Annual Progress Report (APR)

2025 Air Quality Annual Progress Report (APR) for West Dunbartonshire Council

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

Local Air Quality Management

June 2025

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Executive Summary: Air Quality in Our Area

Air Quality in West Dunbartonshire

The 2025 Annual Progress Report (APR) considers measured pollutant concentration from within West Dunbartonshire for the calendar year of 2024 and considers the potential for exceedance of the air quality objectives.

The main pollutants of concern within West Dunbartonshire Council area are nitrogen dioxide and particular matter. Monitoring in West Dunbartonshire was undertaken using automatic (continuous) monitoring at two sites during 2024 and the use of diffusion tubes. Dumbarton monitoring unit only monitors Nitrogen Dioxide (NO_2) and is part of the Automatic Urban and Rural Network (AURN). Both automatic units have triplicate co-located NO_2 diffusion tubes.

No exceedances to the short and long term NO_2 limit were registered at the two continuous monitoring locations. The annual average levels at both the Clydebank location and the Dumbarton location remain statistically steady.

The monitoring location with the highest annual mean for NO_2 is DT18 (Milton 1) with a value of 23.9 µg/m^3 but still below the national annual mean for this pollutant.

The Annual mean PM_{10} and $PM_{2.5}$ levels at Briar Drive Clydebank are not statistically different from previous years, showing only minor fluctuations. These values are below the objective level.

Actions to Improve Air Quality

West Dunbartonshire Council continues to work with internal and external partners to deliver the objectives of Cleaner Air for Scotland 2 – Towards a Better Place for Everyone

Local Priorities and Challenges

West Dunbartonshire Council has no specific priorities in respect of local air quality beyond that of statutory monitoring and idling engines enforcement.

Environmental Health service continues carrying out vehicle idling enforcement programme across the Council area.

How to Get Involved

The general public can find out more about air quality and related subjects by visiting West Dunbartonshire Council web site at http://www.westdunbarton.gov.uk/business/environmental-health/pollution/airquality

Residents can also visit the Scottish Air Quality website and view live air quality Data at http://www.scottishairquality.co.uk

There is the opportunity to register for text and email alerts when air quality is forecast likely to be moderate or higher. This will enable those with breathing problems to make informed judgement about their levels of activity or exposure.

With high levels of nitrogen dioxide coming mainly from vehicle emission there are many ways in which WDC residents can also help contribute towards reducing air pollution in the area, such as choosing to travel around the area by foot, by bicycle or using public transport whenever possible, this can reduce individual contributions to air pollution in the area.

Further information can be obtained by contacting Environmental Health at: Environmental.Health@west-dunbarton.gov.uk

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1 Local Air Quality Management

This report provides an overview of air quality in West Dunbartonshire during 2024. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Progress Report (APR) summarises the work being undertaken by West Dunbartonshire to improve air quality and any progress that has been made.

Table 1.1 – Summary of Air Quality Objectives in Scotland

Pollutant	Air Quality Objective Concentration	Air Quality Objective Measured as	Date to be Achieved by
Nitrogen dioxide (NO_2)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
Nitrogen dioxide (NO_2)	40 µg/m^3	Annual mean	31.12.2005
Particulate Matter (PM_{10})	50 µg/m^3, not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
Particulate Matter (PM_{10})	18 µg/m^3	Annual mean	31.12.2010
Particulate Matter ($PM_{2.5}$)	10 µg/m^3	Annual mean	31.12.2021
Sulphur dioxide (SO_2)	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
Sulphur dioxide (SO_2)	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
Sulphur dioxide (SO_2)	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005
Benzene	3.25 µg/m^3	Running annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m^3	Running annual mean	31.12.2003
Carbon Monoxide	10.0 mg/m^3	Running 8-Hour mean	31.12.2003

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

West Dunbartonshire currently does not have any AQMAs.

2.2. Placemaking – Plans and Policies

Local authorities with support from the Scottish Government will assess how effectively air quality is embedded in plans, policies, City Deals and other initiatives, and more generally in cross departmental working, identifying and addressing evidence, skills, awareness and operational gaps.

The West Dunbartonshire development plan now includes the Local Plan 2010 and National Planning Framework 4 (NPF4). Clydeplan has been removed from being part of the statutory development plan. The Local Development Plan, Proposed Plan, as modified is not adopted but is a material consideration in relation to assessment of planning applications. The Local Plan includes consideration of air quality under its General Development Policy GD1, which encourages the “provision for public transport, pedestrian and cycling access, and considering the need for a Green Travel Plan” in order to avoid or minimise adverse impacts on air quality.

