Causeway Coast & Glens Borough Council

Title of Report:	**2025 Air Quality Progress Report**
Committee Report Submitted To:	**Environmental Services**
Date of Meeting:	**12th May 2026**
For Decision or For Information	**For Information**
To be discussed In Committee	**No**

Linkage to Council Strategy (2021-25)	
Strategic Theme	Healthy and Engaged Communities Climate Change and our Environment
Outcome	To provide information on air quality within the Borough
Lead Officer	Head of Health and Built Environment

Budgetary Considerations	
Cost of Proposal	N/A
Included in Current Year Estimates	N/A
Capital/Revenue	N/A
Code	N/A
Staffing Costs	N/A

Legal Considerations	
Input of Legal Services Required	**NO**
Legal Opinion Obtained	**NO**

Screening Requirements	Required for new or revised Policies, Plans, Strategies or Service Delivery Proposals.		
Section 75 Screening	Screening Completed:	~~Yes/No~~ N/A	Date:
	EQIA Required and Completed:	~~Yes/No~~ N/A	Date:
Rural Needs Assessment (RNA)	Screening Completed	~~Yes/No~~ N/A	Date:
	RNA Required and Completed:	~~Yes/No~~ N/A	Date:
Data Protection Impact Assessment (DPIA)	Screening Completed:	~~Yes/No~~ N/A	Date:
	DPIA Required and Completed:	~~Yes/No~~ N/A	Date:

1.0 Purpose of Report

1.1 The purpose of this report is to advise members of the 2025 Air Quality Progress Report for the Borough.

2.0 Background

2.1 The Local Air Quality Management (LAQM) framework, set out in the Environment (Northern Ireland) Order 2002 and supported by relevant guidance, places a statutory duty on local authorities to review and assess air quality annually against prescribed objectives. Where exceedances are likely, an Air Quality Management Area (AQMA) must be declared and an Air Quality Action Plan (AQAP) prepared to achieve compliance.

2.2 An Air Quality Progress Report was submitted to the Department of Agriculture, Environment and Rural Affairs (DAERA) in June 2025. The report has been accepted by DAERA's technical assessors and published on the Northern Ireland Air website. Norther Ireland Council LAQM reports are available at the link below:

District Council Reports - Northern Ireland Air

2.3 The 2025 Progress Report for Causeway Coast and Glens Borough Council is attached as Appendix 1.

2.4 Progress Reports are required in the intervening years between the three-yearly, more detailed Updating and Screening Assessment reports. Their purpose is to maintain continuity within the Local Air Quality Management (LAQM) process. However, where a Progress Report identifies a risk of exceedance of an air quality objective, the District Council should proceed to undertake a Detailed Assessment immediately.

3.0 Conclusions & Proposed Actions

3.1 The Council previously declared an Air Quality Management Area (AQMA) in Dungiven for nitrogen dioxide (NO_2) arising from road traffic sources. The 2025 Progress Report found that NO_2 concentrations remain below the annual mean objective of 40 µg/m³ and indicate a continuing downward trend.

3.2 Passive diffusion monitoring sites for NO_2 installed in Ballykelly have indicated that levels are well below the guideline values.

3.3 No other significant air quality issues were identified which require further assessment. No new air pollution sources have been identified.

3.4 Monitoring will continue within the existing Dungiven AQMA and in Ballykelly.

4.0 Recommendation

It is recommended that Council notes the report.

Causeway Coast and Glens Borough Council

2025 Air Quality Progress Report

In fulfilment of Environment (Northern Ireland) Order 2002

Local Air Quality Management

June 2025

Information	**Causeway Coast and Glens Borough Council**
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Report Reference Number	PR 25 Report
Date	June 2025

Executive Summary

The new Council of Causeway Coast and Glens Borough Council was formed under Local Government Reform on 1st April 2015, merging Legacy Councils; Ballymoney, Coleraine, Limavady and Moyle.

Within the Borough of Causeway Coast and Glens monitoring of nitrogen dioxide (NO_2) has been undertaken since 2008. This monitoring was undertaken as a result of desktop and stage 1 assessments carried out in the preceding years. Nitrogen dioxide from traffic emissions was identified as a significant pollutant which required detailed investigation.

An Air Quality Management Area (AQMA) was declared within the legacy Limavady District Council, along Dungiven Main Street, in 2009 as levels were in excess of the annual mean concentration of 40µg/m³.

A continuous automatic monitor was installed along Main Street on 4th August 2010 in order to monitor Nitrogen dioxide pollutant concentrations. This has since been replaced with a new NO_x monitor and a new PM10 + PM2.5 monitor has been installed alongside this. See below.

Passive monitoring has been undertaken in other legacy Council locations within the Borough to ensure that levels did not increase.

This report details the air quality information/data gathered by Causeway Coast and Glens Borough Council within the year 2024 and compares it with air quality pollutant levels obtained in previous years as far back as 2014.

Whilst there have been difficulties with the automatic monitoring site due to intermittent mechanical malfunctions in 2021, passive monitoring data derived has shown that levels have remained constant if not, in some cases, slightly reduced on last year.

It is assumed that the 2020 & 2021 data may have been influenced by COVID restrictions on travel. Full monitoring recommenced in 2022.

The action plan derived by legacy Limavady Borough Council, now Causeway Coast and Glens Borough Council, had identified the only long-term solution to the elevated levels due to road traffic within the Dungiven AQMA as being the construction of a bypass in Dungiven.

This bypass has been alluded to for decades, and up until 2018 no progress had been made. The bypass was to form part of a wider dualling scheme of the A6 from Drumahoe to Dungiven, but financial constraints up until then had meant that the project was delayed.

The bypass scheme was completed in April 2023.

In previous reports it was documented that most of the traffic going through Dungiven was through traffic. These vehicles did not stop in the town to access businesses or dwellings. Local traffic only accounted for a small proportion of the daily volumes.

It is envisaged that the bypass will divert through traffic, a significant percentage of which are HGV's, away from the town, and that significant improvements in air quality will be achieved.

Monitoring will continue within the existing AQMA. Causeway Coast and Glens Borough Council has committed to undertaking further air quality monitoring by installing a Palas Fidas PM10 + 2.5 monitor and replaced the existing NO_x monitor with a new monitor.

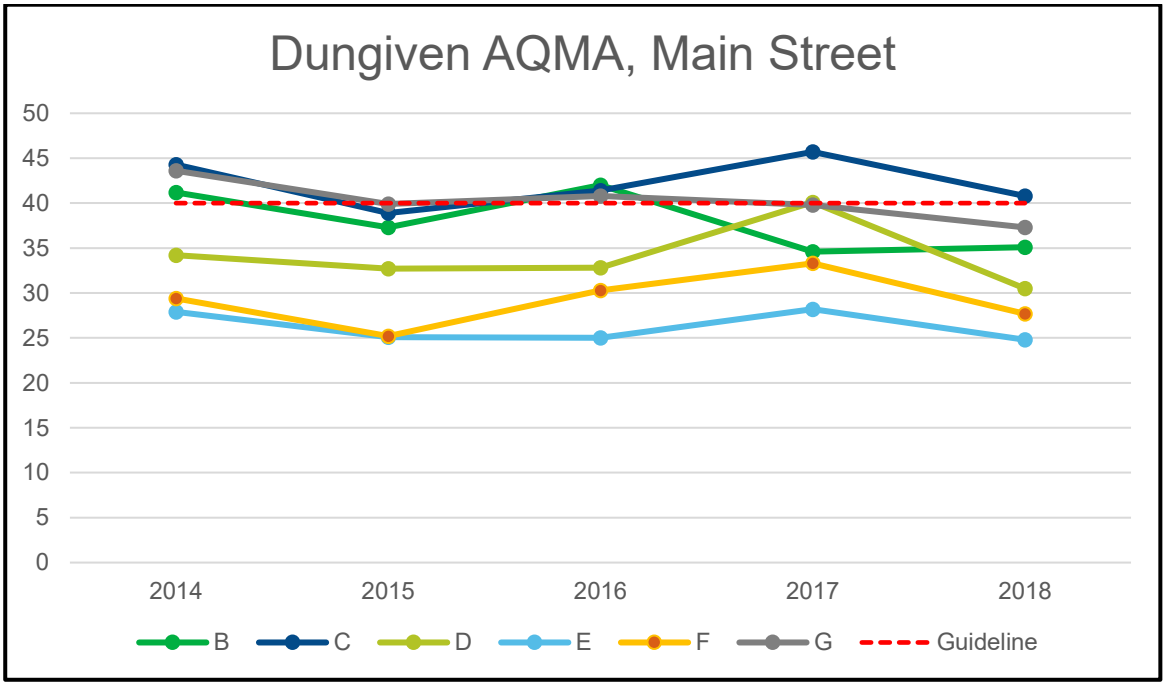
Passive monitoring in the other main urban areas of the Borough was discontinued in 2019, following the publication of the report entitled "Passive Diffusion Monitoring of NO_2 within Causeway Coast and Glens Borough Council 2014-2018" (Appendix B).

