PM_{2.5} objectives have been set out in the UK Air Quality Regulations, although, there is no requirement for local authorities to review and assess PM_{2.5} against these objectives as part of the LAQM regime. Results have been reported as recommended by Technical Guidance LAQM.TG22, shown in Table 2.11. All results are below the UK limit value of 20 µg/m³.

As 2023 data capture levels at the Bawnmore Place site (35%), was below the Department's 85% data capture threshold for PM_{2.5}, annualisation of data from this site was required and undertaken in accordance with LAQM.TG22 guidance.

The 90.4th percentiles of 24-hour mean PM_{2.5} concentrations were also less than 20 µg/m³ at all sites with data capture lower than 85% indicating exceedances of the 24-hour mean PM_{2.5} Air Quality Objective were very unlikely to have occurred.

Table 2.11 Results of Automatic Monitoring of PM_{2.5}: Comparison with Annual Mean Objectives (20µg/m³)

Site ID	Site Type	Within AQMA? Which AQMA?	Valid Data Capture for monitoring Period % ^a	Valid Data Capture 2023 % ^b	Confirm Gravimetric Equivalent	2019* ^c	2020* ^c	2021* ^c	2022* ^c	2023 ^c
Derry Rosemount	Urban background	N	-	94%	Y	9	7	7	9	8
Springhill Park, Strabane	Urban background	N	-	35%	Y	-	-	-	8	8 (17 ^c)
Bawnmore Place Strathfoyle	Suburban	N	-	98%	Y	-	-	-	4	6
Newtownstewart	Urban background	N	-	98%	Y	-	-	-	8	8

^a i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

^b i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

^c if data capture is less than 85%, include the 90.4th percentile of 24-hour means in brackets

* Optional

Ozone (O₃)

Ozone is measured at the Derry Rosemount site. O₃ is a transboundary pollutant; the sources of O₃ are frequently spatially distant from the measured site of the concentrations. This pollutant is not a prescribed air quality objective for LAQM purposes; however, it has been reported as recommended by Technical Guidance LAQM.TG16.

The monitoring data are shown in Table 2.12. There were no exceedances of 8-Hour Running Mean in 2019, 2020, 2021, 2022 or 2023.

Table 2.12 Results of Automatic Monitoring of Ozone: Comparison with Annual Hourly Mean Objective (100µg/m³)

Site ID	Site Type	Within AQMA? Which AQMA?	Valid Data Capture for monitoring Period % ^a	Valid Data Capture 2023 % ^b	Confirm Gravimetric Equivalent	2019* ^c	2020* ^c	2021* ^c	2022* ^c	2023 ^c
Derry Rosemount	Urban background	N		99	Y	0	0	0	0	0

^a i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

^b i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

^c if data capture is less than 85%, include the 90.4th percentile of 24-hour means in brackets

* Optional

Polycyclic Aromatic Hydrocarbons (PAH)

As part of the UK network, PAH is measured on behalf of DEFRA/DAERA at the Derry Brandywell site. Exceedences of the target value of 1 nanogram/m³ for the annual mean concentration of B[a]P were historically measured in 2010 and 2016. From 2018 – 2023 the annual mean concentrations of B[a]P were 0.66, 0.82, 0.63, 0.6, 0.6 and 0.6. Full results can be found at: https://uk-air.defra.gov.uk/data/non-auto-data?uka_id=UKA00499&network=paha&s=View+Site

2.2.6 Summary of Compliance with AQS Objectives

Derry City and Strabane District Council has examined the results from monitoring in the council area. Concentrations are all below the objectives at the relevant locations, therefore there is no need to proceed to a Detailed Assessment.

3 Road Traffic Sources

3.1 Narrow Congested Streets with Residential Properties Close to the Kerb

Derry City and Strabane District Council confirms that there are no new/newly identified congested streets with a flow above 5,000 vehicles per day and residential properties close to the kerb, that have not been adequately considered in previous rounds of Review and Assessment.

3.2 Busy Streets Where People May Spend 1 hour or More Close to Traffic

Derry City and Strabane District Council confirms that there are no new/newly identified busy streets where people may spend 1 hour or more close to traffic.

3.3 Roads with a High Flow of Buses and/or HGVs.

Derry City and Strabane District Council confirms that there are no new/newly identified roads with high flows of buses/HDVs.

3.4 Junctions

Derry City and Strabane District Council confirms that there are no new/newly identified busy junctions/busy roads.

3.5 New Roads Constructed or Proposed Since the Last Round of Review and Assessment

There is one new road and one proposed major road project in the Derry City and Strabane District Council area since the last screening assessment.

In April 2023, the A6 Dungiven to Drumahoe Dual Carriageway opened. The project was supported by the submission of an Air Quality Assessment and is available at the hyperlink: [https://www.infrastructure-ni.gov.uk/publications/a6-londonderry-dungiven-environmental-statement#:~:text=The%20environmental%20statement%20is%20a,Regulations%20\(North%20Ireland\)%202007.](https://www.infrastructure-ni.gov.uk/publications/a6-londonderry-dungiven-environmental-statement#:~:text=The%20environmental%20statement%20is%20a,Regulations%20(North%20Ireland)%202007.)

Sections 1 and 2 of the A5 Western Transport Corridor currently run through the district. A detailed air quality assessment has been undertaken for the A5 WTC Road project.

Derry City and Strabane District Council has assessed new/proposed road meeting the criteria in Table 7.1 of Chapter 7 of LAQM.TG22 and concluded that it will not be necessary to proceed to a Detailed Assessment.

3.6 Roads with Significantly Changed Traffic Flows

Derry City and Strabane District Council confirms that there are no new/newly identified roads with significantly changed traffic flows.

3.7 Bus and Coach Stations

Derry City and Strabane District Council confirms that there are no relevant bus stations in the Local Authority area.

4 Other Transport Sources

4.1 Airports

Derry City and Strabane District Council confirms that there are no new/newly identified airports in the council area. In 2023, approx. 154,392 passengers passed through the City of Derry Airport on scheduled and chartered flights, with no freight only planes.

The total equivalent passengers through the City of Derry Airport is well below the 10 million passengers per annum threshold for relevant exposure as set out in the technical guidance.

4.2 Railways (Diesel and Stream Trains)

4.2.1 Stationary Trains

Derry City and Strabane District Council confirms that there are no locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.

4.2.2 Moving Trains

Derry City and Strabane District Council confirms that there are no locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.

4.3 Ports

Located within the council area is Foyle Port at Lisahally. Derry City and Strabane District Council previously considered this port against the criteria within the technical guidance note.

No changes has been noted in the frequency of arrivals at the port since the previous screening assessment.

Derry City and Strabane District Council confirms that there are no ports or shipping that meet the specified criteria within the Local Authority area.

5 Industrial Sources

5.1 Industrial Installations

5.1.1 New or Proposed Installations for which an Air Quality Assessment has been Carried Out

In Northern Ireland, the permitting of prescribed industrial activities under the Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013 is undertaken by both local authorities (Part C processes) and the Industrial Pollution and Radiochemical Inspectorate (IPRI) of the Department of Agriculture, Environment and Rural Affairs (Part A and B processes).

Part A processes have the greatest capacity to pollute and as a result can impact detrimentally upon air, land and water. For this reason, they require an integrated approach to controlling whereas Part B and Part C processes are regulated for emissions to air only.

Derry City and Strabane District Council have 32 permitted Part A or B Processes within the borough. Public Register of Part A and B Processes by DAERA NI is available here - <https://public-registers.daera-ni.gov.uk/pollution-prevention-control>

Derry City and Strabane District Council have 42 Part C Permitted Processes within the Borough. A list of Part C Processes regulated by Derry City and Strabane District Council is available at the following website: <http://www.derrystrabane.com/services/health-communitywellbeing/environment-and-neighbourhoods/pollution-prevention-control>

Derry City and Strabane District Council confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

5.1.2 Existing Installations where Emissions have Increased Substantially or New Relevant Exposure has been Introduced

Derry City and Strabane District Council confirms that there are no industrial installations with substantially increased emissions or new relevant exposure in their vicinity within its area or nearby in a neighbouring authority.

5.1.3 New or Significantly Changed Installations with No Previous Air Quality Assessment

Derry City and Strabane District Council confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

5.2 Major Fuel Depots

Consideration was given previously to LCC Oil Storage and Distribution Terminal at Maydown. The previous assessment considered the following: The terminal is approximately 860 metres from residential properties. Using the nomogram in LAQM.TG(09) (Figure 5.16), emissions of benzene would be required to be in excess of 4 tonnes per annum for an annual mean ground level concentration of 0.22g/m^3 to be reached at the residential properties. This is considered highly unlikely based upon the annual throughput of fuels, and further assessment is not deemed necessary.

Derry City and Strabane District Council has assessed a major petrol storage depot, and concluded that it will not be necessary to proceed to a Detailed Assessment.

5.3 Petrol Stations

Derry City and Strabane District Council confirms that there are no petrol stations meeting the specified criteria.

5.4 Poultry Farms

Derry City and Strabane District Council confirms that there are no poultry farms meeting the specified criteria.

6 Commercial and Domestic Sources

6.1 Biomass Combustion – Individual Installations

Derry City and Strabane District Council confirms that there are no new biomass combustion plant in the Local Authority area.

6.2 Biomass Combustion – Combined Impacts

Derry City and Strabane District Council confirms that there are no relevant biomass combustion plant in the Local Authority area.

6.3 Domestic Solid Fuel Burning

Derry City and Strabane District Council have declared smoke control areas within Strabane, Newtownstewart and Castlederg. Details of these areas are available at the following website: <http://www.derrystrabane.com/services/health-communitywellbeing/environment-and-neighbourhoods/air-quality>

Derry City and Strabane District Council confirms that there are no areas of significant domestic fuel use in the Local Authority area.

7 Fugitive or Uncontrolled Sources

Derry City and Strabane District Council confirms that there are no potential sources of fugitive particulate matter emissions in the Local Authority area.

8 Conclusions and Proposed Actions

8.1 Conclusions from New Monitoring Data

Derry City and Strabane District Council has presented a range of monitoring data within this Updating and Screening Assessment Report that addresses a number of the pollutants prescribed within the UK Air Quality Strategy.

There were no monitored exceedances for any of the Air Quality Strategy objectives for sulphur dioxide, and particulate matter during 2023.

The NO₂ levels in Spencer Road AQMA have remained low and below the annual mean objective of 40 µg/m³, therefore, Derry City and Strabane District Council shall move forward to produce a detailed assessment with the intention of revoking the AQMA.

8.2 Conclusions from Assessment of Sources

Following the updated screening assessment, no new sources were identified. In 2023 work has progressed with new legislative requirements to permit Medium Scale Combustion Plant and Specified Generators across the council area. Once relevant plant has been identified, screening will be required to determine LAQM impacts.

8.3 Proposed Actions

Derry City and Strabane District Council is focused on improving air quality as a whole, therefore all existing monitoring sites shall remain in 2024.

Derry City and Strabane District Council will continue to review monitoring results within our AQMA site and where results have remained low for over five years, Derry City and Strabane District Council shall move forward to produce a detailed assessment with the intention of revoking the relevant AQMAs.

Derry City and Strabane District Council previously recommended that the AQMA at Spencer Road should be revoked. This formal process will commence.

Derry City and Strabane District Council shall submit an Air Quality Progress report in 2025.

9 References

- Local Air Quality Management Guidance – TG22
<https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf>
- Defra ‘Workplace Analysis Scheme for Proficiency (WASP) NO₂ diffusion tubes proficiency tests’.
<https://laqm.defra.gov.uk/air-quality/air-quality-assessment/qa-qc-framework/>
- Department for Infrastructure (DfI) – Regional Development Strategy for NI 2035
<https://www.infrastructure-ni.gov.uk/publications/regional-development-strategy-2035>
- DAERA – Environment Strategy
<https://www.daera-ni.gov.uk/news/poots-approves-finalised-environment-strategy>
- DfI – Strategic Planning Policy Statement
<https://www.infrastructure-ni.gov.uk/publications/strategic-planning-policy-statement>
- Environment (Northern Ireland) Order 2002.
<http://www.legislation.gov.uk/nisi/2002/3153/contents/made>
- Northern Ireland Air – Air Quality in Northern Ireland website
<http://www.airqualityni.co.uk/>

Appendices

Appendix A: QA/QC Data

Appendix B: Monthly Diffusion Tube Results

Appendix C: Derry City and Strabane District Council Air Quality Data Ratification 2023 and the LAQM Statistics

Appendix D: Appendix D: Derry City and Strabane District Council Air Quality Data Ratification 2023 and the LAQM Statistics (Newtownstewart Only)

Appendix A: Quality Assurance / Quality Control (QA/QC)

Data

QA/QC of Diffusion Tube Monitoring

SOCOTEC, formerly ESG Didcot, has participated in the AIR NO₂ PT scheme since it started in April 2014, and participated in the Workplace Analysis Scheme for Proficiency (WASP) for NO₂ diffusion tube analysis prior to this. These schemes provide strict performance criteria for participating laboratories to meet, thereby ensuring NO₂ concentrations reported are of a high calibre. AIR is an independent analytical proficiency-testing (PT) scheme, operated by LGC Standards and supported by the Health and Safety Laboratory (HSL). AIR PT is a new scheme, started in April 2014, which combines two long running PT schemes: LGC Standards STACKS PT scheme and HSL WASP PT scheme. AIR offers a number of test samples designed to test the proficiency of laboratories undertaking analysis of chemical pollutants in ambient indoor, stack and workplace air. One such sample is the AIR NO₂ test sample type that is distributed to participants in a quarterly basis. AIR NO₂ PT forms an integral part of the UK NO₂ Network's QA/QC. The scores achieved by SOCOTEC are shown in Table A.2. The percentage score reflects the results deemed to be satisfactory based upon the z-score of $< \pm 2$.