The Local Development Plan, Proposed Plan as modified, similarly requires measures to mitigate air quality impacts under policy ENV8 Air, Light & Noise Pollution. The Proposed

LDP also promotes and requires the prioritisation of active travel across a range of policies, including Policies CP2 Green Infrastructure and CON1 Transport Requirements for New Development, which also requires developers of major development to include electric vehicle charging infrastructure.

West Dunbartonshire Council has relevant initiatives in Transport and Climate change, Policy 13 Sustainable transport seeks “To encourage, promote and facilitate developments that prioritise walking, wheeling, cycling and public transport for everyday travel and reduce the need to travel unsustainably.” This policy also requires the provision of low and zero-emission vehicle and cycle charging infrastructure

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Expected/Actual Completion year	Organisations Involved	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
<1>	Review of vehicle replacement strategy with a managed transition to electric fleet	Vehicle Fleet Efficiency	2025	WDC Fleet Maintenance and Transport	Planned	Full Funded	Strategy to be adopted by Council 2025	Desktop research underway	Staff resourcing to fully implement
<2>	Collaboration with Glsgow City Council to improve electric vehicle procurement and infrastructure	Vehicle Fleet Efficiency	2028	WDC and GCC Fleet Maintenance and Transport	In progress	Fully funded	Establish, governance subgroups and workplans	Project Board established	Challenges in bringing the group together
<3>	Adopt and take action to implement Sustainable people, places and connections, for both WDC staff and for communities across West Dunbartonshire	Promoting travel alternatives	2022-2026 (Long-term target of 2045)	WDC Energy Savings Trust (EST) Transport Scotland Scottish Government Sustrans Cycling Scotland Paths for All Local Community	In progress	Council Capital; Cycling Scotland Funding Sustrans Funding Transport Scotland Funding Smarter Choices Smarter Places (SCSP) funding.	Report to Scottish Government on an annual basis through mandatory climate change reporting.	Active & Sustainable Travel Strategy and Action Plan (ASTSAP) currently being developed	Funding and long term project. Changeover of staff

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

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

West Dunbartonshire undertook automatic (continuous) monitoring at 2 sites during 2024. Table A.1 in Appendix A shows the details of the sites. National monitoring results are available at http://www.scottishairquality.co.uk/

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

3.1.2 Non-Automatic Monitoring Sites

West Dunbartonshire Council undertook non- automatic (passive) monitoring of NO_2 at 24 sites during 2023. Table A.2 in Appendix A shows the details of the sites. The sites included two set of triplicates tubes co-located with our automatic monitoring sites given a total of 28 tubes. Table A.2 in Appendix A shows the details of the sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) and bias adjustment for the diffusion tubes are included in Appendix C.

3.2 Individual Pollutants

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

3.2.1 Nitrogen Dioxide (NO_2)

Table A.3 in Appendix A compares the ratified monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40 µg/m^3 at automatic monitoring sites.

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

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

Table A.5 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past five years with the air quality objective of 200 µg/m^3, not to be exceeded more than 18 times per year.

3.2.2 Particulate Matter (PM_{10})

Table A.6 in Appendix A compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past five years with the air quality objective of 18 µg/m^3.

Table A.7 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the air quality objective of 50 µg/m^3, not to be exceeded more than seven times per year.

3.2.3 Particulate Matter ($PM_{2.5}$)

Table A.8 in Appendix A compares the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past five years with the air quality objective of 10 µg/m^3.

3.2.4 Sulphur Dioxide (SO_2)

West Dunbartonshire Council does not carry out any monitoring in respect of Sulphur Dioxide and has no current plans to do so.

3.2.5 Carbon Monoxide, Lead and 1,3-Butadiene

West Dunbartonshire Council does not carry out any monitoring in respect of Carbon Monoxide, Lead and 1,3-Butadiene and has no current plans to do so

4 New Local Developments

No new developments in the area which may affect air quality have been identified and requires consideration in this report.

4.1 Road Traffic Sources

There were no new road traffic sources identified within West Dunbartonshire Council Area in 2024.