Analysis of the NO_2 data at the passive monitoring sites throughout the Borough over the period 2014 – 2018 showed that concentrations were below the applicable annual mean objective level at the legacy monitoring locations in Ballymoney Borough Council, Moyle District Council and Coleraine Borough Council areas.

From the passive diffusion data derived, results showed the levels were below the annual mean concentration of 40µg/m³.

However, the annual mean objective level of 40ug/m^3 continued to be exceeded during this period (2014-2018) at two passive monitoring sites within the Dungiven AQMA. These two

discontinued legacy sites (locations C and G) correspond with junctions which lead onto Main Street, Dungiven.



No further detailed assessments have been deemed necessary to evaluate air quality within the Borough. This will be reviewed in the next Progress Report, or if Council become aware of any new developments which have the potential to adversely impact air quality.

It is also valuable to review and update air quality within the Borough as part of this department's remit under the legislation (Part III of the Environment (Northern Ireland) Order 2002, the Air Quality Standards Regulations (Northern Ireland) 2010 and the Air Quality Regulations (Northern Ireland) 2003.

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1 Introduction

1.1 Description of Local Authority Area

Causeway Coast and Glens Borough Council is located along the North and East coasts of Northern Ireland and encompasses the former Councils of Ballymoney, Coleraine, Limavady and Moyle. From the 2021 Northern Ireland Census data, it has a population of just over 141,746 residents (NISRA, 2022).

The land area is approximately 2000km^2.

The council area is a mix of market towns, commercial, small industrial hubs, and open countryside.

1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management (LAQM) 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.

For Local Authorities in Northern Ireland, Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the LAQM process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedance of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

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. This table shows the objectives in units of micrograms per cubic metre μg/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 – Air Quality Objectives included in Regulations for the purpose of LAQM in Northern Ireland

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µg/m^3	Running annual mean	31.12.2003
	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 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.50 µg/m^3	Annual mean	31.12.2004
	0.25 µg/m^3	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m^3	Annual mean	31.12.2005
Particulate matter (PM_{10}) (gravimetric)	50 µg/m^3, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 µg/m^3	Annual mean	31.12.2004
Sulphur dioxide	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
	266 µg/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

Desktop assessments were carried out within legacy Councils (Ballymoney, Coleraine, Limavady and Moyle) to determine if the defined air quality pollutant levels were likely to exceed the National Air Quality Objective levels as set out within the Air Quality Regulations (NI) 2003.

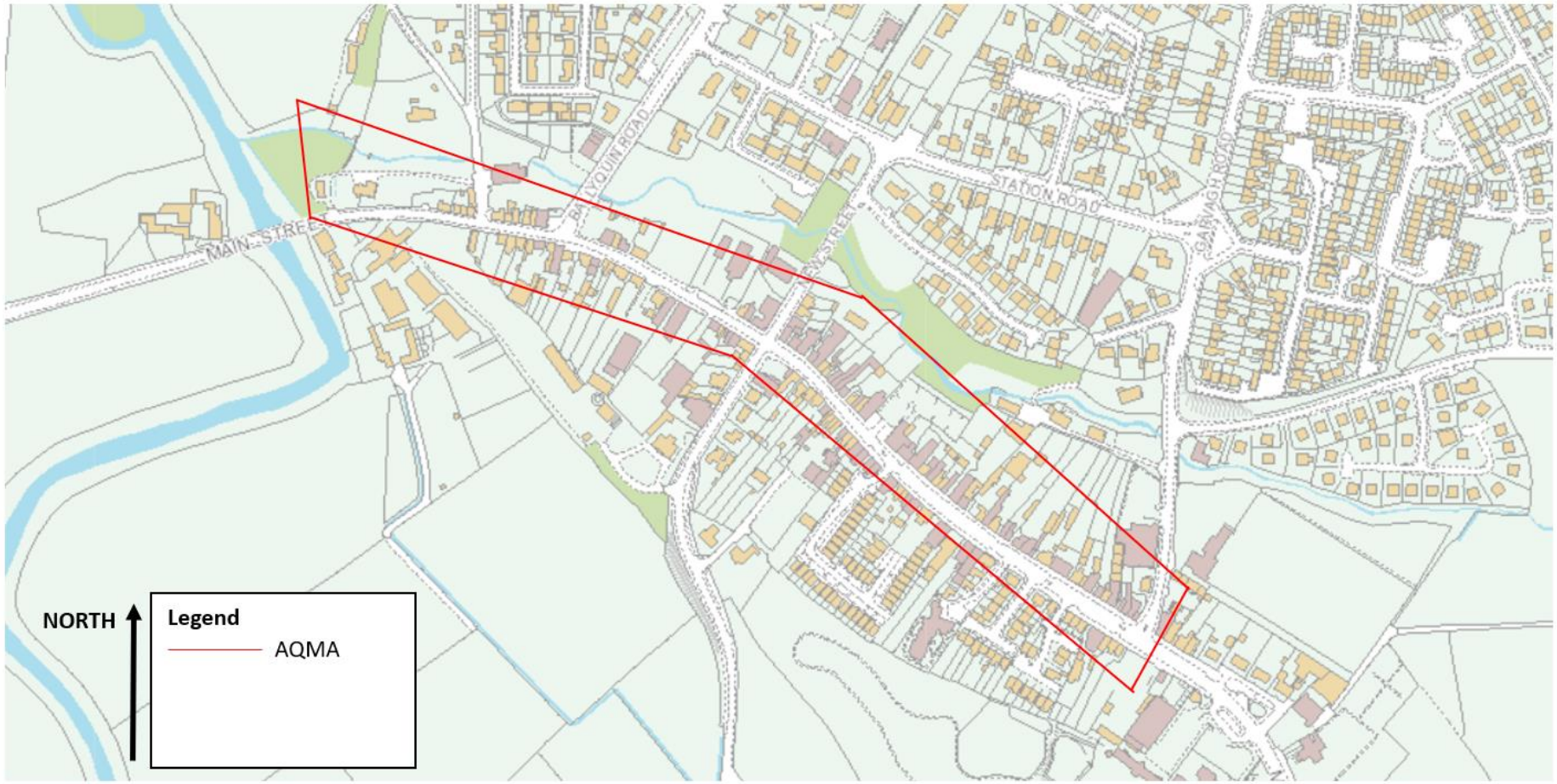
Of particular interest for these Councils were nitrogen dioxide from traffic emissions, particulate matter (PM_{10}) and sulphur dioxide. Particulate matter and sulphur dioxide emissions are associated with industrial processes and the burning of fossil fuels. Following on from these desktop assessments further analysis of pollutants was carried out. Fuel use surveys, DMRB (design manual for roads and bridges) assessments and passive monitoring (nitrogen dioxide for road traffic emissions) were carried out to assess levels.

In terms of the legacy Councils, Air Quality Management Areas (AQMAs) were declared:

- Legacy Limavady Borough Council - Main Street Dungiven for nitrogen dioxide (NO_2), road traffic pollutant emission source.
- Legacy Ballymoney Borough Council - Glebeside, Ballymoney for particulates (PM_{10}), domestic fossil fuel emission source. (The Glebeside AQMA was undeclared as houses in this estate had been converted over to gas).

The AQMA within Dungiven is the only one remaining in place.

Figure 1 - Maps of AQMA Boundaries



2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

Causeway Coast and Glens Borough Council has a continuous NO_2 monitor within the AQMA in Dungiven. It has been operational since 2010. The continuous NO_2 monitor was replaced in May 2025 with a ACOEM Serinus 40 NOx analyser. The monitor is audited and serviced on an annual basis by contractors and the data is ratified. A Palas FIDAS 200 dual channel PM10 + PM2.5 was purchased and installed at the same time.

Figure 2 – Map(s) of Automatic Monitoring Sites

Table 2 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Inlet Height (m)	Pollutants Monitored	In AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst-Case Exposure?
Dungiven AQMA	Main Street	Urban Roadside	268851	409503	2.0	NO_2	Y	Chemiluminescent	Y (1m)	1m	Y
Dungiven AQMA	Main Street	Urban Roadside	268851	409503	2.0	PM2.5 + PM10	Y	Optical light scattering	Y (1m)	1m	Y

2.1.2 Non-Automatic Monitoring Sites

Nitrogen dioxide (NO_2) and nitric oxide (NO) are both oxides of nitrogen and are collectively referred to as nitrogen oxides.