Laboratory summary performance for AIR NO₂ PT rounds AR050, 52, 53, 55, 56, 58, 59, 62 and 63

AIR PT Round	AIR PT AR050	AIR PT AR052	AIR PT AR053	AIR PT AR055	AIR PT AR056	AIR PT AR058	AIR PT AR059	AIR PT AR062	AIR PT AR063
Round conducted in the period	May – June 2022	July – August 2022	September – October 2022	January – February 2023	May – June 2023	July – August 2023	September – October 2023	January – February 2024	April – June 2024
SOCOTEC	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]

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

Precision versus Accuracy (Bias)

The spreadsheet of diffusion tube co-location results, used for calculating a national bias adjustment factor, also contains information on the precision of the diffusion tubes, in those cases where duplicate or triplicate tubes were exposed. At the request of a number of local authorities, the precision data for each laboratory have been brought together in a summary form.

Precision should not be confused with accuracy. Diffusion tube precision can be described as the ability of a measurement to be consistently reproduced, i.e., how similar the results of duplicate or triplicate tubes are to each other. Accuracy represents the ability of the measurement to represent the “true” value, which, in this case, is defined as the result from the automatic analyser. When averaged over a number of sets of results, bias can become evident. This represents the overall tendency of the diffusion tubes to depart from the “true” value, i.e., to systematically over- or under-read when compared against the reference method.

Once identified, bias can be adjusted for in order to improve the accuracy of diffusion tube results. This is completed using bias adjustment factors, which have been found to be specific to a laboratory and tube preparation method.

Unlike bias, poor precision cannot be adjusted for. It can only be improved by careful handling of the tubes in both the laboratory and the field.

Precision Summary Table

Diffusion Tube Preparation Method	2021 Good	2021 Bad	2022 Good	2022 Bad	2023 Good	2023 Bad
ESG Didcot / SOCOTEC, 50% TEA in Acetone	25	3	29	0	28	0

The table above shows that there were very few bad results with the vast majority classified as “good.”

Full results can be found at

<https://laqm.defra.gov.uk/air-quality/air-quality-assessment/precision-and-accuracy/>

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Derry City and Strabane District 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

Derry City and Strabane District Council have applied a national bias adjustment factor of 0.78 to the 2023 monitoring data. A summary of bias adjustment factors used by Derry City and Strabane District Council over the past five years is presented in Table A.1.

Table A.1 Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	National	03/26	0.78
2022	Local	-	0.95
2021	Local	-	0.88
2020	Local	-	0.76
2019	Local	-	0.77

NO₂ Fall-off with Distance from the Road

No diffusion tube NO₂ monitoring locations within Derry City and Strabane District Council required distance correction during 2023.

QA/QC of Automatic Monitoring

The Rosemount AURN site is managed to the UK Automatic Urban and Rural Network (AURN) QA procedures and standard. The National Physical Laboratory (NPL) undertook the Quality Assurance/Quality Control (QA/QC) procedures at the three non-AURN monitoring sites during 2023, ensuring that measurements from the analysers were as accurate as possible. Manual calibration of automatic monitors was undertaken every two weeks by the Council's officers. This allowed the instrument drifts to be fully quantified and documented using traceable calibration gas standards and the results are used to scale data. The analysers were checked and serviced every six months by the appointed equipment support contractors, EnviroTechnology. The reports were then sent to AQDM for data ratification

PM₁₀ and PM_{2.5} Monitoring Adjustment

All PM₁₀ and PM_{2.5} monitors utilised within Derry City and Strabane District Council do not require the application of a correction factor.

Automatic Monitoring Annualisation

All automatic monitoring locations within Derry City and Strabane District 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.

NO₂ Fall-off with Distance from the Road

No automatic NO₂ monitoring locations within Derry City and Strabane District Council required distance correction during 2023.

Table A.2 Annualisation Summary – PM₁₀ (concentrations presented in µg/m³)

Site ID	Annualisation Factor Bawnmore Place Strathfoyle	Annualisation Factor Newtownstewart	Annualisation Factor Ballymena Ballykeel	Average Annualisation Factor	Raw Data Simple Annual Mean (µg/m ³)	Annualised Data Simple Annual Mean (µg/m ³)	Comments
Derry, Rosemount	0.83	1	0.83	0.89	12	11	None
Springhill Park, Strabane	0.83	1	0.83	0.89	12	11	None

Table A.3 Local Bias Adjustment Calculations

 BUREAU VERITAS	Local Bias Adjustment Outputs - Information Only				
	Go back to STEP 3 - Bias Adjustment to define factor				
	STEP 3a Local Bias Adjustment Input 1	STEP 3b Local Bias Adjustment Input 2	STEP 3c Local Bias Adjustment Input 3	STEP 3d Local Bias Adjustment Input 4	STEP 3e Local Bias Adjustment Input 5
Periods used to calculate bias	7	9			
Bias Adjustment Factor A	0.7 (0.58 - 0.89)	1.02 (0.88 - 1.22)			
Diffusion Tube Bias B	43% (12% - 73%)	-2% (-18% - 14%)			
Diffusion Tube Mean ($\mu\text{g}/\text{m}^3$)	11.7	32.8			
Mean CV (Precision)	8.1%	9.3%			
Automatic Mean ($\mu\text{g}/\text{m}^3$) (for periods used to calculate bias)	8.2	33.5			
Data Capture (for periods used to calculate bias)	99%	98%			
Overall Data Capture	85%	90%			
Adjusted Tube Mean ($\mu\text{g}/\text{m}^3$)	8 (7 - 10)	33 (29 - 40)			
Overall Diffusion Tube Precision	Poor Overall Precision	Poor Overall Precision			
Overall Continuous Monitor Data Capture	Poor Overall Data Capture	Poor Overall Data Capture			
Combined Local Bias Adjustment Factor	0.83	Warning - One or more Co-location studies has Poor Overall Diffusion Tube Precision (i.e. CV >10%). Local Bias Adjustment Factor is based on the worst performing study. One or more Co-location studies has Poor Overall Continuous Monitor Data Capture (i.e. <90%). Local Bias Adjustment Factor is based on the worst performing study.			

Appendix B: Monthly Diffusion Tube Results

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	NO ₂ Mean Concentrations (µg/m ³)												Simple Annual Mean (µg/m ³)		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Raw Data	Bias Adjusted (0.78)	Distance Corrected to Nearest Exposure
A1-3	59253	580590	17.3	15.2	14.7	11.8	10.1	7.4	6.4	8.0	9.2	10.4	18.5	10.7	11.6	9.1	-
C1-2	59291	580266	64.9	64.2	68.3	55.2	62.0	58.9	52.2	54.1	64.1	54.1	73.4	58.2	60.8	47.4	-
C3-4	59298	580220	39.1	41.2	40.0	33.7	35.7	29.4	26.1	28.9	30.4	35.0	43.5	29.0	34.3	26.8	-
C5-6	59332	580229	34.9	43.2	46.9	34.6	32.8	31.2	27.4	30.1	37.8	33.7	45.9	37.2	36.3	28.3	-
C7-8	59404	580302	24.4	24.5	24.4	18.2	15.3	17.8	10.1	17.2	20.7	19.1	28.7	22.8	20.3	15.8	-
C9-10	59303	580267	38.2	38.8	45.1	45.9	41.8	43.1	34.0	35.1	36.1	43.4	46.0	28.2	39.6	30.9	-
D1-3	60531	579772	39.1	38.0	35.2	31.0	28.4	32.9		24.4	26.1	29.7	35.7	28.3	31.7	24.7	-
D4-5	60543	579726	27.0	33.7	37.1	34.7	24.5	29.5	20.8	23.3	23.5	30.2	35.8	22.7	28.6	22.3	-
D6-7	60580	579759	49.3	56.2	54.8	56.3	54.5	51.3	46.9	40.8	46.4	53.8	59.5	39.7	50.8	39.6	-
D8-9	60615	579725	47.0	52.2	56.4	53.0	58.4	59.8	47.8	45.5	43.5	58.7	51.7	35.6	50.8	39.6	-
D10-11	60564	579805	47.8	57.6	59.5	63.4	49.3	52.9	42.3	40.3	45.0	50.5	49.0	39.7	49.8	38.8	-
D12-13	60590	579867	38.4	45.0	51.7	45.2	37.8	42.0	34.7	-0.5	42.1	38.0	49.7	35.2	38.3	29.9	-

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	NO ₂ Mean Concentrations (µg/m ³)												Simple Annual Mean (µg/m ³)		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Raw Data	Bias Adjusted (0.78)	Distance Corrected to Nearest Exposure
D14-15	60632	579936	38.5	39.0	43.2	32.4	29.6	28.3	56.4	23.4	34.2	20.8	37.3	30.5	34.5	26.9	-
D16-17	60533	579764	26.7	40.0	38.8	31.9	25.9	28.9	22.4	22.9	27.4	31.7	30.1	27.2	29.5	23.0	-
P1-2	59956	582076	29.9	28.6	30.0	24.6	19.0	19.4	18.3	16.1	22.4	23.7	25.1	19.3	23.0	18.0	-
P3-4	59947	582083	32.2	32.3	36.2	32.7	24.7	22.1	23.2	20.5	22.2	25.6	33.1	23.1	27.3	21.3	-
P5-6	60097	581965	30.7	32.3	39.4	34.4	28.7	29.9	24.2	22.5	23.6	31.9	38.7	21.6	29.8	23.3	-
P7-8	60011	582031	39.6	41.4	46.6	43.1	34.9	40.3	28.5	27.2	30.1	40.2	43.4	27.0	36.9	28.7	-
P9-10	60081	581964	45.6	47.7	29.5	34.7	38.9	28.9	33.9	31.0	34.5	32.6	34.5	37.4	35.8	27.9	-
P11-12	60068	581974	55.2	52.8	52.4	28.6	45.1	37.5	40.5	37.6	41.3	23.2	48.5	42.3	42.1	32.8	-
S7-8	59921	580863	37.6	35.9	36.1	88.3	25.9	21.0	24.4	22.4	27.2	24.4	31.3	24.2	33.2	25.9	-
SP1-2	60297	579101	36.9	44.8	45.4	44.0	35.8	38.2	31.3	35.1	34.3	38.8	39.9	32.9	38.1	29.7	-
FR1-2	59456	580186	30.6	32.0	36.4	37.4	24.5	32.0	29.5	24.3	26.7	27.7	34.8	24.9	30.1	23.5	-
FR3-4	59493	580324	30.2	34.3	38.5	30.7	25.7	31.2	20.1	24.5	27.4	33.8	29.7	25.1	29.3	22.8	-
RO1-2	59786	581064	25.8	21.0	20.2	34.6	14.4	14.2	12.7	13.4	16.8	19.9	17.2	17.4	19.0	14.8	-

Appendix C: Derry City and Strabane District Council

Air Quality Sata Ratification 2023 and the LAQM

Statistics

Derry and Strabane Air Quality Data Ratification 2023 and the LAQM Statistics

The 2023 data ratification for the Derry and Strabane air quality monitoring sites has been completed to the LAQM TG22 standards using the AURN methodology. This report summarises the individual Statistical Reports, includes network comparison plots and spreadsheets. The ratified concentrations, comparisons between stations, pollutants and across years have passed the quality control checks. The instruments continued to work well so high data captures can be expected during 2024.

QAQC Procedures

Attached is a summary of our QAQC procedures which can be added to the QAQC annex of the ASR.