4.2 Other Transport Sources

The following transport sources within the West Dunbartonshire Council local authority boundary do not meet the criteria specified in the Local Air Quality Management, Technical Guidance (TG22) that would trigger the requirement for a more detailed assessment:

- Airports.
- Locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.
- Locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.
- Ports for shipping.

4.3 Industrial Sources

There were no new industrial sources identified within West Dunbartonshire Council Area in 2024 neither has the Scottish Environmental Protection Agency (SEPA) made West Dunbartonshire Council aware of any significant new industrial sources since the previous Annual Progress Report in June 2024.

4.4 Commercial and Domestic Sources

There are no new commercial or domestic sources identified in the West Dunbartonshire Council area. However, there have been many planning applications/building warrants

received for domestic fuel burning through the use of wood burning stoves which continues to grow in West Dunbartonshire.

4.5 New Developments with Fugitive or Uncontrolled Sources

There are no new developments with fugitive or uncontrolled sources identified in the West Dunbartonshire Council area.

5 Planning Applications

There are no new planning applications in 2024 West Dunbartonshire Council that would have the potential to affect air quality.

6 Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

No exceedances to the short and long term NO_2 limit were registered at the two continuous monitoring locations. The annual average levels at both the Clydebank location and the Dumbarton location remain statistically steady.

The monitoring location with the highest annual mean for NO_2 is DT18 (Milton 1) with a value of 23.9 µg/m^3 but still below the national annual mean for this pollutant.

The Annual mean PM_{10} and $PM_{2.5}$ levels at Briar Drive Clydebank are not statistically different from previous years, showing only minor fluctuations. These values are below the objective level.

6.2 Conclusions relating to New Local Developments

There have been no new local developments that have the potential to introduce new exceedances of relevant air quality objectives in West Dunbartonshire or expected to have significant impact on air quality in the towns within WDC.

6.3 Proposed Actions

Monitoring data for 2024 has not identified any new exceedances of the objectives for any pollutant and all monitored areas of West Dunbartonshire are not only in compliance but are well below the objective levels, even although traffic levels have returned to pre pandemic levels.

Due to ongoing staff shortages within West Dunbartonshire we have reduced the diffusion tube network by a significant amount. This was only done after considering the many years of relatively low levels recorded at these locations and ensuring that there was still adequate overall coverage of the district. This will be reflected in future Progress Reports.

West Dunbartonshire Housing Department have initiated a project that monitors indoor air quality in Housing tenancies. As part of that project they are monitoring outdoor air quality,

$PM_{2.5}$ and CO_2, with 5 low cost sensors in the Clydebank area. The rationale behind the outdoor sensors is to alleviate fears that tenants are allowing air pollution into their homes if they open windows for ventilation. The results of this project will be shared with Environmetal Health and will form part of our Progress Report for 2026.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
CM1	Clydebank	Roadside	249723	672044	NO_2; $PM_{10;}$ $PM_{2.5}$	NO	Chemiluminescent; FDMS	18	4.5	1.5	CM1
CM2	Dumbarton	Roadside	240238	675193	NO_2	NO	Chemiluminescent	2.5	5	1.5	CM2

Notes:

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

(2) N/A if not applicable.

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

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT1	Clydebank 1	Kerbside	248479	671115	NO2	NO	2.0	1.0		2.0
DT3	Clydebank 7	Kerbside	249918	669868	NO2	NO	4.0	1.0		2.0
DT4	Clydebank 9	Kerbside	249761	669990	NO2	NO	3.0	1.0		2.0
DT6	Clydebank 11	Kerbside	249801	672288	NO2	NO	22.0	1.0		2.0
DT7	Clydebank 12	Kerbside	249747	671665	NO2	NO	10.0	1.0		2.0
DT9	Clydebank 14	Kerbside	249872	671854	NO2	NO	>25	10.0		2.0
DT10	Clydebank 15	Kerbside	249746	671966	NO2	NO	8.5	1.0		2.0

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT12	Clydebank 17	Kerbside	249987	672440	NO2	NO	11.0	1.0		2.0
DT14	Dumbarton 11	Kerbside	240515	675078	NO2	NO	4.0	1.0		2.0
DT15	Dumbarton 12	Kerbside	239410	675330	NO2	NO	7.0	1.0		2.0
DT16	Dumbarton 2	Kerbside	240178	675228	NO2	NO	8.0	1.0		2.0
DT17	Dumbarton 3	Kerbside	240279	675196	NO2	NO	4.5	1.0		2.0
DT18	Milton 1	Kerbside	242266	674235	NO2	NO	12.0	1.0		2.0
DT19	Milton 2	Kerbside	242160	674299	NO2	NO	2.0	12.0		2.0
DT20	Alexandria 1	Kerbside	239024	680206	NO2	NO	5.0	1.0		2.0