All combustion processes produce nitrogen oxide emissions, largely in the form of nitric oxide, which is then converted to nitrogen dioxide mainly as a result of reactions with ozone in the atmosphere.

Exposure to high concentrations of nitrogen dioxide is reported to sensitize asthmatics to allergens, such as irritant chemicals, house dust mites and pollen.

In urban areas, particularly close to major roads, motor vehicles account for the largest proportion of nitrogen oxide emissions. The contribution of road transport to nitrogen oxide emissions has declined significantly in recent years because of various national policy measures.

Diffusion tubes are a type of passive sampler; they absorb the pollutant to be monitored directly from the surrounding air. Diffusion tubes represent a simple and cost-effective method of monitoring air quality in an area, to give a good general indication of average pollution concentrations. They are particularly useful for assessment against annual mean objectives.

Monitoring sites are chosen to provide data on locations where there is relevant public exposure and where possible, are close to the nearest receptor to the busy road or road junction of interest. The sites are subject to periodic review.

Diffusion tubes are placed out in accordance with and adherence to the DEFRA – Exposure Calendar and Methodology. At the end of the monitoring period the tubes are collected, documentation completed and then sent to the appointed laboratory (Gradko Environmental) to undergo analysis.

On completion of analysis, the results are emailed to the Environmental Protection Team and are recorded for use in the results tabulation for the applicable year.

Results obtained from diffusion tube analysis require correction for possible positive bias (over-read), or negative bias (under-read). The preparation method used was an absorbent of 20% TEA (Triethanolamine) in water. The bias adjustment factor for Gradko and the technique in 2024 is 0.84. This factor is based on 33 studies and is taken from the DEFRA website at: http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html.

Passive monitoring in Legacy Council Areas of Coleraine, Moyle and Ballymoney was discontinued in 2019, following the publication of the report entitled “Passive Diffusion Monitoring of NO_2 within Causeway Coast and Glens Borough Council 2014-2018” (Appendix B).

Figure 3 - Map(s) of Non-Automatic Monitoring Sites

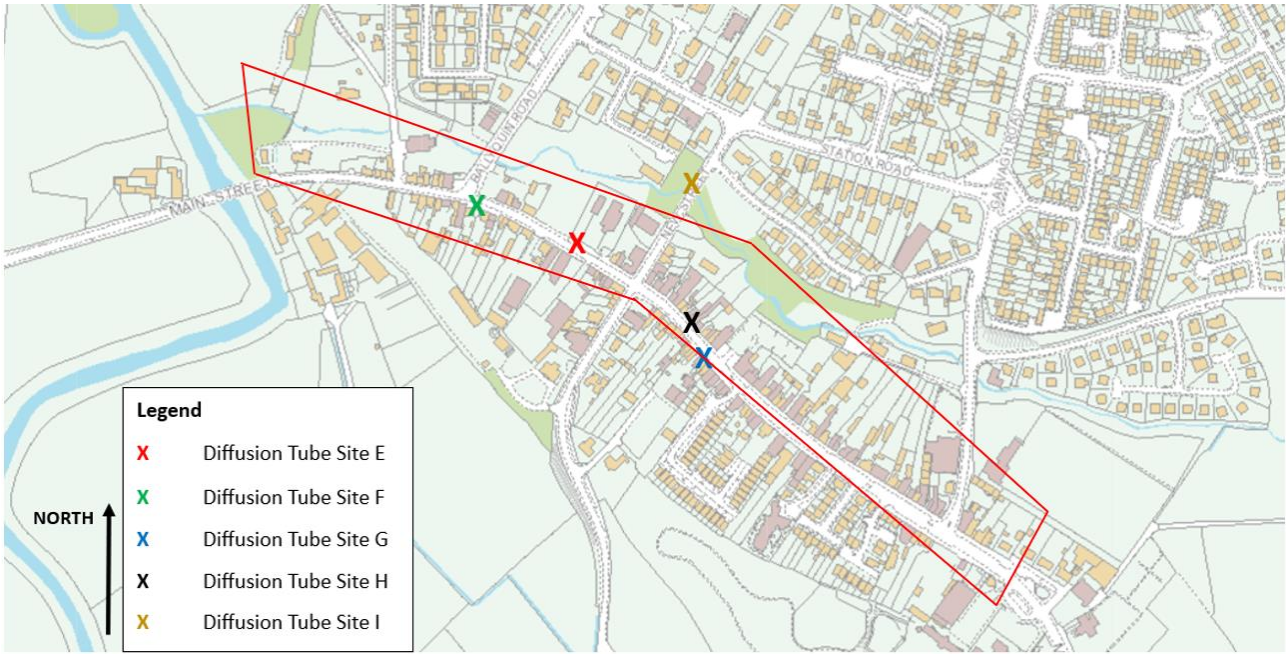


Table 3 – Details of Non-Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA? Which AQMA?	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Site Height (m)
E	Main Street (AQ Monitor)	Roadside	268851	409503	NO_2	Y	Y (1m)	1	Y	2.5
F	Main Street	Roadside	268742	409543	NO_2	Y	Y (1m)	1	N	2.5
G	Main Street	Roadside	268981	409387	NO_2	Y	Y (1m)	1	N	2.5
H	Main Street	Roadside	269051	409338	NO_2	Y	Y (1m)	1	N	2.5
I	New Street	Roadside	268957	409535	NO_2	Y	Y (1m)	1	N	2.5

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA? Which AQMA?	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Site Height (m)
A	Plantation Road	Roadside	262706	422217	NO_2	N	Y (1m)	1	N	2.5
B	Main Street	Roadside	262903	422347	NO_2	N	Y (1m)	1	N	2.5
C	Main Street	Roadside	262774	422364	NO_2	N	Y (1m)	1	N	2.5
D	Glenhead Road	Roadside	262904	422246	NO_2	N	Y (1m)	1	N	2.5

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide (NO_2)

Automatic Monitoring Data

Data is presented below for the Nitrogen Dioxide levels within the AQMA for 2022 (Table 4).

Table 4 - Monthly Data Captures 2024 (%)

Pollutant – Nitrogen Dioxide											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
99.5	100	100	99.4	90.6	100	100	100	100	99.6	79.7	77.4

The NO_2 annual mean was 16.2 µg/m^3 for 2022. The AQS annual mean Objective is 40 µg/m^3 and the target annual data capture is 75%. The NO_2 annual mean and hourly mean objectives (2024) were not exceeded. For 2024 this site achieved 95.5% data capture, therefore annualisation was not required for this data.

Table 5 – Results of Automatic Monitoring for NO2: Comparison with Annual Mean Objective

Site ID	X OS Grid Ref	Y OS Grid Ref	Site Type	Valid Data Capture for Monitoring Period % [a]	Valid Data Capture 2024 % [b]	Annual Mean Concentration (µg/m^3)				
						2020* [c]	2021* [c]	2022* [c]	2023* [c]	2024 [c]
Dungiven AQMA	268851	409503	Urban Roadside	95.5	95.5	24	28	23	22	16.2

In bold, exceedance of the NO_2 annual mean AQS objective of 40µg/m^3

[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 in Boxes 7.9 and 7.10 of LAQM.TG22, if valid data capture is less than 75%

* Annual mean concentrations for previous years are optional

Figure 4 – Trends in Annual Mean NO2 Concentrations Measured at Automatic Monitoring Sites