Site Environment and Description

Station	Site Environment and Description
Derry Dale's Corner	Corner of King Street and Melrose Terrace KERBSIDE MAP PHOTO DASHBOARD
Newtownstewart	Behind Oldcastle Street and Dublin Street, Newtownstewart SUBURBAN MAP PHOTO DASHBOARD
Strabane Springhill Park	Springhill Park URBAN BACKGROUND MAP PHOTO
Strathfoyle Bawnmore Place	33 Bawnmore Place, Strathfoyle URBAN BACKGROUND MAP PHOTO DASHBOARD

Spreadsheets

The spreadsheets contain the full monthly, daily, hourly and 15-minute mean datasets for 2023. These spreadsheets can act as a historical record of the measurements. The monthly means may be useful for any annualisation but not NO₂ diffusion tube bias corrections. These spreadsheets, not the website, must be used if the consultants writing the ASR want to calculate the LAQM statistics from scratch.

LAQM Statistics

Here are the LAQM statistics for the ASR.

Nitrogen Dioxide NO₂

The NO₂ annual mean and hourly mean Objectives were not exceeded.

The NO₂ annual means and annual data captures are shown below. The AQS annual mean Objective is 40 µg m⁻³ and the annual data capture target is 85%.

Station	Annual Data Capture %	Annual Mean µg m ⁻³	Objective Exceeded
Derry Dale's Corner	90.0	33.1	No

The NO₂ annual mean does not need annualising using the methodology in the Technical Guidance (7.140) because the annual data capture was greater than 75%.

The NO₂ hourly mean AQS Objective is 200 µg m⁻³. The number of exceedances are shown below. There is an annual allowance of 18 hours.

Station	Number of Hourly Mean > 200 µg m ⁻³	Objective Exceeded	Maximum Hourly Mean µg m ⁻³	Annual Data Capture %	99.8 th Percentile µg m ⁻³
Derry Dale's Corner	0	No	159.7	90.0	-

The NO₂ 99.8th percentile (Technical Guidance 7.195) does not need to be reported because the annual data capture was greater than 85%.

PM₁₀

The gravimetric PM₁₀ annual mean and daily mean Objectives were not exceeded.

The gravimetric PM₁₀ annual means and annual data captures are shown below. The annual mean AQS Objective is 40 µg m⁻³ and the annual data capture target is 85%.

Station	Annual Data Capture %	Annual Mean µg m ⁻³	Objective Exceeded
Newtownstewart	98.3	11.9	No
Strabane Springhill Park	35.4	12.0	No
Strathfoyle Bawnmore Place	98.2	10.2	No

The PM₁₀ annual mean should be annualised using the methodology in the Technical Guidance (7.140) because the annual data capture was less than 75% and there was at least 3 months monitoring.

The gravimetric PM₁₀ daily mean AQS Objective is 50 µg m⁻³. The number of exceedances are shown below. There is an annual allowance of 35 days.

Station	Number of Daily Mean > 50 µg m ⁻³	Objective Exceeded	Maximum Daily Mean µg m ⁻³	Annual Data Capture %	90.4 th Percentile µg m ⁻³
Newtownstewart	0	No	39.8	98.3	-
Strabane Springhill Park	0	No	34.0	35.4	20.5
Strathfoyle Bawnmore Place	0	No	32.3	98.2	-

The PM₁₀ 90.4th percentile (Technical Guidance 7.182) should be reported because the annual data capture was less than 85%.

PM_{2.5}

The gravimetric PM_{2.5} annual means and annual data captures are shown below. The annual mean AQS Objective is 20 µg m⁻³ and the annual data capture target is 85%.

There is a target of a 35% reduction in population exposure compared with the average population exposure baseline period (2016 - 2018) by end of 2040.

The annual mean AQS Objective of 10 µg m⁻³ should not to be exceeded at any relevant monitoring station by 31st December 2040.

Station	Annual Data Capture %	Annual Mean µg m ⁻³	Objective Exceeded
Newtownstewart	98.3	8.2	No
Strabane Springhill Park	35.4	8.1	No
Strathfoyle Bawnmore Place	98.2	6.1	No

The PM_{2.5} annual mean should be annualised using the methodology in the Technical Guidance (7.140) because the annual data capture was less than 75% and there was at least 3 months monitoring.

Sulphur Dioxide SO₂

The SO₂ Objectives were not exceeded.

The SO₂ annual means and annual data captures are shown below. The AQS annual mean Objective is 20 µg m⁻³ and the annual data capture target is 85%.

Station	Annual Data Capture %	Annual Mean µg m ⁻³	Objective Exceeded
Strabane Springhill Park	65.5	1.8	No

The SO₂ annual mean should be annualised using the methodology in the Technical Guidance (7.140) because the annual data capture was less than 75% and there was at least 3 months monitoring.

The number of exceedances of the 15-minute AQS Objectives are shown below. There is an annual allowance of 35 15-minute means.

Station	Number of 15-minute Mean > 266 µg m ⁻³	Objective Exceeded	Maximum 15-minute Mean µg m ⁻³	Annual Data Capture %	99.9 th Percentile µg m ⁻³
Strabane Springhill Park	0	No	79.8	65.5	54.5

The number of exceedances of the hourly AQS Objectives are shown below. There is an annual allowance of 24 hours.

Station	Number of Hourly Mean > 350 µg m ⁻³	Objective Exceeded	Maximum Hourly Mean µg m ⁻³	Annual Data Capture %	99.7 th Percentile µg m ⁻³
Strabane Springhill Park	0	No	73.2	65.5	37.8

The number of exceedances of the daily AQS Objectives are shown below. There is an annual allowance of 3 days.

Station	Number of Daily Mean > 125 µg m ⁻³	Objective Exceeded	Maximum Daily Mean µg m ⁻³	Annual Data Capture %	99.2 nd Percentile µg m ⁻³
Strabane Springhill Park	0	No	22.9	65.5	18.4

The 99.9th, 99.7th and 99.2nd percentiles (Technical Guidance 7.2215) should be reported because the annual data capture was less than 85%.

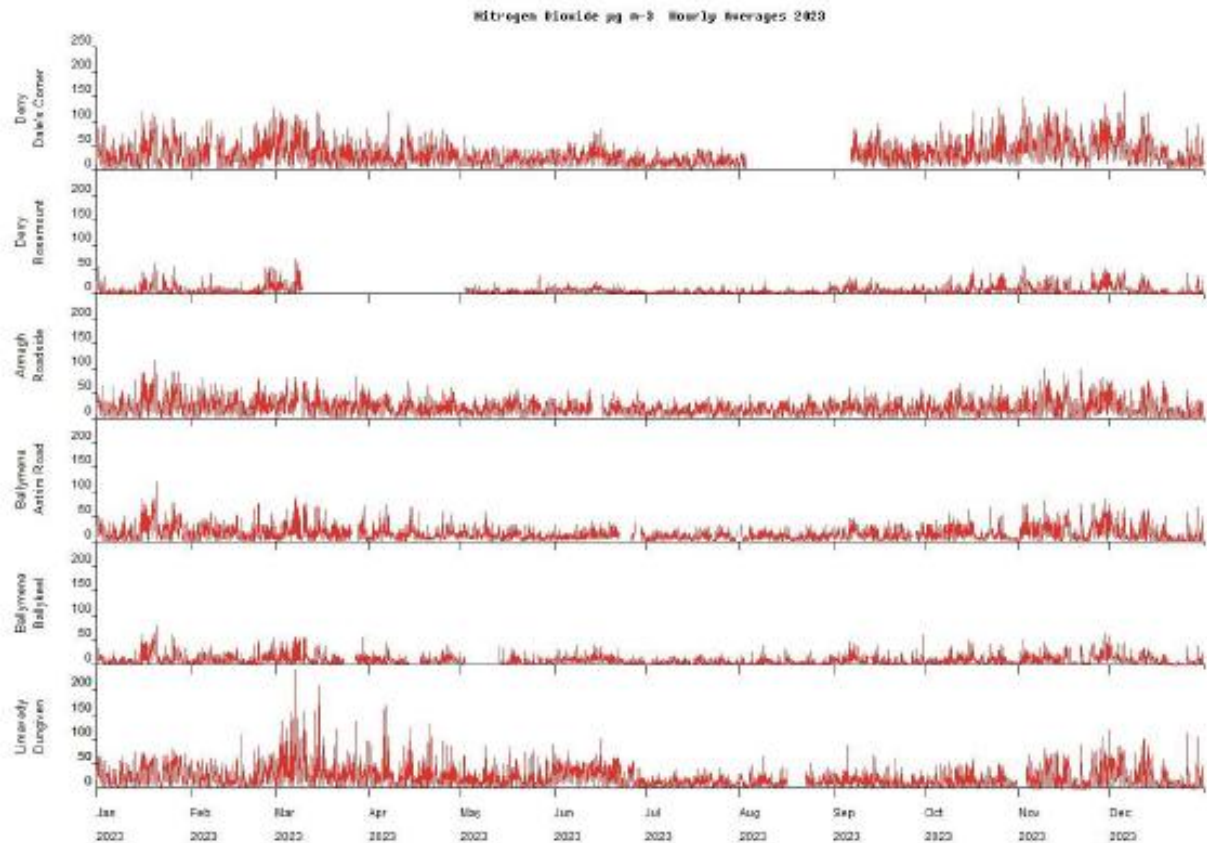
Daily Air Quality Index

The Daily Air Quality Index (DAQI) was introduced by Defra in January 2012 and revised April 2013. The number of occasions within each band is summarised as follows.

DAQI Pollutant	Station	Moderate	High	Very High
Nitrogen Dioxide	Derry Dale's Corner	0 hours	0	0
PM ₁₀ Particulate Matter	Newtownstewart	0 days	0	0
	Strabane Springhill Park	0	0	0
	Strathfoyle Bawnmore Place	0	0	0
PM _{2.5} Particulate Matter	Newtownstewart	0 days	0	0
	Strabane Springhill Park	0	0	0
	Strathfoyle Bawnmore Place	0	0	0
Sulphur Dioxide	Strabane Springhill Park	0 15-minutes	0	0

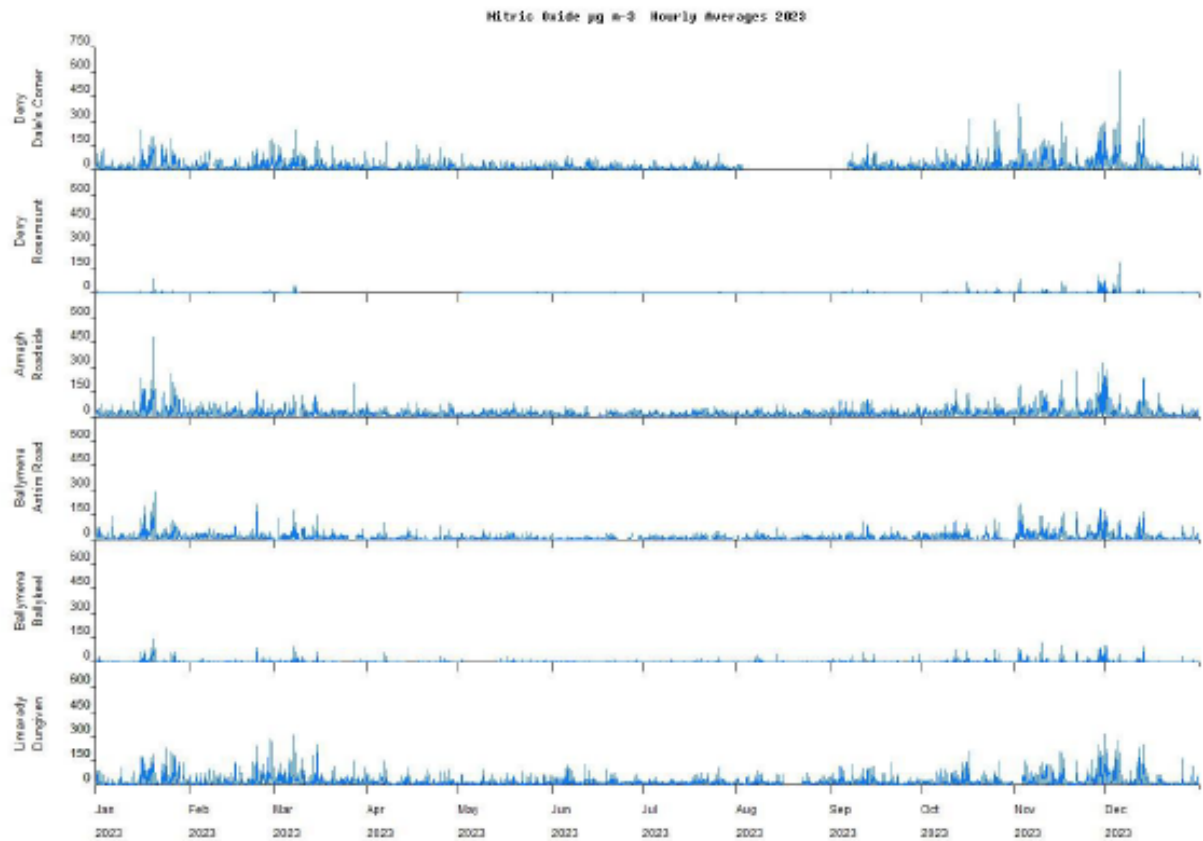
Timeseries Comparison Plots

These timeseries plots compare the measurements with the provisional data from nearby AURN sites. Measurements from individual stations should never be viewed in isolation.