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT21	Balloch 1	Kerbside	238584	681562	NO2	NO	12.0	1.0		2.0
DT22, DT23, DT24	Briar Drive 3	Kerbside	248479	671115	NO2	NO	2.5	1.0	Yes	2.0
DT25, DT26, DT27	Dumbarton Triplicate 3	Kerbside	240238	675193	NO2	NO	18.0	4.5	Yes	2.0
DT29	Clydebank 19	Kerbside	249752	669981	NO2	NO	2.5	2.5		2.0
DT31	Clydebank 21	Kerbside	250531	669269	NO2	NO	4.0	1.0		2.0
DT32	Clydebank 22	Kerbside	250199	669551	NO2	NO	7.0	1.0		2.0
DT35	Milton 5	Kerbside	242413	674288	NO2	NO	2.0	14.0		2.0
DT36	Clydebank 23	Kerbside	249868	671267	NO2	NO	2.5	1.0		2.0

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube co-located with a Continuous Analyser?	Tube Height (m)
DT37	Dumbarton 13	Kerbside	240858	674932	NO2	NO	2.0	1.0		2.0

Notes:

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

(2) N/A if not applicable.

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

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	249723	672044	Roadside	99.5	99.5	21	17.4	17.60	14.8	15
CM 2	240238	675193	Roadside	99.8	99.8	12.6	13.6	12.10	13	12

Notes:

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

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

Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

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

Table A.4 – Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
DT1	248479	671115	Kerbside		92.5	19.1	17.2	19.2	12.0	14.6
DT3	249918	669868	Kerbside		92.5	15.4	13.0	16.2	9.7	11.8
DT4	249761	669990	Kerbside		75.0	14.0	14.9	16.2	10.6	11.2
DT6	249801	672288	Kerbside		75.0	12.9	13.6	17.9	11.4	12.9
DT7	249747	671665	Kerbside		92.5	14.9	15.4	20.1	11.5	13.1
DT9	249872	671854	Kerbside		84.9	9.1	8.4	8.7	5.6	6.8
DT10	249746	671966	Kerbside		92.5	15.8	15.6	18.5	13.3	10.8
DT12	249987	672440	Kerbside		92.5	12.9	14.1	15.0	8.9	10.1
DT14	240515	675078	Kerbside		84.9	13.3	15.2	13.5	9.6	9.6
DT15	239410	675330	Kerbside		92.5	13.3	11.7	13.1	10.4	11.5

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2024 (%) [2]	2020	2021	2022	2023	2024
DT16	240178	675228	Kerbside		92.5	18.5	19.0	24.4	16.7	17.5
DT17	240279	675196	Kerbside		92.5	16.7	19.9	23.8	17.0	16.1
DT18	242266	674235	Kerbside		92.5	23.0	29.5	34.4	23.5	23.9
DT19	242160	674299	Kerbside		84.9	19.9	13.7	14.6	9.5	8.9
DT20	239024	680206	Kerbside		83.0	13.7	14.9	18.3	13.4	11.1
DT21	238584	681562	Kerbside		92.5	12.4	14.2	15.4	9.8	10.2
DT22, DT23, DT24	248479	671115	Kerbside		92.5	12.3	14.2	15.9	11.2	10.8
DT25, DT26, DT27	240238	675193	Kerbside		92.5	14.9	14.2	15.4	11.2	11.0
DT29	249752	669981	Kerbside		92.5	14.1	14.2	15.1	11.2	10.8
DT31	250531	669269	Kerbside		66.0	13.3	13.4	13.8	9.4	8.8
DT32	250199	669551	Kerbside		92.5	11.3	13.4	12.9	9.4	10.8

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
DT35	242413	674288	Kerbside		92.5	10.8	13.4	13.6	9.4	8.6
DT36	249868	671267	Kerbside		75.0	12.3	11.6	14.8	9.6	15.0
DT37	240858	674932	Kerbside		84.9	11.0	12.0	14.2	9.4	12.1