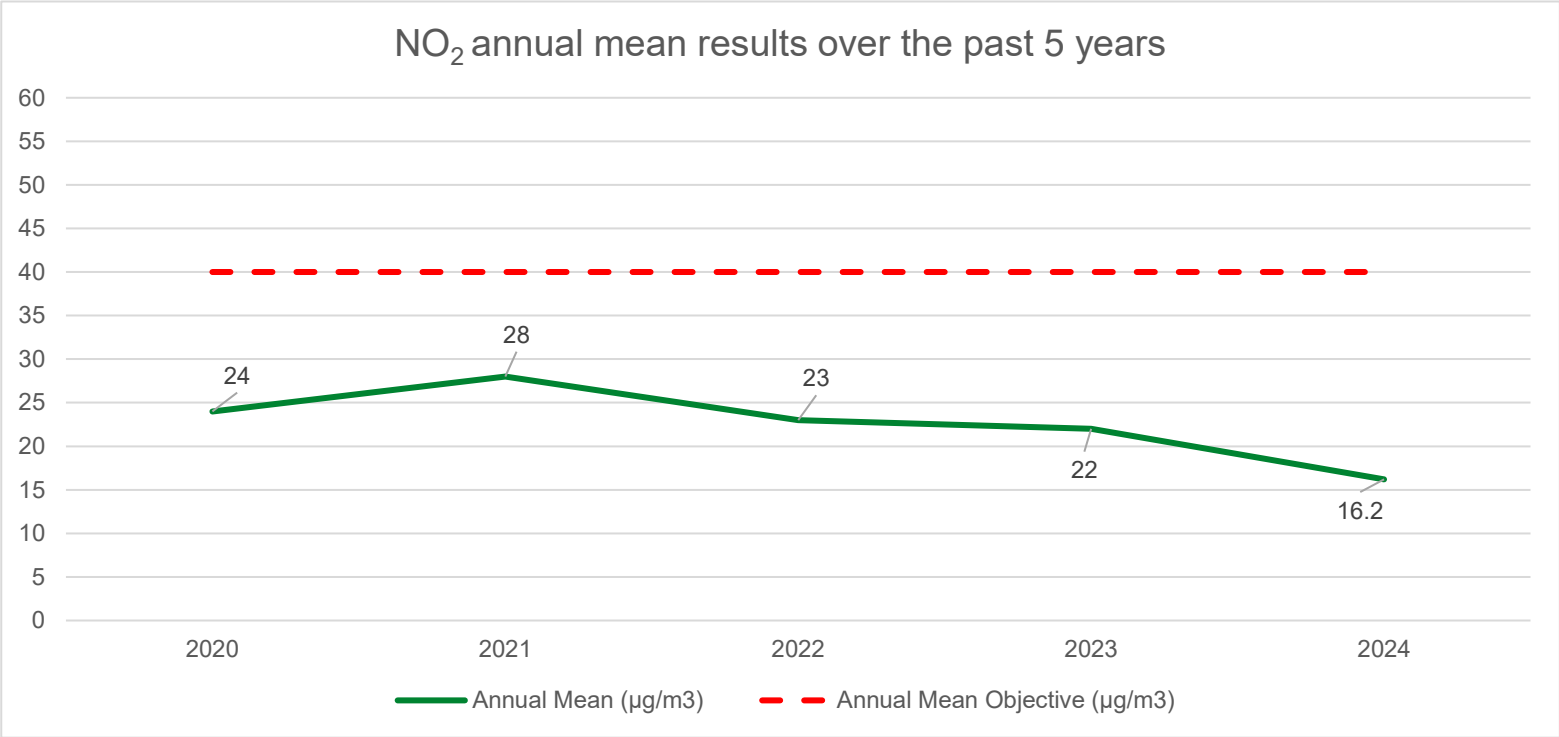


Figure 4 demonstrates that there has been an ongoing trend since 2020 of annual mean NO_2 concentrations dropping. It was previously assumed that the figures for years 2020 and 2021 have been influenced by COVID restrictions on travel/unnecessary journeys, however, this trend has continued and with the A6 Bypass opening in 2023, with a continued downward trend into 2023 and 2024. The year 2024 recorded the lowest levels as traffic congestion will have been greatly reduced due to the bypass.

Table 6 – Results of Automatic Monitoring for NO2: Comparison with 1-hour Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % [a]	Valid Data Capture 2024 % [b]	Number of Hourly Means > 200µg/m^3				
					2020* [c]	2021* [c]	2022* [c]	2023* [c]	2024 [c]
Dungiven AQMA	Urban Roadside	Y	95.5	95.5	0	0	0	0	0

In bold, exceedance of the NO_2 hourly mean AQS objective (200µg/m^3 – 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 data capture for full calendar year is less than 85%, include the 99.8th percentile of hourly means in brackets

* Number of exceedances for previous years is optional

Diffusion Tube Monitoring Data

Table 7 – Annual Results Summary

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 <(0.84)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Dungiven E	268851	409503	-	26.5	24.3	20.6	21.7	17.8	17.0	19.8	25.9	24.7	30.7	28.1	23.4	19.6	-	
Dungiven F	268742	409543	29.8	31.7	27.3	28.0	29.6	-	19.1	20.5	23.4	22.7	25.2	29.8	26.1	21.9	-	
Dungiven G	268981	409387	22.2	23.4	19.8	17.0	18.0	15.4	15.9	15.0	18.9	-	23.6	22.2	19.21	16.1	-	
Dungiven H	269051	409338	27.7	30.3	29.7	30.4	32.7	20.6	27.6	20.4	35.3	31.2	34.0	27.7	29	24.3	-	
Dungiven I	268957	409535	15.6	15.5	14.0	11.2	12.3	-	9.9	10.2	13.7	13.5	16.8	15.6	13.5	11.34	-	
Ballykelly A	262706	422217	4.2	8.6	8.6	4.2	6.7	4.2	5.2	-	6.4	6.0	8.7	8.0	6.4	5.4	-	

Ballykelly B	262903	422347	24.4	25.1	30.3	26.2	27.6	18.9	20.4	15.3	28.2	25.0	31.6	24.4	24.8	20.8	-	
Ballykelly C	262774	422364	21.2	-	19.7	13.1	12.6	12.7	10.9	15.2	14.6	19.7	23.1	21.2	16.7	14.1	-	
Ballykelly D	262904	422246	7.8	9.5	9.7	7.4	9.2	-	5.7	4.1	7.6	6.4	9.0	7.8	7.7	6.5	-	

In bold, exceedance of the NO_2 annual mean AQS objective of 40µg/m^3

Underlined, annual mean > 60µg/m^3, indicating a potential exceedance of the NO_2 hourly mean AQS objective

[a] Means should be “annualised” as in Boxes 7.9 and 7.10 of 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, NO_2 concentration at the nearest relevant exposure should be estimated based on the NO_2 fall-off with distance calculator, and results should be discussed in a specific section. The procedure is also explained in paragraphs 7.82 to 7.85 of LAQM.TG22.

Table 8 – Results of NO2 Diffusion Tubes (2018 to 2024)

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2020 (Bias Adjustment Factor = 0.81)	2021 (Bias Adjustment Factor = 0.84)	2022 (Bias Adjustment Factor = 0.84)	2023 (Bias Adjustment Factor = 0.81)	2024 (Bias Adjustment Factor = 0.84)
Dungiven E	Roadside	Y	Insufficient data	Insufficient data	30.3	28.6	19.6
Dungiven F	Roadside	Y	Insufficient data	Insufficient data	35.2	33.1	21.9
Dungiven G	Roadside	Y	Insufficient data	Insufficient data	25.0	22.7	16.1
Dungiven H	Roadside	Y	Insufficient data	Insufficient data	34.5	35	24.3
Dungiven I	Roadside	Y	Insufficient data	Insufficient data	15.1	15.2	11.34
Ballykelly A	Roadside	N	N/A	N/A	4.8	7	5.4
Ballykelly B	Roadside	N	N/A	N/A	21.0	25.6	20.8
Ballykelly C	Roadside	N	N/A	N/A	15.6	18.9	14.1
Ballykelly D	Roadside	N	N/A	N/A	5.6	8.8	6.5

In bold, exceedance of the NO_2 annual mean AQS objective of 40µg/m^3

Underlined, annual mean > 60µg/m^3, indicating a potential exceedance of the NO_2 hourly mean AQS objective

[a] Means should be “annualised” as in Boxes 7.9 and 7.10 of LAQM.TG22, if full calendar year data capture is less than 75%