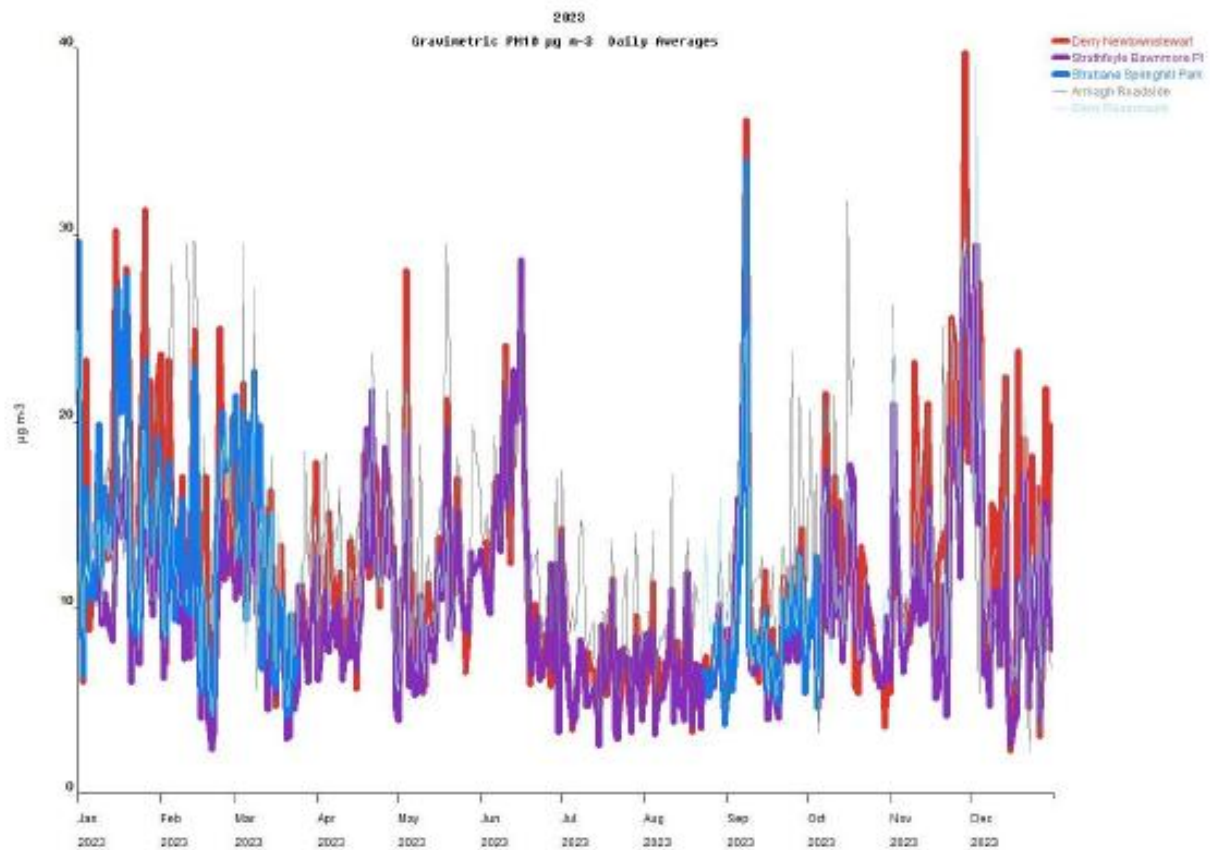


NO₂ Hourly Mean Concentrations during 2023

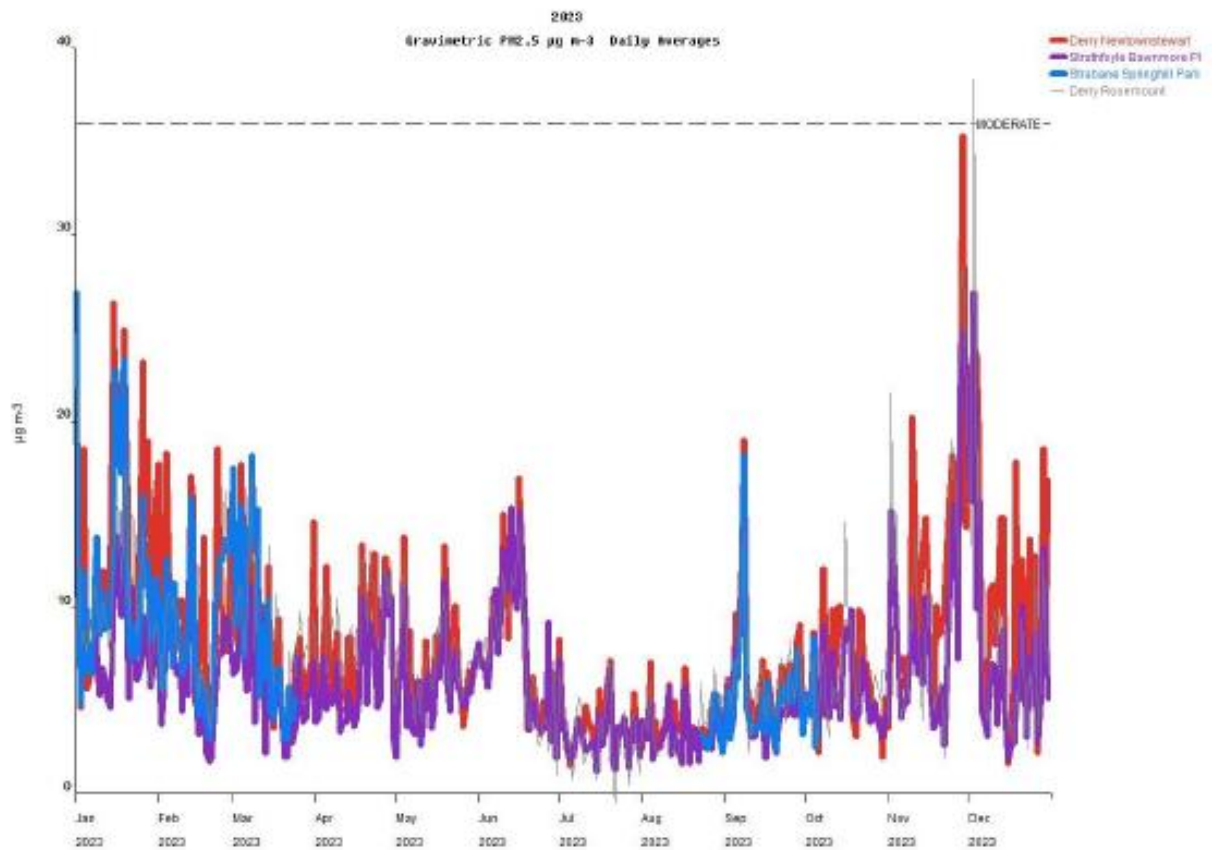
LAQM does not include Nitric Oxide (NO). This pollutant shows how the stations are influenced by traffic.



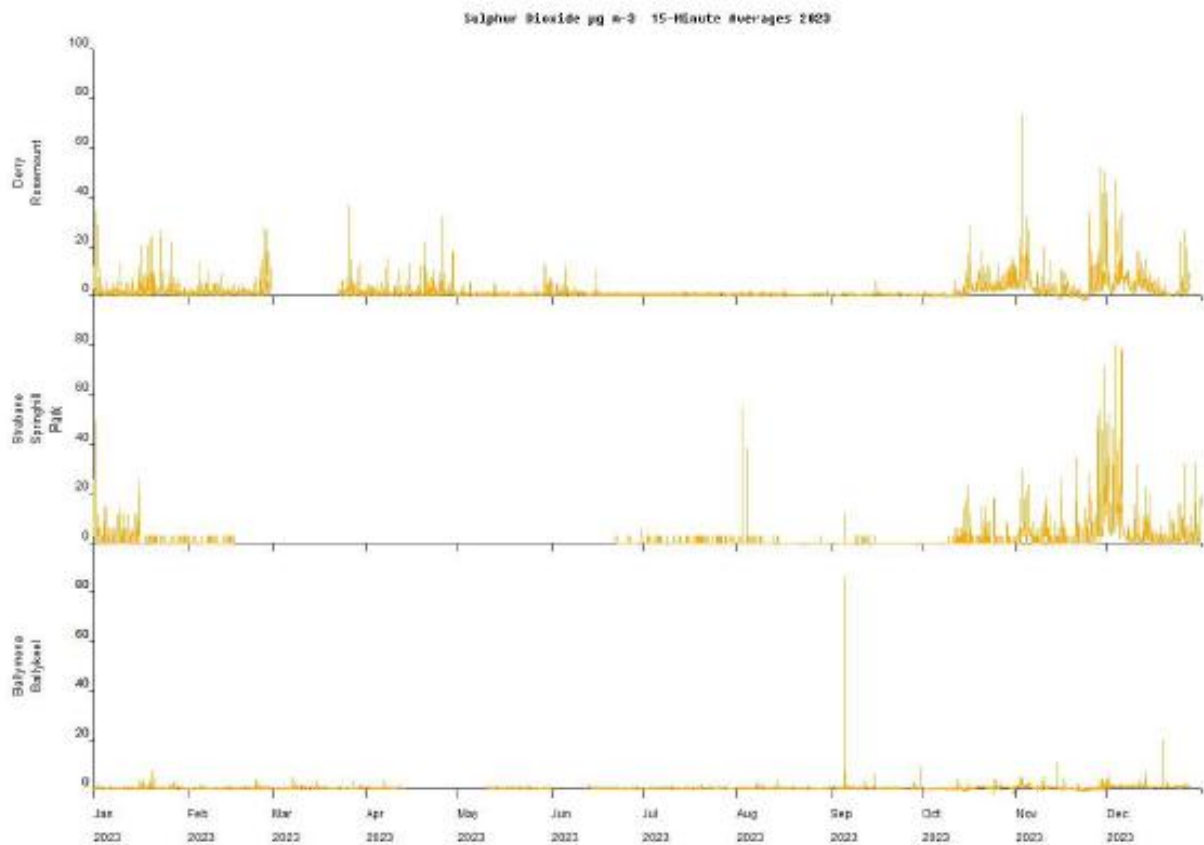
NO Hourly Mean Concentrations during 2023



PM₁₀ Daily Mean Concentrations during 2023



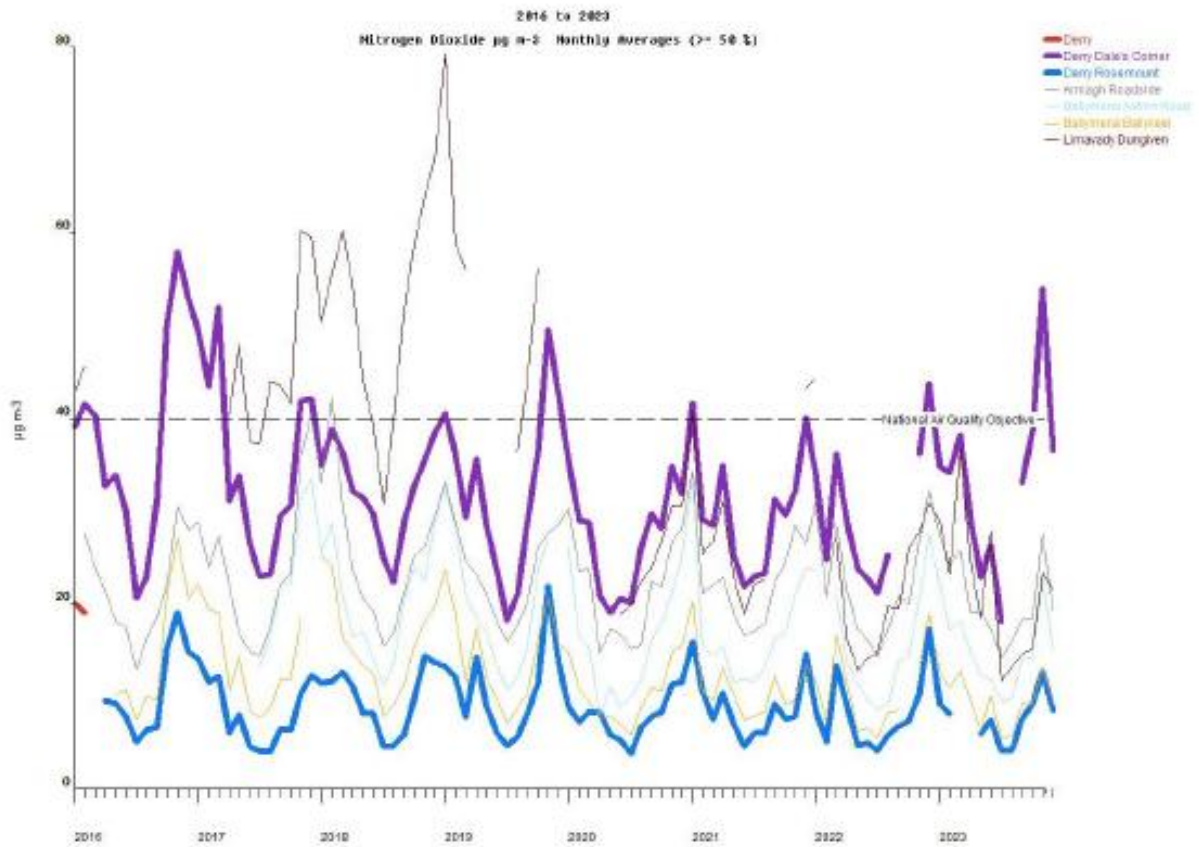
PM_{2.5} Daily Mean Concentrations during 2023