<CLICK HERE THEN PASTE COMPLETED DATA ROWS FROM LAQM DATA PROCESSING TOOL (IF UTILISED)>

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22 (confirm by selecting in box).**

☒ **Diffusion tube data has been bias adjusted (confirm by selecting in box).**

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

Notes:

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

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

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

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

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

Table A.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200 µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	249723	672044	Roadside	99.5	99.5	0(85)	0	0	0	0
CM 2	240238	675193	Roadside	99.8	99.8	0	0(86)	0	0	0

Notes:

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

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

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

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

Table A.6 – Annual Mean PM_{10} Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	249723	672044	Roadside	99.7	99.7	9	10	**10**	**9.1**	9

Notes:

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

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

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

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

Table A.7 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50 µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	249723	672044	Roadside	99.7	99.7	0	0(20)	0	**0**	0

Notes:

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

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

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

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

Table A.8 – Annual Mean $PM_{2.5}$ Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	249723	672044	Roadside	99.7	99.7	5	6	6	5.1	6

Notes:

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

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

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

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

Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO_2 2024 Monthly Diffusion Tube Results (µg/m^3)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT1	248479	671115	19.6	18.7	15.0		8.1	26.9	11.4	11.9	17.2	22.1	19.4	25.6	17.8	14.6		
DT3	249918	669868	20.7	15.4	10.5		9.9	12.1	7.6	11.1	16.4	16.5	15.0	23.1	14.4	11.8		
DT4	249761	669990	23.5	8.0	11.9			14.4	11.0	9.0	14.8	18.5	12.2		13.7	11.2		
DT6	249801	672288	23.1	9.9	8.6		11.0	14.8			16.9	19.7	18.0	19.3	15.7	12.9		
DT7	249747	671665	16.1	13.5	8.8		13.8	12.1	11.9	13.3	16.0	24.5	19.5	26.8	16.0	13.1		
DT9	249872	671854	13.7	6.8			3.9	6.5	5.5	4.4	7.3	9.3	10.8	14.8	8.3	6.8		
DT10	249746	671966	15.1	12.9	9.9		6.6	9.2	9.9	10.4	17.9	10.3	21.2	22.0	13.2	10.8		
DT12	249987	672440	12.6	8.0	4.7		3.7	13.0	8.7	12.2	12.6	18.6	18.6	22.5	12.3	10.1		
DT14	240515	675078	13.1	9.3	7.1		7.2	10.6	8.5	5.7	11.1	15.1		29.5	11.7	9.6		
DT15	239410	675330	13.4	12.8	12.4		11.6	9.2	8.7	10.3	18.1	17.1	28.6	12.1	14.0	11.5		

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 <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT16	240178	675228	21.4	13.5	21.3		13.7	22.1	23.6	21.2	25.2	26.6	16.9	28.9	21.3	17.5		
DT17	240279	675196	22.7	18.5	14.2		10.2	22.8	22.5	6.5	25.9	29.4	14.9	27.9	19.6	16.1		
DT18	242266	674235	22.3	38.8	31.3		9.4	30.6	32.8	31.4	34.8	29.2	23.2	37.4	29.2	23.9		
DT19	242160	674299		12.8	9.8		5.0	19.0	9.8	8.6	13.7	1.6	10.8	17.2	10.8	8.9		
DT20	239024	680206	12.7		10.0		8.1	12.8	12.3	14.7	14.5	18.3	21.8	10.5	13.6	11.1		
DT21	238584	681562	11.1	10.7	10.8		11.5	11.9	8.8	6.9	21.5	13.8	23.0	6.8	12.4	10.2		
DT22	249723	672044	21.4	17.1	12.0		7.3	9.9	7.2	6.1	17.2	15.9	15.5	20.9	-	-		Triplicate Site with DT22, DT23 and DT24 - Annual data provided for DT24 only
DT23	240238	675193	20.2	12.7	9.4		6.1	16.0	6.8	8.0	17.0	16.4	15.1	8.3	-	-		Triplicate Site with DT22, DT23 and DT24 - Annual data provided for DT24 only
DT24	248479	671115	19.1	11.9	12.5		12.2	7.3	9.5	5.5	16.1	18.6	15.7	20.9	13.2	10.8		Triplicate Site with DT22, DT23 and DT24 - Annual data provided for DT24 only
DT25	240238	675193	18.5	12.1	10.1		7.5	12.5	7.4	7.1	16.7	20.4	8.4	23.4	-	-		Triplicate Site with DT25, DT26 and DT27 - Annual data provided for DT27 only