Figure 5 – Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites

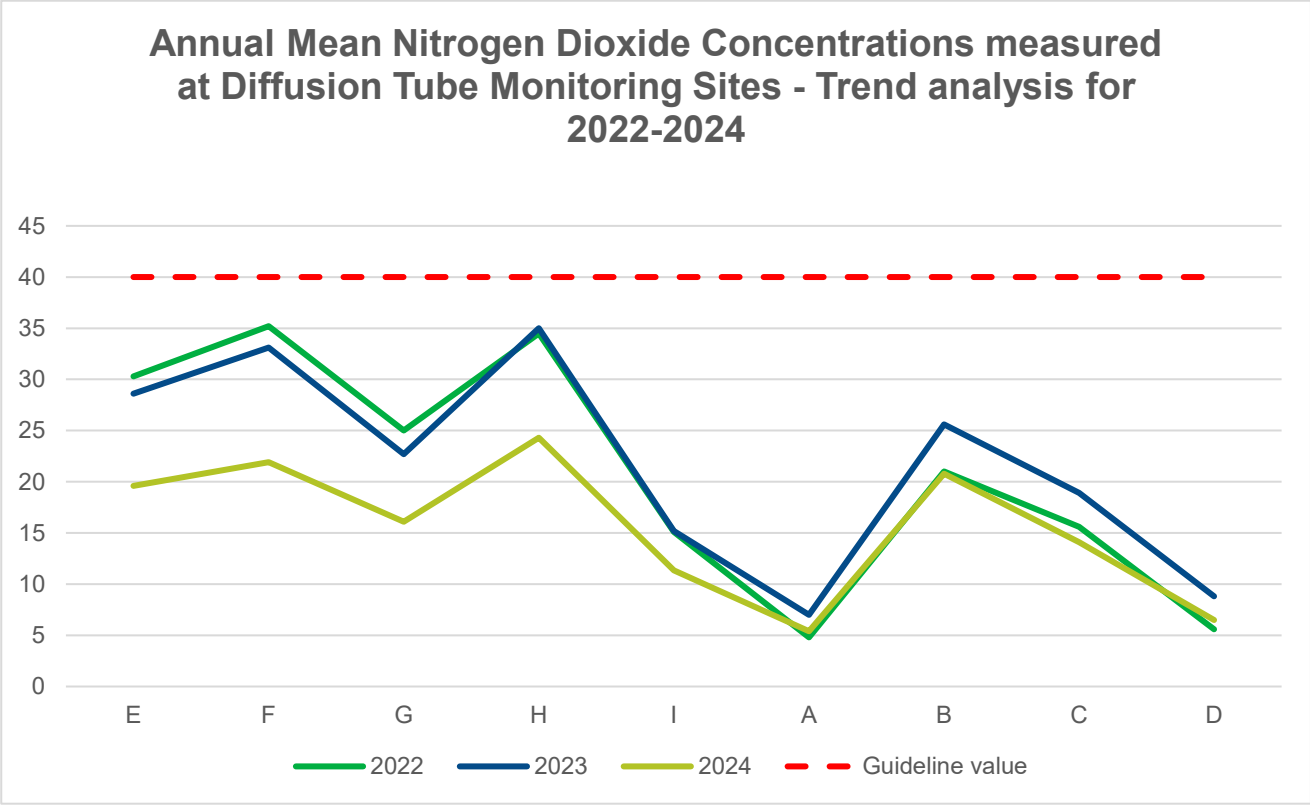


Figure 5 shows that annual mean nitrogen dioxide (NO_2) concentrations across all diffusion tube sites remained well below the guideline value of 40 µg/m³ throughout 2022–2024, with clear spatial and temporal patterns. Concentrations were generally higher at sites E, F and H, peaking around 2022–2023, particularly at site H, before declining sharply in 2024. A pronounced dip is evident at site A in all three years, indicating consistently low NO_2 levels there. From 2022 to 2024, most sites display an overall downward trend, especially noticeable at sites F, H, B and C, suggesting improving air quality over time. While 2023 shows some short-term increases at certain locations compared with 2022, 2024 values are typically the lowest, reinforcing the broader trend of decreasing NO_2 concentrations across the monitoring network.

2.2.2 Particulate Matter (PM_{10})

Causeway Coast and Glens Borough Council installed a Palas Fidas 200 dual channel PM10 + PM2.5 monitor alongside the existing Dungiven AQMA monitoring station in May 2025. There currently is insufficient data to report on as it has not been in operation for a year.

2.2.3 Sulphur Dioxide (SO_2)

Causeway Coast and Glens Borough Council does not monitor Sulphur Dioxide. Consideration is being given to identifying potential monitoring opportunities to undertake surveys of air quality within the Borough, potentially making use of temporary mobile air quality monitoring stations.

2.2.4 Benzene

Causeway Coast and Glens Borough Council does not monitor Benzene. Consideration is being given to identifying potential monitoring opportunities to undertake surveys of air quality within the Borough, potentially making use of temporary mobile air quality monitoring stations.

2.2.5 Other Pollutants Monitored

Causeway Coast and Glens Borough Council does not monitor other pollutants. Consideration is being given to identifying potential monitoring opportunities to undertake surveys of air quality within the Borough, potentially making use of temporary mobile air quality monitoring stations.

2.2.6 Summary of Compliance with AQS Objectives

Causeway Coast and Glens Borough Council has examined the results from monitoring in the Borough. Concentrations are all below the objectives, therefore there is no need to proceed to a Detailed Assessment.

3 New Local Developments

3.1 Road Traffic Sources

There have been no new road schemes within the Borough that would negatively impact upon air quality. No new roads have been opened since the last Updating and Screening Assessment however the construction of a bypass in Dungiven commenced September 2018, and completed April 2023. No busy or narrow congested streets have been identified that have not previously been considered. No roads with significantly changed traffic flows have been identified and there are no roads with high flows of buses and or HGVs. There are no new bus or coach stations.

3.2 Other Transport Sources

In addition to fixed transport infrastructure, consideration has been given to other transport-related sources, including rail services, ports, and seasonal variations in traffic associated with tourism. No increases in activity have been identified that would be likely to result in exceedances of air quality objectives at locations of relevant exposure.

3.3 Industrial Sources

The Environmental Health Department comments on planning applications where an Air Quality Impact Assessment (AQIA) may be necessary, no applications required further action in relation to Air Quality.

A review of Pollution Prevention and Control (PPC) permitted installations within the Borough was undertaken as part of this assessment. No new permits or material variations to existing permits were identified that would significantly alter emission profiles or present a risk to local air quality at sensitive receptors.

3.4 Commercial and Domestic Sources

Technical Guidance (TG 22) states that areas of significant domestic coal burning should be considered. Previous monitoring/modelling and fuel use surveys of such significant areas i.e., any area of 500x500m with more than 50 houses burning coal/smokeless fuel have

indicated that no exceedances of sulphur dioxide (SO_2) and particulate matter (PM_{10}) were likely. Many of these areas have since moved over to gas usage.

The Council remains mindful of potential changes in domestic fuel use patterns and will review this in future assessments where appropriate.

3.5 New Developments with Fugitive or Uncontrolled Sources

Within the Causeway Coast and Glens Borough there are several quarries, and these would have been subject to previous review and assessment in terms of the technical guidance.

There are two landfill sites operating within the Borough, one of which is council owned at the Craigahulliar site and one privately owned by RiverRidge Recycling Ltd., located outside Garvagh. There are in total four closed landfills within the Borough. These have been considered in previous assessments.

A review of the relevant planning data and PPC permitted installations was carried out pertaining to quarry and landfill sites and no additional sites which would require inclusion were identified. Included in this review was a screening of relevant complaints held by the Council.

Causeway Coast and Glens Borough Council confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

Causeway Coast and Glens Borough Council confirms that all the following have been considered:

- **Road traffic sources**
- **Other transport sources**
- **Industrial sources**
- **Commercial and domestic sources**
- **New developments with fugitive or uncontrolled sources.**

4 Planning Applications

A review of relevant planning applications was undertaken. Causeway Coast and Glens Borough Council is not aware of any approved/pending applications which would adversely impact upon air quality within the Borough.

5 Conclusions and Proposed Actions

5.1 Conclusions from New Monitoring Data

This Progress Report has indicated that aside from the AQMA, no new issues were identified which would require either a detailed or further assessment for any pollutants. As previously stated, due to COVID lockdown and government restrictions passive monitoring did not take place during 2020 and 2021 and recommenced in 2022. Levels of NO_2 within the AQMA in Dungiven (automatic monitoring data) has revealed that there is a trend of decreasing concentrations of nitrogen dioxide below the annual mean objective level of 40µg/m³. However, Causeway Coast and Glens Borough Council is committed to monitoring air quality within the Borough and has invested in replacement NO_x monitoring equipment and new PM10+PM2.5 monitoring equipment.

Further to Council Report "*Update on Air Quality Monitoring and consideration of additional passive diffusion tube screening*", dated 14th September 2021, the Environmental Protection team instigated monitoring utilising, passive diffusion tubes within Ballykelly to determine Nitrogen Dioxide ($NO_{2)}$ levels. This was agreed to be implemented in order to provide up-to-date data concerning pollutant concentrations, in terms of road traffic source (appendix C).

It is also valuable to review and update air quality within the Borough as part of this department's remit under the legislation (Part III of the Environment (Northern Ireland) Order 2002, the Air Quality Standards Regulations (Northern Ireland) 2010 and the Air Quality Regulations (Northern Ireland) 2003.

No significant issues have been identified beyond the existing AQMA which require any additional investigation or monitoring. Regarding potential sources, no new issues have been identified since the last Update and Screening Assessment (2024).