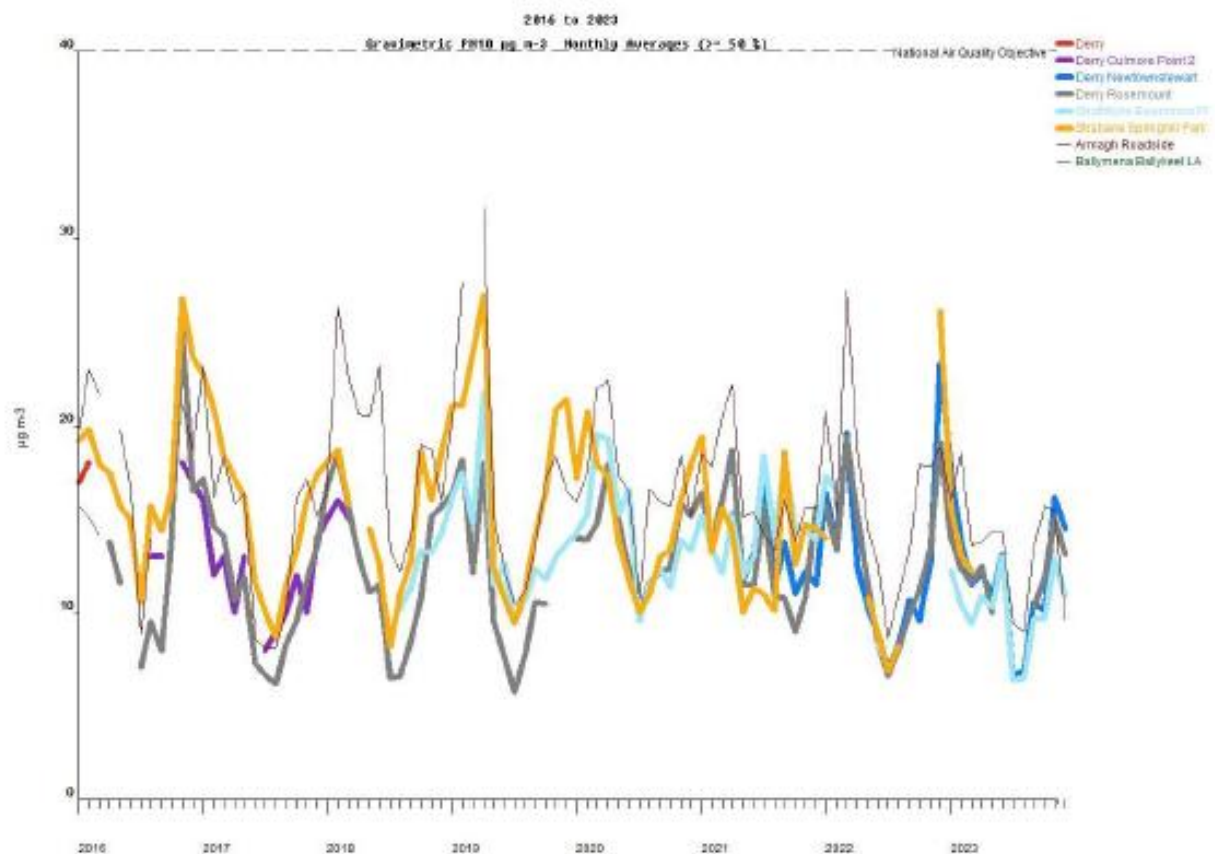
SO₂ 15-minute Mean Concentrations during 2023

Monthly Means Comparison Plots

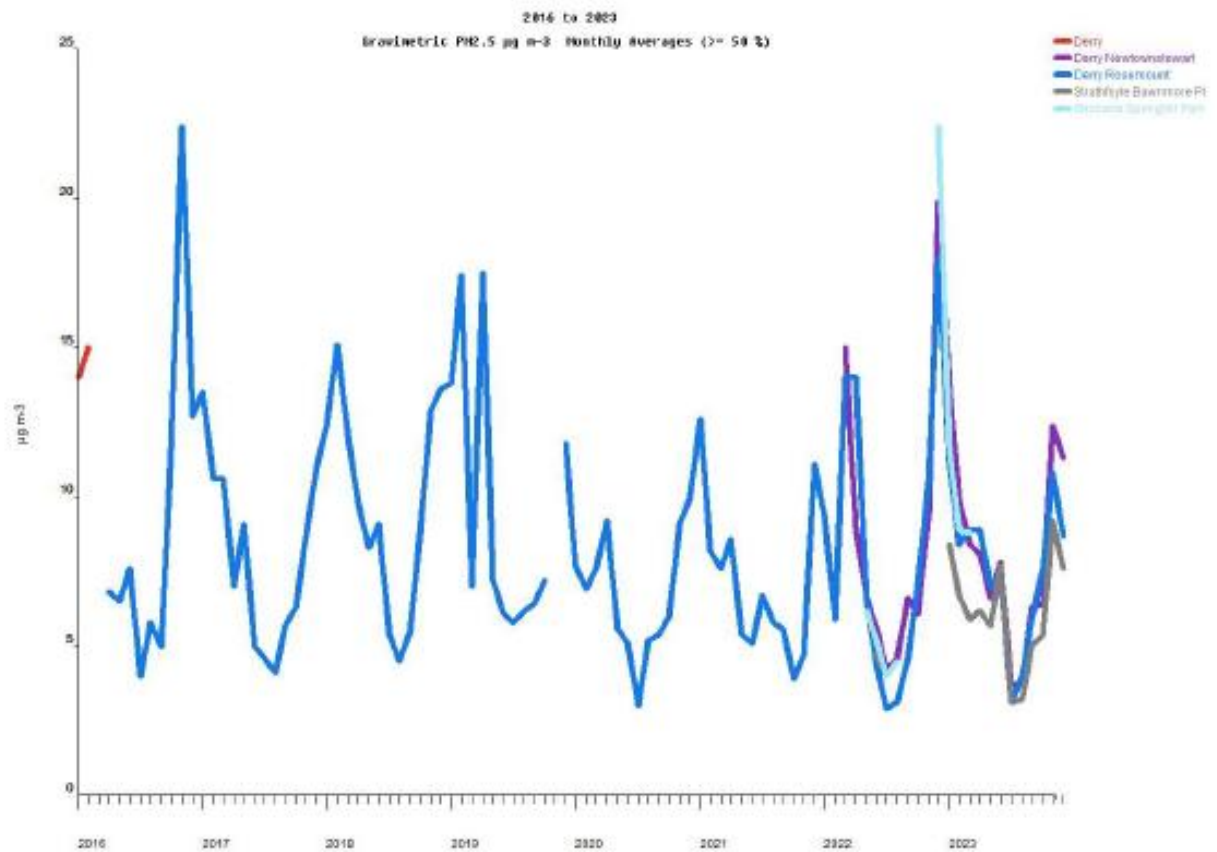
These timeseries plots compare the results with the nearby stations since 2016. These plots show the recent seasonal trends.



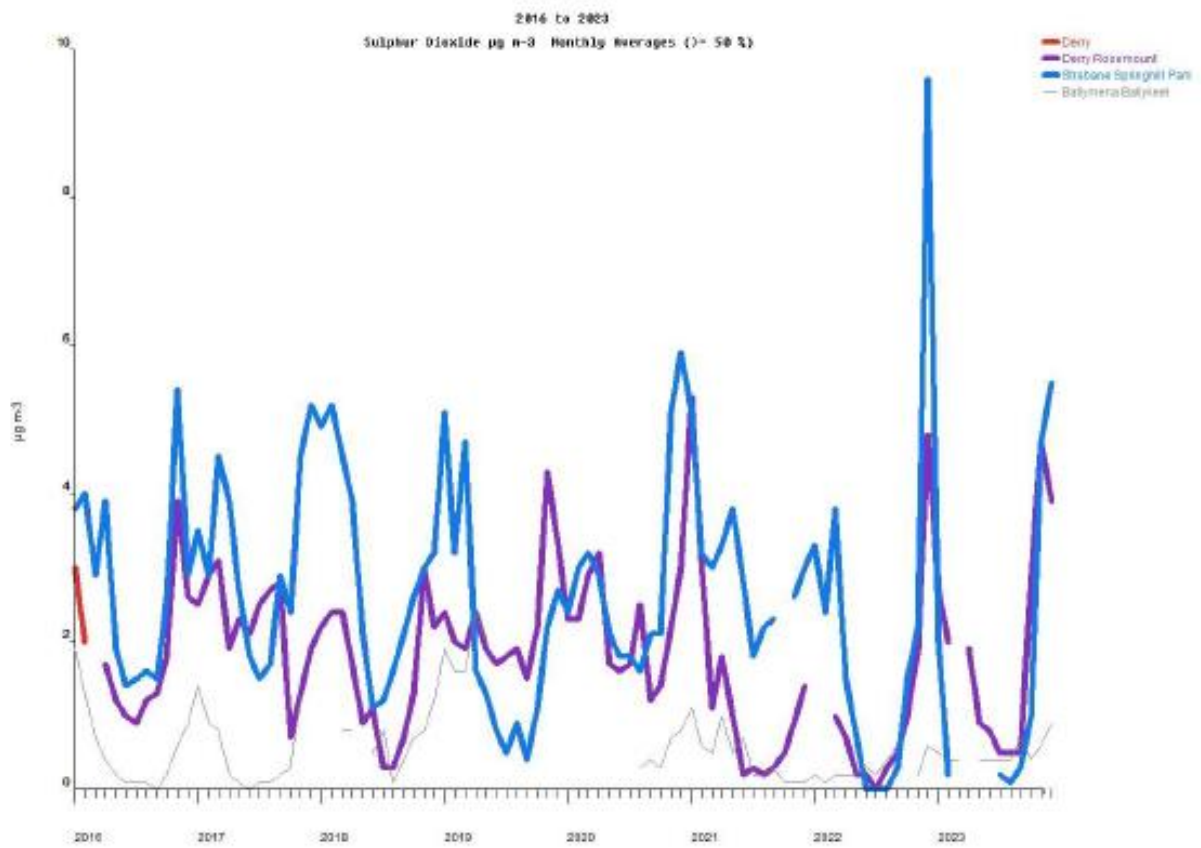
NO₂ Monthly Mean Concentrations from 2016