5.2 Conclusions relating to New Local Developments

Having assessed the relevant planning applications in the Council district, it was concluded that they would have no significant negative impact on existing local air quality. In addition, no significant changes in local circumstances were identified within the Council district,

which would require further assessment. It is therefore not considered necessary to proceed to a ‘Detailed Assessment’ for any of the new local developments or potential sources.

5.3 Other Conclusions

No significant changes in emissions sources within the Council area have been identified. No new developments have been identified which would significantly impact on air quality at relevant locations.

5.4 Proposed Actions

The new monitoring data has not identified the need to progress to a detailed assessment for any pollutant. The monitoring data has indicated that there are no changes required to the existing AQMA’s within the Borough at this stage. Air Quality in the Dungiven AQMA has complied with air quality objectives in 2024. Causeway Coast and Glens Borough Council’s next course of action is to continue to monitor pollutants, at their current locations and submit a 2026 Update and Screening Assessment Report. This report will include the results from PM10+PM2.5 monitoring.

6 References

I. Air Quality Regulations (Northern Ireland) 2003. Available at: https://www.legislation.gov.uk/nisr/2003/342/contents/made

II. Belfast Telegraph (2015) Traffic rise at Belfast airports as City of Derry falls. Available at: https://www.belfasttelegraph.co.uk/business/news/traffic-rise-at-belfast-airports-as-city-of-derry-falls-30920265.html

III. Causeway Coast and Glens Borough Council (2018). Passive diffusion monitoring of NO_2 with Causeway Coast and Glens Borough Council 2014-2018

IV. City of Derry Airport (2022) Facts and Figures. Available at: https://www.cityofderryairport.com/about-us/facts-figures/

V. DAERA Pollution Prevention and Control permitted processes. Available at: https://public-registers.daera-ni.gov.uk/pollution-prevention-control

VI. DEFRA (2008). Diffusion Tubes for Ambient NO_2 Monitoring: Practical Guidance for Laboratories and Users

VII. DEFRA (2016). Local Air Quality Management Technical Guidance (TG16)

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IX. DEFRA in partnership with the Scottish Executive, Welsh Assembly Government and DOE Northern Ireland (2007). The Air Quality Strategy for England, Scotland, Wales and Northern Ireland.

X. NISRA. 2021 Census. Available at: https://www.nisra.gov.uk/statistics/census/2021-census

XI. The Environment (Northern Ireland) Order 2002. Available at: https://www.legislation.gov.uk/nisi/2002/3153/contents

XII. Open Data NI (2022). Northern Ireland Traffic Count Data. Available at; https://www.opendatani.gov.uk/dataset/northern-ireland-traffic-count-data

7 Appendices

Appendix A: Quality Assurance / Quality Control (QA/QC) Data
Appendix B: Cessation of passive diffusion monitoring of NO_2 within Causeway Coast and Glens Borough Council 2014-2018
Appendix C: Ballykelly Air Quality Briefing

Appendix A: QA/QC Data

QA/QC Diffusion Tube Monitoring

Diffusion Tube Bias Adjustment Factors

Gradko International Ltd, St Martins House, 77 Wales Street, Winchester, Hampshire

20%TEA in water

2024 Bias Adjustment factor = 0.84

QA/QC of Diffusion Tube Monitoring

Please find below Gradko Internal Laboratory Methods used for the analysis of air pollution monitoring equipment:

Nitrogen dioxide and sulphur dioxide diffusive air monitors

Analysed by UKAS accredited in-house method GLM 3

Nitrogen dioxide and NOx diffusive air monitors

Analysed by UKAS accredited in-house method GLM 7 and GLM 9

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

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Causeway Coast and Glens Borough 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.

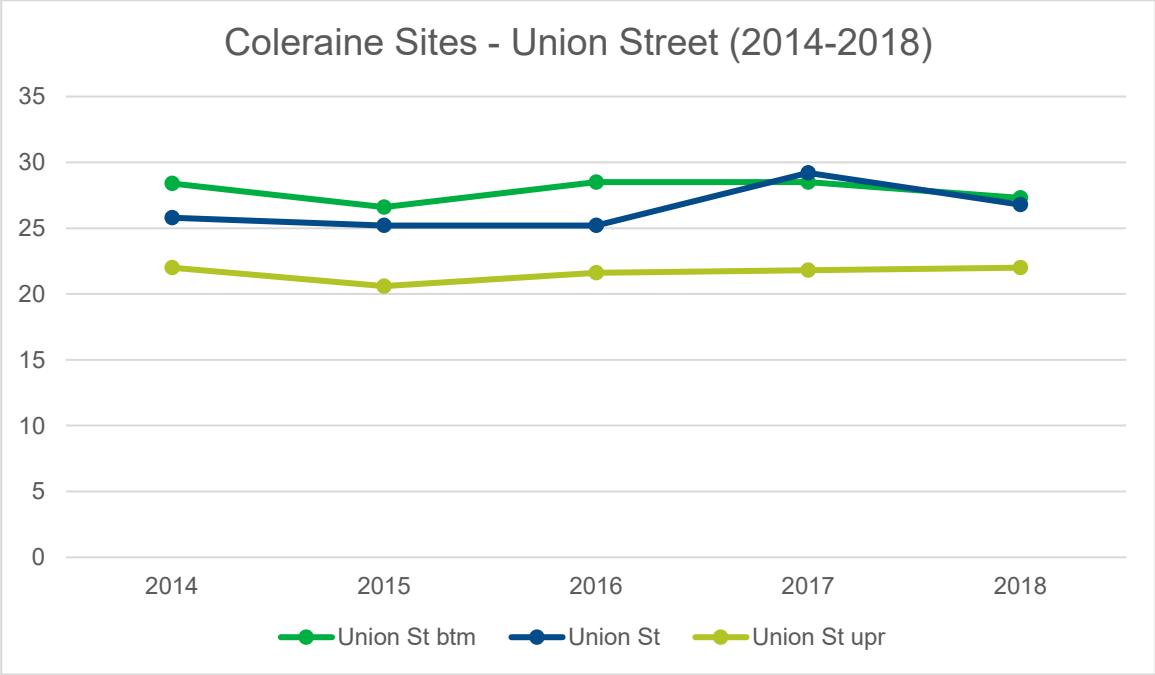
Diffusion Tube Bias Adjustment Factors

Causeway Coast and Glens Borough Council have applied a national bias adjustment factor of 0.84 to the 2024 monitoring data. A decision was made to apply the national figure of 0.84 as 27 studies were included in this and therefore deemed to be a more realistic figure.

Appendix B: Cessation of passive diffusion monitoring of NO_2 within Causeway Coast and Glens Borough Council 2014-2018

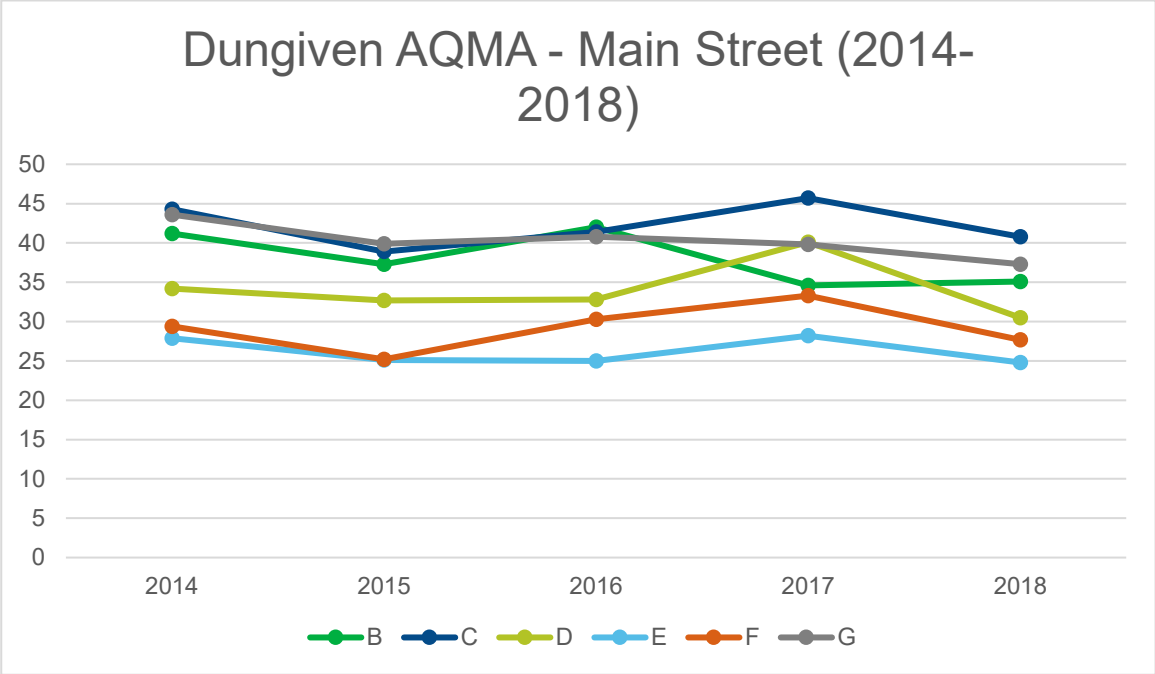
Analysis of passive NO_2 monitoring data throughout the Borough has shown that since 2014 pollutant levels in the legacy Coleraine, Ballymoney and Moyle areas have remained below the annual mean concentration of 40µg/m³. The annual mean objective level continues to be exceeded within the AQMA in Dungiven (please refer to graphs below). Based on these findings, it is proposed to continue monitoring within the AQMA only.