PM₁₀ Monthly Mean Concentrations from 2016



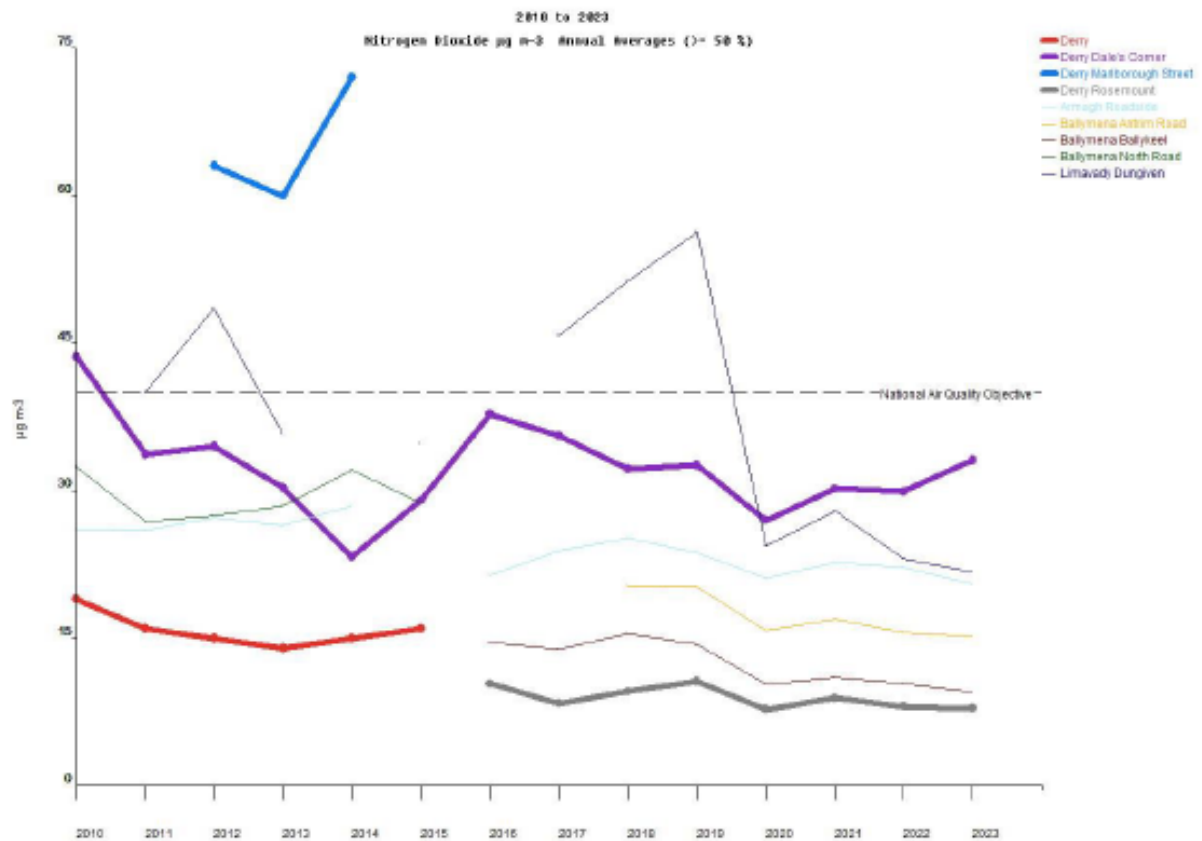
PM_{2.5} Monthly Mean Concentrations from 2016



SO₂ Monthly Mean Concentrations from 2016

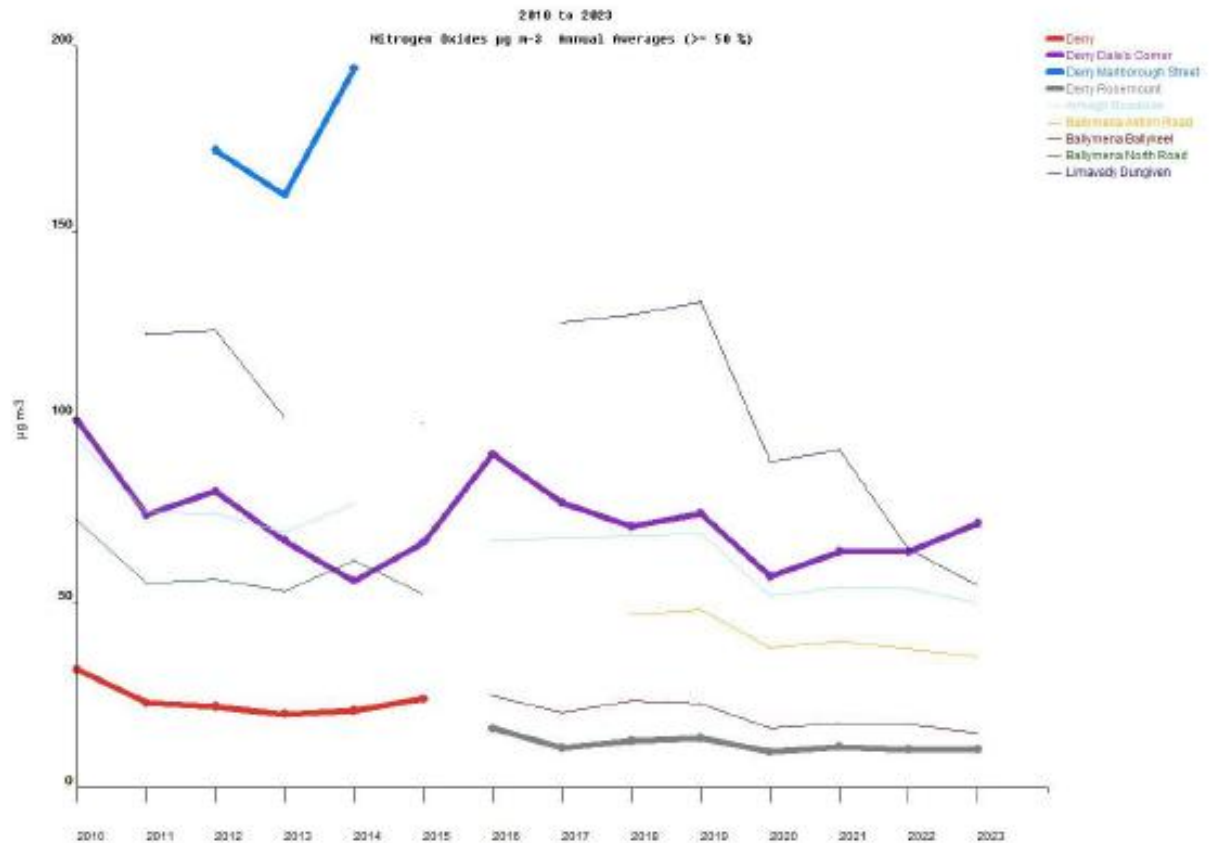
Annual Means Comparison Plots

These timeseries plots compare the results with the nearby stations since 2010. These plots show the long-term trends. Roadside locations generally have higher concentrations than Background and Rural locations.

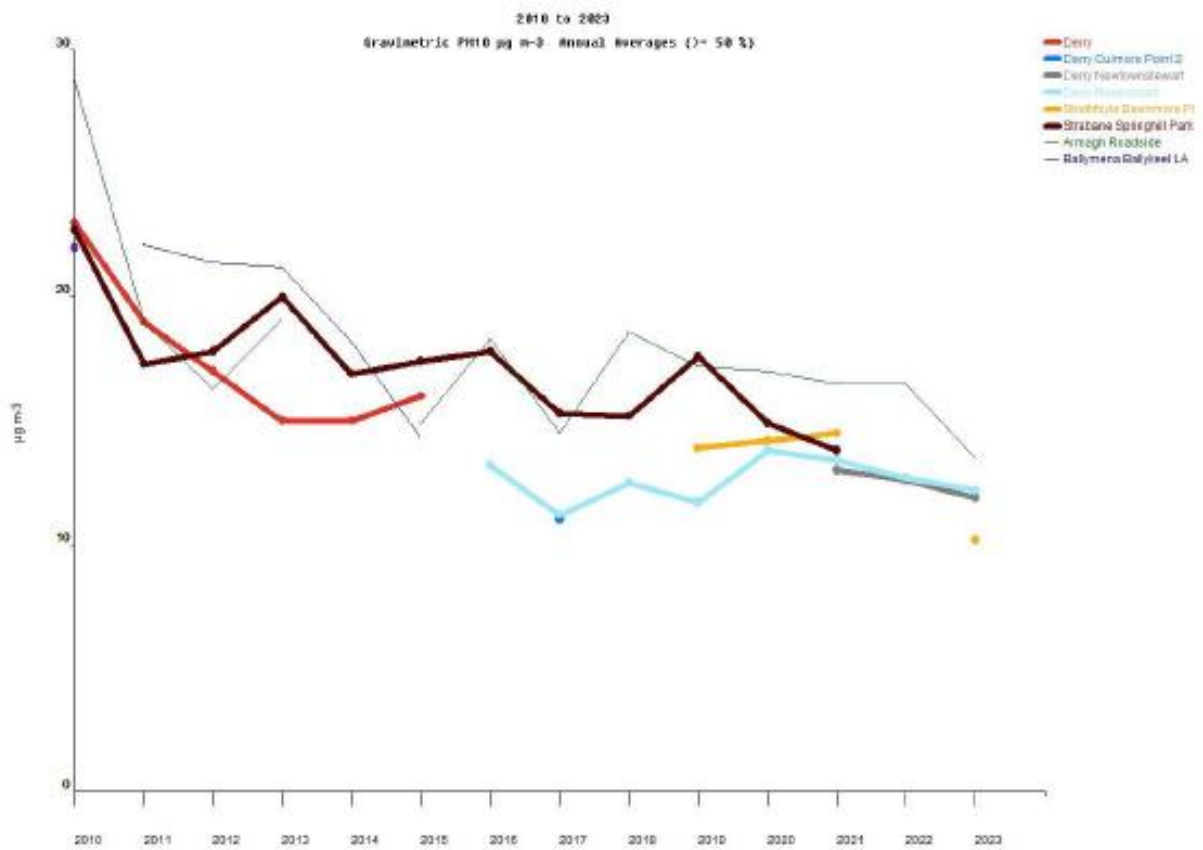


NO₂ Annual Mean Concentrations from 2010

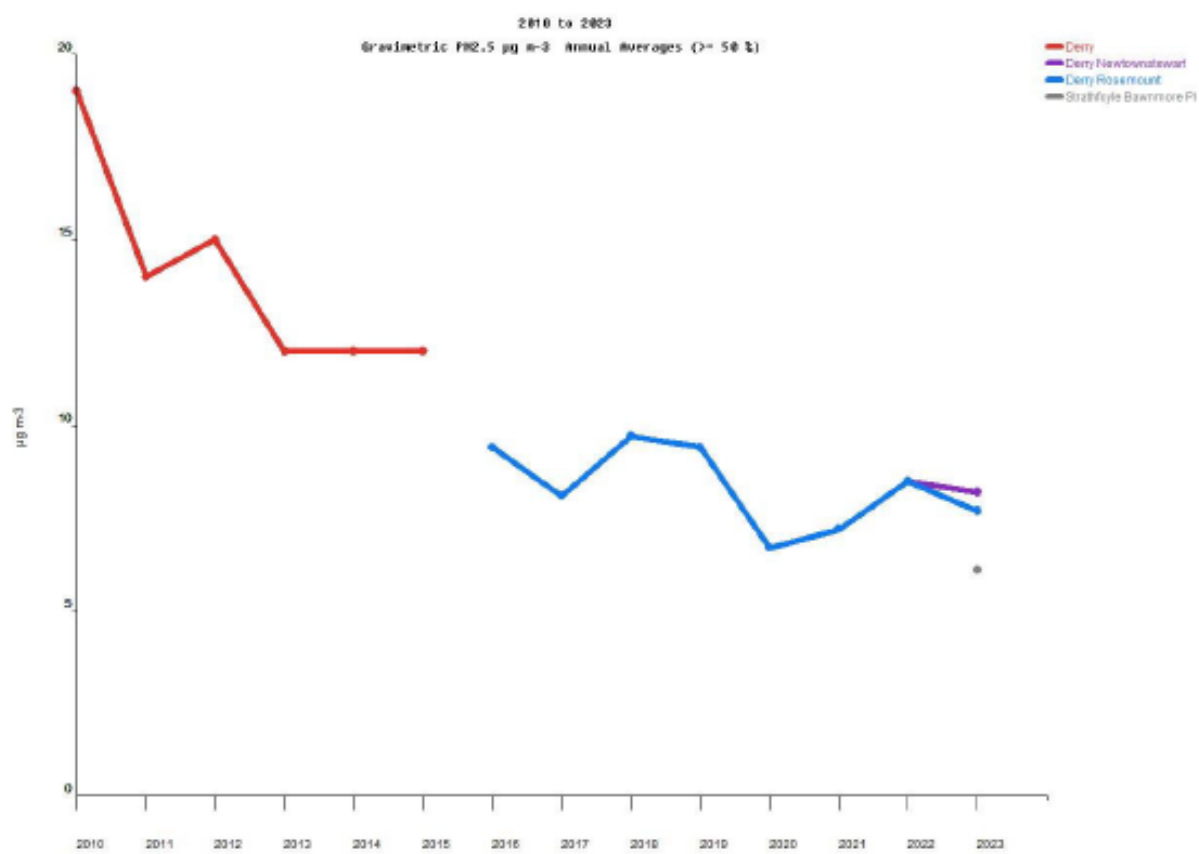
LAQM does not include Oxides of Nitrogen ($\text{NO}_x = \text{NO}_2 + \text{NO}$). This pollutant shows the long term trend in emission reduction. Roadside locations generally have higher concentrations than Background and Rural locations.