Coleraine



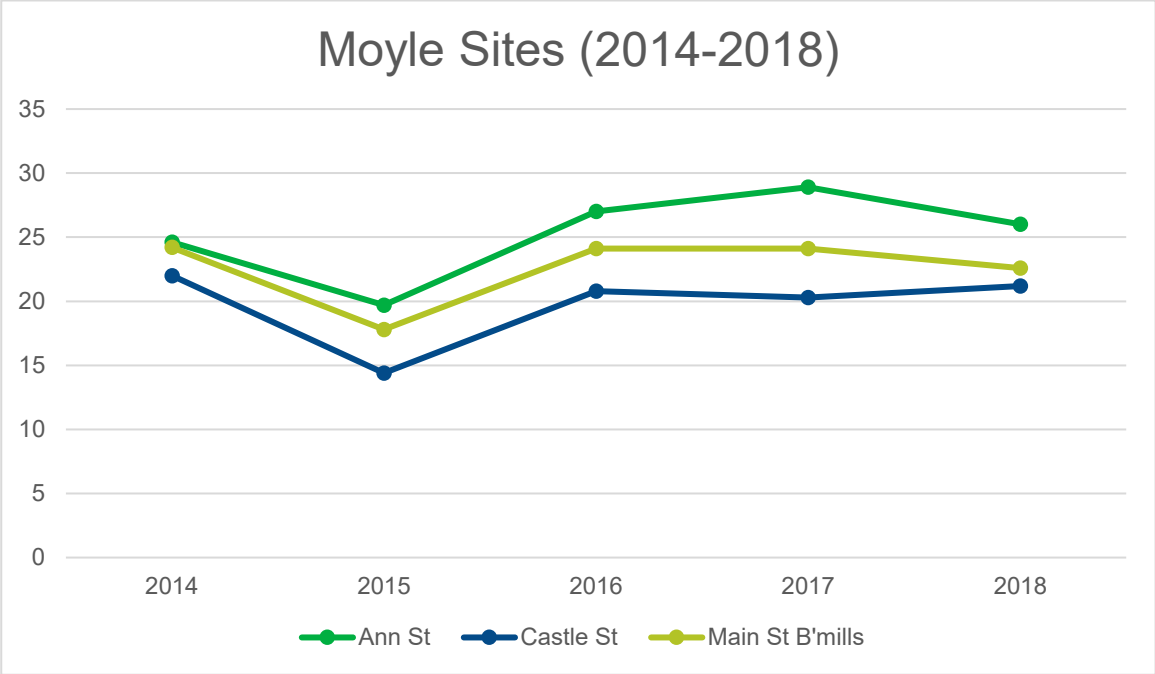
Levels of NO_2 in the Union Street area of Coleraine have been relatively constant over the past 5 years. The annual mean concentration has not been exceeded at any of the sites.

Dungiven AQMA Main Street



The annual mean objective level of 40µg/m³ continues to be exceeded at two monitoring sites within the Dungiven AQMA. These two sites, C & G, correspond with two junctions which lead onto Main Street. Location C where the Ballyquin Road meets Main Street is often where traffic builds up when traffic on Main Street is attempting to turn right onto the Ballyquin Road. Similarly, traffic builds up close location C in periods of high traffic flow and when traffic is attempting to make a right turn off Main Street onto New Street.

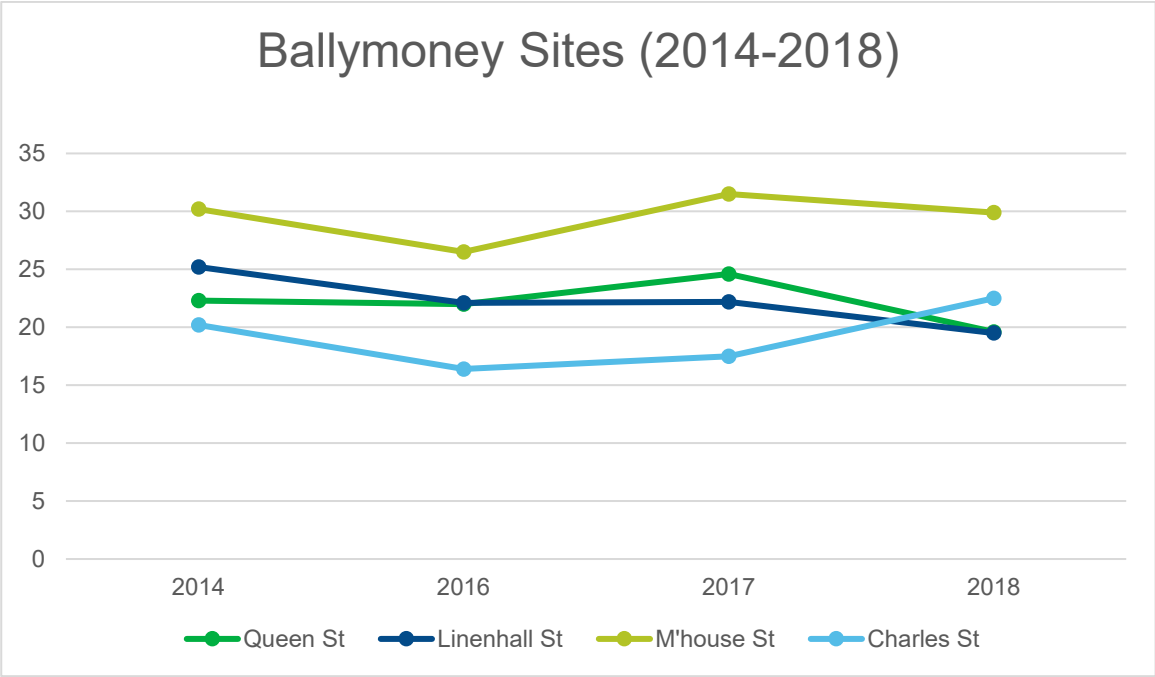
Moyle



NO_2 objective levels are not exceeded at any of the Moyle sites. Levels within Ann Street and Castle Street in Ballycastle and Main Street Bushmills do not exceed 30

µg/m³

Ballymoney



NO_2 levels at the monitoring sites within Ballymoney have all been below the annual mean concentration of 40µg/m³ over the past 5 years.

It had been suggested that additional NO_2 monitoring should be carried out within the one-way system in Coleraine town centre (Brook St/Long Commons/Tesco/Hanover Place). Previous reports compiled by the legacy Coleraine office state that the Environmental Health Department had previously conducted monitoring in these streets. Monitoring was carried out in Long Commons as far back as 2002 when levels were measured at 23.4µg/m³ (Stage 2 Review & Assessment 2002). Within the USA published in 2012 Table 2.4 lists monitoring data collected for these areas. This is summarised below.

Street Name	**2009 (µg/m³)**	**2010 (µg/m³)**	**2011 (µg/m³)**
Brook Street	33.14	29.65	27.21
Long Commons	20.36	24.66	19.47
Tesco	22.86	27.23	20.91
Hanover Place	23.84	25.72	21.92

The data clearly shows that levels were significantly lower that the annual mean objective level. These areas were screened out at this time as needing no further attention. This data, and the fact that automotive technologies have improved since this monitoring was undertaken demonstrates that there is no relevant exposure to high concentrations of NO_2 within these locations.

Recommendation

As limits are not exceeded at any of these passive monitoring sites, we will discontinue use as of 31 March 2020. Passive monitoring will continue within the AQMA in Dungiven.

Appendix C: Ballykelly Air Quality Briefing

Further to Council Report "*Update on Air Quality Monitoring and consideration of additional passive diffusion tube screening*", dated 14th September 2021, the Environmental Protection team instigated monitoring utilising, passive diffusion tubes within Ballykelly to determine Nitrogen Dioxide ($NO_{2)}$ levels. This was agreed to be implemented in order to provide up-to-date data concerning pollutant concentrations, in terms of road traffic source.

It is also valuable to review and update air quality within the Borough as part of this department's remit under the legislation (Part III of the Environment (Northern Ireland) Order 2002, the Air Quality Standards Regulations (Northern Ireland) 2010 and the Air Quality Regulations (Northern Ireland) 2003.

Table 0: 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	16.25µg/m^3	Running annual mean	31.12.2003
Benzene	3.25µg/m^3	Running annual mean	31.12.2010
1,3-Butadiene	2.25µg/m^3	Running annual mean	31.12.2003
Carbon monoxide	10.0mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5µg/m^3	Annual mean	31.12.2004
Lead	0.25µg/m^3	Annual mean	31.12.2008
Nitrogen dioxide	200µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005

Nitrogen dioxide	40µg/m^3	Annual mean	31.12.2005
Particles (PM_{10}) (gravimetric)	50µg/m^3, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
Particles (PM_{10}) (gravimetric)	40µg/m^3	Annual mean	31.12.2004
Sulphur dioxide	350µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
Sulphur dioxide	125µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
Sulphur dioxide	266µg/m^3, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

- **Method of Monitoring – Nitrogen Dioxide**

Diffusion tubes have been deployed at predetermined locations within Ballykelly in order to assess concentrations against the pollutant's annual mean objective. Diffusion tubes are a type of passive sampler; they absorb the pollutant to be monitored directly from the surrounding air. Diffusion tubes provide a reliable, simple, and cost-effective method of monitoring air quality in an area, to give a good general indication of average pollution concentrations.

They are particularly useful for assessment against annual mean objectives.

Diffusion tubes are placed out in accordance with and adherence to the DEFRA – Exposure Calendar and Methodology. At the end of the monitoring period the tubes are collected, documentation completed and then sent to the appointed laboratory (Gradko Environmental) to undergo analysis.

On completion of analysis, the results are emailed to the Environmental Protection Team and are recorded for use in the results tabulation for the applicable year.

Results obtained from diffusion tube analysis require correction for possible positive bias (over-read), or negative bias (under-read). The preparation method used was an absorbent of 20% TEA (Triethanolamine) in water. The bias adjustment factor for Gradko and the technique in 2024 is 0.84. This factor is based on 27 studies and is taken from the DEFRA website at: http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html.

Diffusion Tube Monitoring has been carried out within Ballykelly since February 2022 and is continuing to be undertaken.

Sufficient data has been derived to enable derivation of annualised results, with the relevant bias adjustment considered as per Technical Guidance TG (22).

The data collected will also be detailed within the 2022 Progress Report, the duty to produce annual progress reports also forms part of this department's role under the legislation.

- **Ballykelly – Diffusion Tube Data Collection**

The Ballykelly site locations are detailed below:

Table 2: Ballykelly site locations

ID	Site Name	X IGR Ref	Y IGR Ref
A1	Control		
A2	Plantation Road Ballykelly	262706	422217
A3	Plantation Road Ballykelly	262706	422217
B1	Main Street Ballykelly	262903	422347
B2	Main Street Ballykelly	262903	422347
B3	Main Street Ballykelly	262903	422347
C1	Main Street Ballykelly	262774	422364
C2	Main Street Ballykelly	262774	422364

C3	Main Street Ballykelly	262774	422364
D1	Glenhead Road Ballykelly	262904	422246
D2	Glenhead Road Ballykelly	262904	422246
D3	Glenhead Road Ballykelly	262904	422246

Site Locations Rationale

Site locations in Ballykelly were selected as follows:

Site A Plantation Road – Road where traffic queues back from junction in area of medium density housing.

Site B Main Street – Junction of traffic lights in town centre

Site C Main Street – Nearest residential dwellings with relevant exposure along Main Street

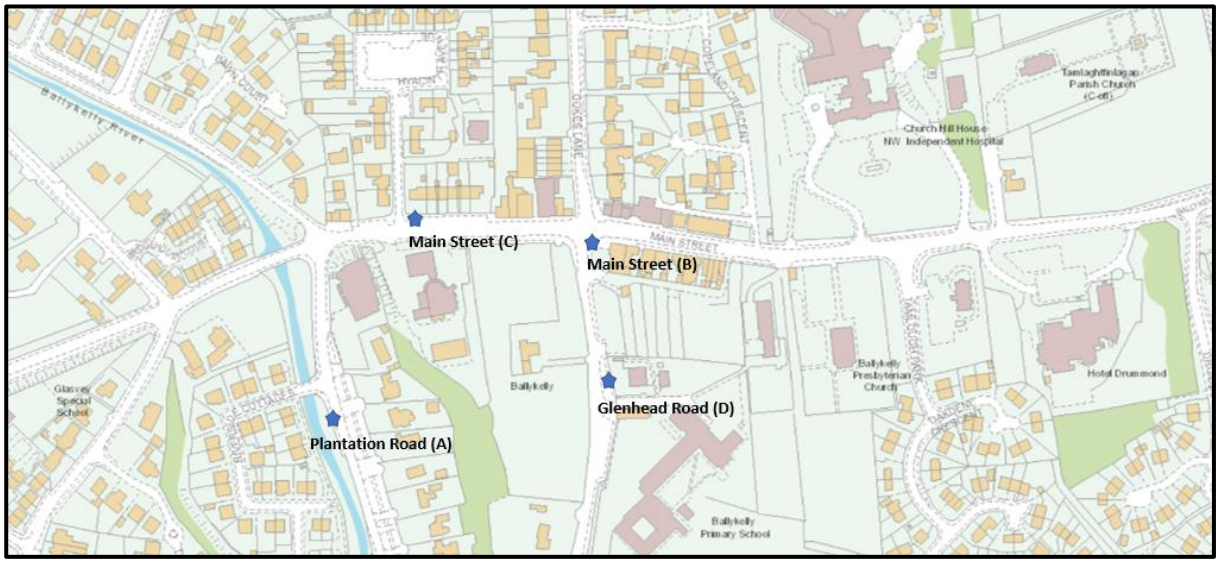
Site D Glenhead Street – Outside Ballykelly Primary School approaching Traffic Lights junction in town centre

NO_2 Tube Bias & Precision

For NO_2 diffusion tubes, bias represents the overall tendency of the tubes to under or over-read relative to the reference chemiluminescence analyser. It is necessary to calculate a bias factor and adjust monitored results accordingly.

Tube A1 is used as a control and stored securely in Causeway Coast and Glens Borough Council Limavady Office. The Control's Duplicate NO_2 tubes are then deployed at Site A on Plantation Road.

Map 1: Depiction of Ballykelly Diffusion Tube Site Locations



- **Ballykelly Monitoring Results – NO_2**

Bias adjusted NO_2 concentrations February 2022 – December 2022

Table 3

Monitoring site	Bias adjusted concentration (0.84) µg/m³
Plantation Road, Ballykelly	5.4
Main Street, Ballykelly	20.8
Main Street, Ballykelly	14.1
Glenhead Road, Ballykelly	15.1

- Annual mean objective level of 40µg/m³

The passive monitoring undertaken has revealed that the annual mean concentration (40ug/m³) for NO_2 was not exceeded at the monitoring locations selected in Ballykelly in 2024.

Diffusion Tubes were deployed in Ballykelly on the following dates:

Table 4: Ballykelly Diffusion Tube Deployment Dates

	Diffusion Tube Deployment Dates	
January	03/01/2024	31/01/2024
February	31/01/2024	06/03/2024
March	06/03/2024	03/04/2024
April	03/04/2024	01/05/2024
May	01/05/2024	05/06/2024
June	05/06/2024	03/07/2024
July	03/07/2024	31/07/2024
August	31/07/2024	04/09/2024
September	04/09/2024	02/10/2024
October	02/10/2024	06/11/2024
November	06/11/2024	04/12/2024
December	04/12/2024	08/01/2025

Recommendation

The Health and Built Environment Department will be seeking to continue with the passive monitoring in Ballykelly.

In conjunction with our duties under the Air Quality legislation, the Environmental Protection Team have been seeking advice from DAERA NI colleagues in the AEQ Team concerning the expansion of monitoring to include mobile monitoring units which may be flexibly deployed within the Borough and expanded to consider other sources of pollutants.