NO_x Annual Mean Concentrations from 2010



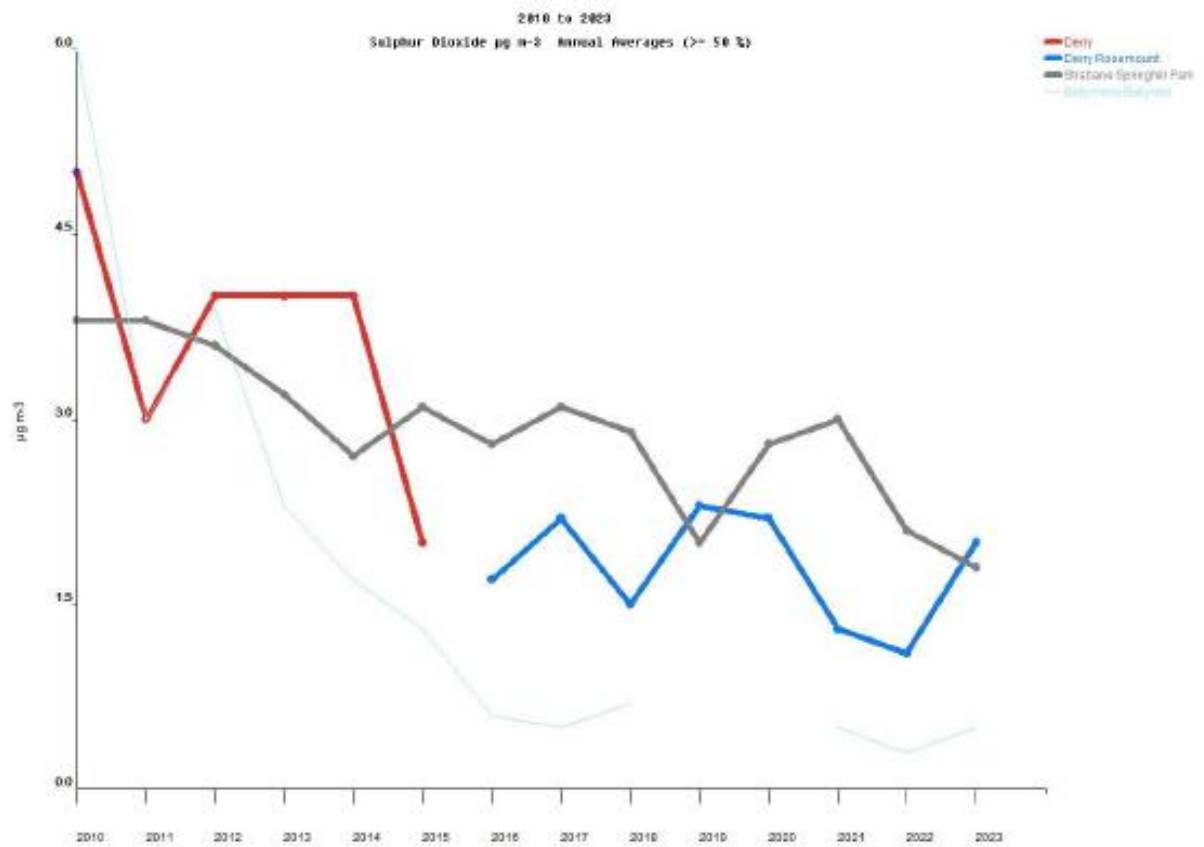
PM₁₀ Annual Mean Concentrations from 2010



PM_{2.5} Annual Mean Concentrations from 2010



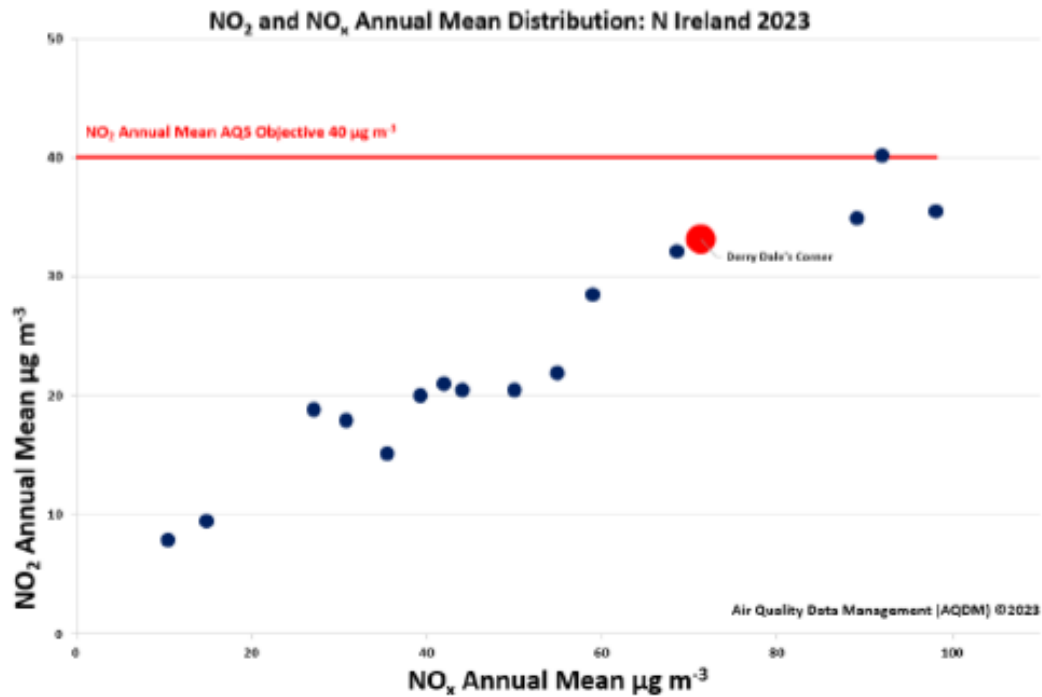
Air Quality Data Management (AQDM)
17 January 2024



SO₂ Annual Mean Concentrations from 2010

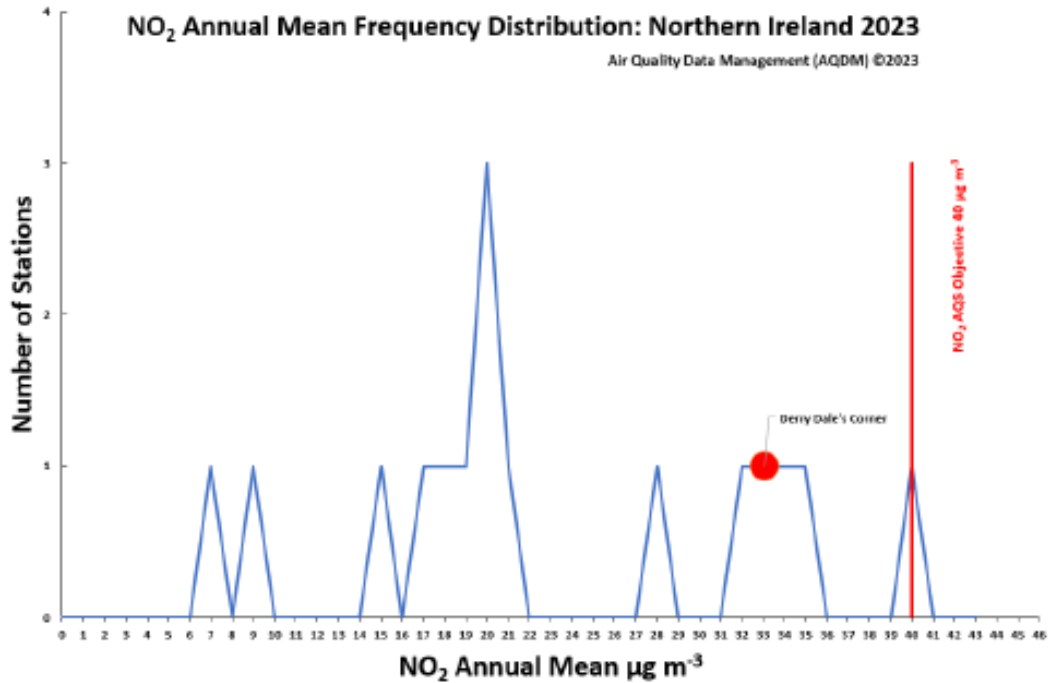
NO₂ and NO_x Annual Means Comparison Plot

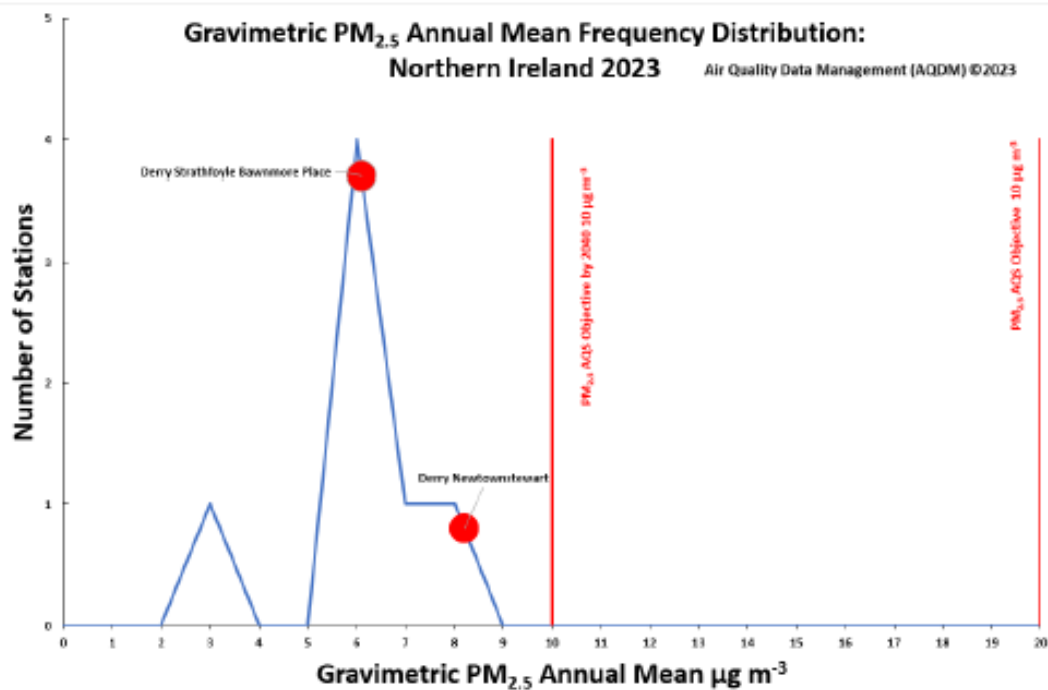
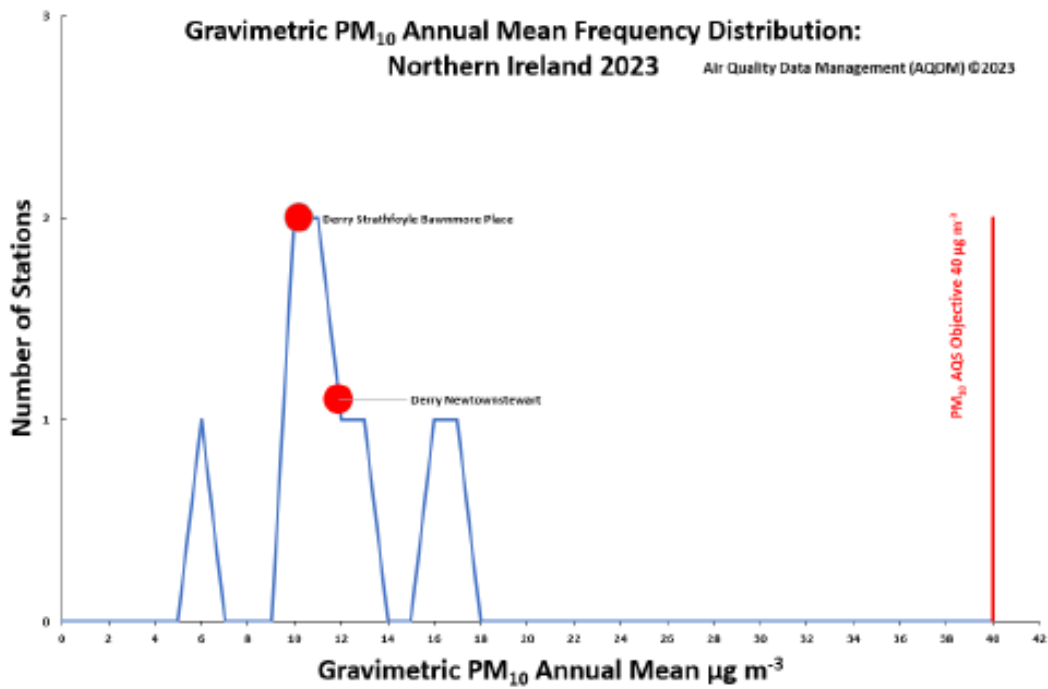
This plot shows the relationship between the NO₂ and NO_x annual means for monitoring stations, including the AURN, during 2023. Most 2023 data are still provisional and subject to change. The distribution begins with low pollution Rural stations near the origin and increases to the Roadside stations with the highest concentrations.



Annual Means Frequency Distribution Plots

These plots show the frequency distribution of the annual means for monitoring stations, including the AURN, during 2023. Most 2023 data are still provisional and subject to change. The distribution begins with low pollution Rural stations near the origin and increases to the Roadside stations with the highest concentrations.





Appendix D: Derry City and Strabane District Council

Air Quality Sata Ratification 2023 and the LAQM

Statistics (Newtownstewart Only)

Air Quality Report

Produced by AQDM on behalf of Derry
NEWTOWNSTEWART 2023

Fully ratified by AQDM to the LAQM TG22 standards using the AURN methodology

Site Environment and Description

Behind Oldcastle Street and Dublin Street, Newtownstewart

SUBURBAN [Map](#) [Photo](#) [Dashboard](#)

Statistical Summary Report

This 2023 report contains all the statistics required for the LAQM reporting.

The full results and statistics are available from the Air Quality in Northern Ireland website
<https://www.airqualityni.co.uk>.

Gravimetric PM_{2.5}

The Gravimetric PM_{2.5} is the FIDAS PM_{2.5} / 1.06

Daily Air Quality Index (DAQI)

The table below shows the duration within the bands of the Daily Air Quality Index (DAQI).
The DAQI was introduced by Defra in January 2012 and revised April 2013.

DAQI Pollutant	Moderate	High	Very High
PM ₁₀ Particulate Matter	0 days	0	0
PM _{2.5} Particulate Matter	0 days	0	0

Air Quality Exceedances of the AQS Objectives

Gravimetric PM₁₀ - annual data capture was 98.3 %

The annual mean was 11.9 µg m⁻³ which did not exceed the 40 µg m⁻³ Objective.

The maximum daily mean was 39.8 µg m⁻³ so there were no exceedances of the PM₁₀ daily limit of 50 µg m⁻³. There is an annual allowance of 35 days so the Objective was not exceeded.

Gravimetric PM_{2.5} - annual data capture was 98.3 %

The annual mean was 8.2 µg m⁻³ which did not exceed the 20 µg m⁻³ Objective.

Air Quality Report

NEWTOWNSTEWART 2023

Air Quality Statistics

Pollutant	Grav PM ₁₀ [*]	Grav PM _{2.5} [~]	PM ₁ [§]
Number Very High #	0	0	-
Number High #	0	0	-
Number Moderate #	0	0	-
Number Low #	357	356	-
Maximum 15-min mean	- $\mu\text{g m}^{-3}$	- $\mu\text{g m}^{-3}$	361.0 $\mu\text{g m}^{-3}$
Maximum hourly mean	207.3 $\mu\text{g m}^{-3}$	188.5 $\mu\text{g m}^{-3}$	183.0 $\mu\text{g m}^{-3}$
Maximum running 8-hr mean	73.4 $\mu\text{g m}^{-3}$	67.3 $\mu\text{g m}^{-3}$	69.0 $\mu\text{g m}^{-3}$
Maximum running 24-hr mean	47.0 $\mu\text{g m}^{-3}$	42.5 $\mu\text{g m}^{-3}$	43.2 $\mu\text{g m}^{-3}$
Maximum daily mean	39.8 $\mu\text{g m}^{-3}$	35.3 $\mu\text{g m}^{-3}$	35.5 $\mu\text{g m}^{-3}$
Average	11.9 $\mu\text{g m}^{-3}$	8.2 $\mu\text{g m}^{-3}$	7.0 $\mu\text{g m}^{-3}$
Data capture	98.3 %	98.3 %	98.3 %

Daily Air Quality Index (DAQI) as defined by COMEAP January 2012 and revised April 2013

* Gravimetric PM₁₀ as measured by a FIDAS instrument using 1 gravimetric factor

~ Gravimetric PM_{2.5} as measured by a FIDAS instrument using 0.94 gravimetric factor

§ PM₁ as measured by a FIDAS instrument

Air Quality Exceedances

Pollutant	Air Quality Regulations (Northern Ireland) 2003	Max Conc	Number	Days	Allowed	Exceeded
PM ₁₀ Particulate Matter (Gravimetric)	Annual mean > 40 $\mu\text{g m}^{-3}$	11.9 $\mu\text{g m}^{-3}$	0	-	-	No
PM ₁₀ Particulate Matter (Gravimetric)	Daily mean > 50 $\mu\text{g m}^{-3}$	39.8 $\mu\text{g m}^{-3}$	0	0	35 days	No
PM _{2.5} Particulate Matter (Gravimetric)	Annual mean > 20 $\mu\text{g m}^{-3}$	8.2 $\mu\text{g m}^{-3}$	0	-	-	No

Air Quality Report

NEWTOWNSTEWART 2023

Monthly Data Captures %

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Grav PM ₁₀	100.0	100.0	99.9	100.0	92.3	97.5	100.0	99.5	100.0	100.0	90.3	100.0
Grav PM _{2.5}	100.0	100.0	99.9	100.0	92.3	97.5	100.0	99.5	100.0	100.0	90.3	100.0
PM ₁	100.0	100.0	99.9	100.0	92.3	97.5	100.0	99.5	100.0	100.0	90.3	100.0

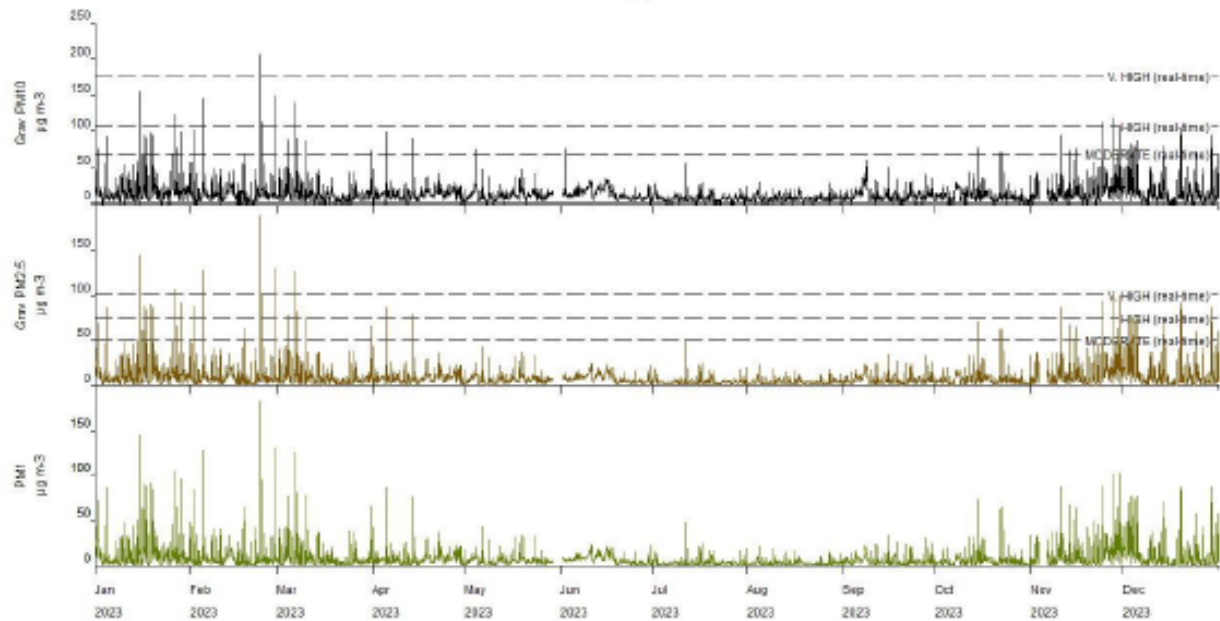
Monthly Means

Pollutant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Grav PM ₁₀ $\mu\text{g m}^{-3}$	17.5	13.9	11.5	12.1	10.9	13.1	6.7	6.9	10.6	10.1	16.2	14.5
Grav PM _{2.5} $\mu\text{g m}^{-3}$	13.8	9.9	8.4	8.1	6.6	7.8	3.7	3.7	6.3	6.4	12.4	11.3
PM ₁ $\mu\text{g m}^{-3}$	12.5	8.6	7.4	7.0	5.1	6.8	2.8	2.7	4.9	5.2	11.3	10.2

Air Quality Report

NEWTOWNSTEWART 2023

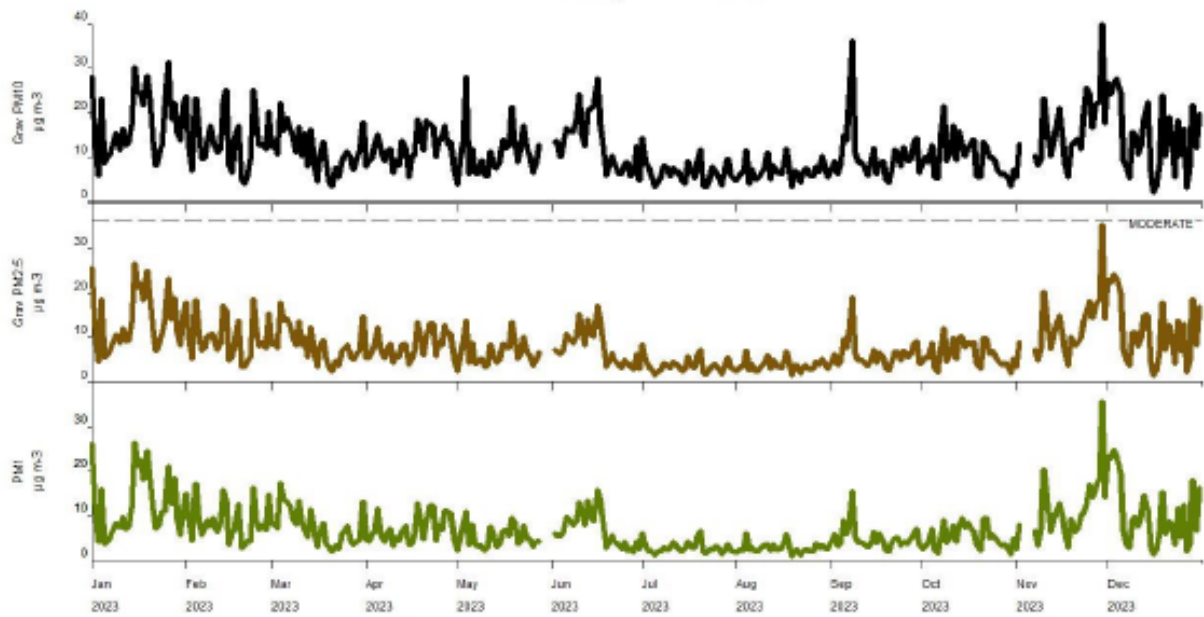
Hourly Means



Air Quality Report

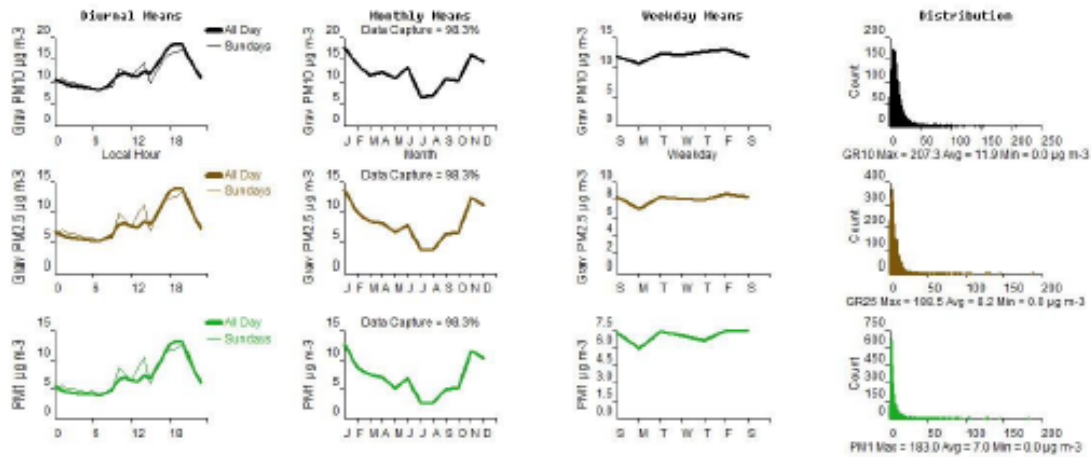
NEWTOWNSTEWART 2023

Daily Means



Air Quality Report

NEWTOWNSTEWART 2023



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<http://www.UKAirQuality.net>