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT26	240238	675193	15.5	14.8	11.4			11.2	6.8	4.7	15.5	18.4	12.7	30.7	-	-		Triplicate Site with DT25, DT26 and DT27 - Annual data provided for DT27 only
DT27	240238	675193	19.4	10.4	9.7		14.8	11.3	9.5	9.4	15.3	13.0	12.9	20.5	13.4	11.0		Triplicate Site with DT25, DT26 and DT27 - Annual data provided for DT27 only
DT29	249752	669981	14.3	11.3	10.8		7.0	14.6	8.5	12.9	17.7	13.3	18.6	15.4	13.1	10.8		
DT31	250531	669269	12.6		6.5				5.5	8.9	13.1	15.4	15.6	14.1	11.5	8.8		
DT32	250199	669551	23.0	8.8	7.4		1.6	28.3	7.4	6.6	10.2	13.9	17.0	20.4	13.1	10.8		
DT35	242413	674288	10.0	13.5	4.3		5.2	13.0	11.9	6.6	12.1	14.5	8.2	16.5	10.5	8.6		
DT36	249868	671267	20.6	14.9	12.9		17.3		11.6	11.7		29.7	21.2	24.5	18.3	15.0		
DT37	240858	674932	20.8	12.9	7.6		13.7		15.7	8.9	12.7	22.5	14.4	17.8	14.7	12.1		

<CLICK HERE THEN PASTE COMPLETED DATA ROWS FROM LAQM DATA PROCESSING TOOL (IF UTILISED)>

☒ **All erroneous data has been removed from the NO_2 diffusion tube dataset presented in Table B.1 (confirm by selecting in box).**

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22 (confirm by selecting in box).**

☐ **Local bias adjustment factor used (confirm by selecting in box).**

☒ **National bias adjustment factor used (confirm by selecting in box).**

☒ **Where applicable, data has been distance corrected for relevant exposure in the final column (confirm by selecting in box).**

☒ **<Local Authority> confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System (confirm by selecting in box).**

Notes:

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

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

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within West Dunbartonshire During 2024

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

Additional Air Quality Works Undertaken by West Dunbartonshire During 2024

West Dunbartonshire has not completed any additional works within the reporting year of 2024.

QA/QC of Diffusion Tube Monitoring

The diffusion tubes for the year 2024 are supplied and analysed by Glasgow Scientific Services (GSS) and are prepared using the 20% TEA in water method and in accordance with the procedures set out in the practical guidance. The duration of exposure is normally the 4/5 weeks period as suggested by the calendar provided by Defra. All results have been bias adjusted and annualised where required. The full set of monthly NO_2 diffusion tube results are shown in Table B.1 above.

Glasgow Scientific Services (GSS) Laboratory is UKAS accredited laboratory and participate in the AIR NO_2 Proficiency Testing Scheme.

Diffusion Tube Annualisation

1 Diffusion Tube, DT31, required annualization in 2024. This was done using the Diffusion Tube Data Processing Tool and the results are provided in Table C.2. below

Diffusion Tube Bias Adjustment Factors

West Dunbartonshire have applied a national bias adjustment factor of 0.82 to the 2024 monitoring data. A summary of bias adjustment factors used by West Dunbartonshire over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	04/25	0.82
2023	National	06/24	0.74
2022	National	03/23	1.05
2021	Local	-	0.88
2020	National	03/21	0.96

NO_2 Fall-off with Distance from the Road

No diffusion tube NO_2 monitoring locations within West Dunbartonshire required distance correction during 2024.

QA/QC of Automatic Monitoring

All automatic sites are part of the Scottish Air Quality Programme and are audited twice per year by Ricardo. Servicing and repair is carried out by Acoem UK, the service contracts include a six monthly service of instruments, call outs to site for repairs and the routine replacement of consumables. All data is available in real-time, and regularly scaled and ratified by Ricardo on behalf of the Scottish Government.

PM_{10} and $PM_{2.5}$ Monitoring Adjustment

The type of PM_{10}/$PM_{2.5}$ monitor(s) utilised within West Dunbartonshire do not require the application of a correction factor.

Automatic Monitoring Annualisation

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

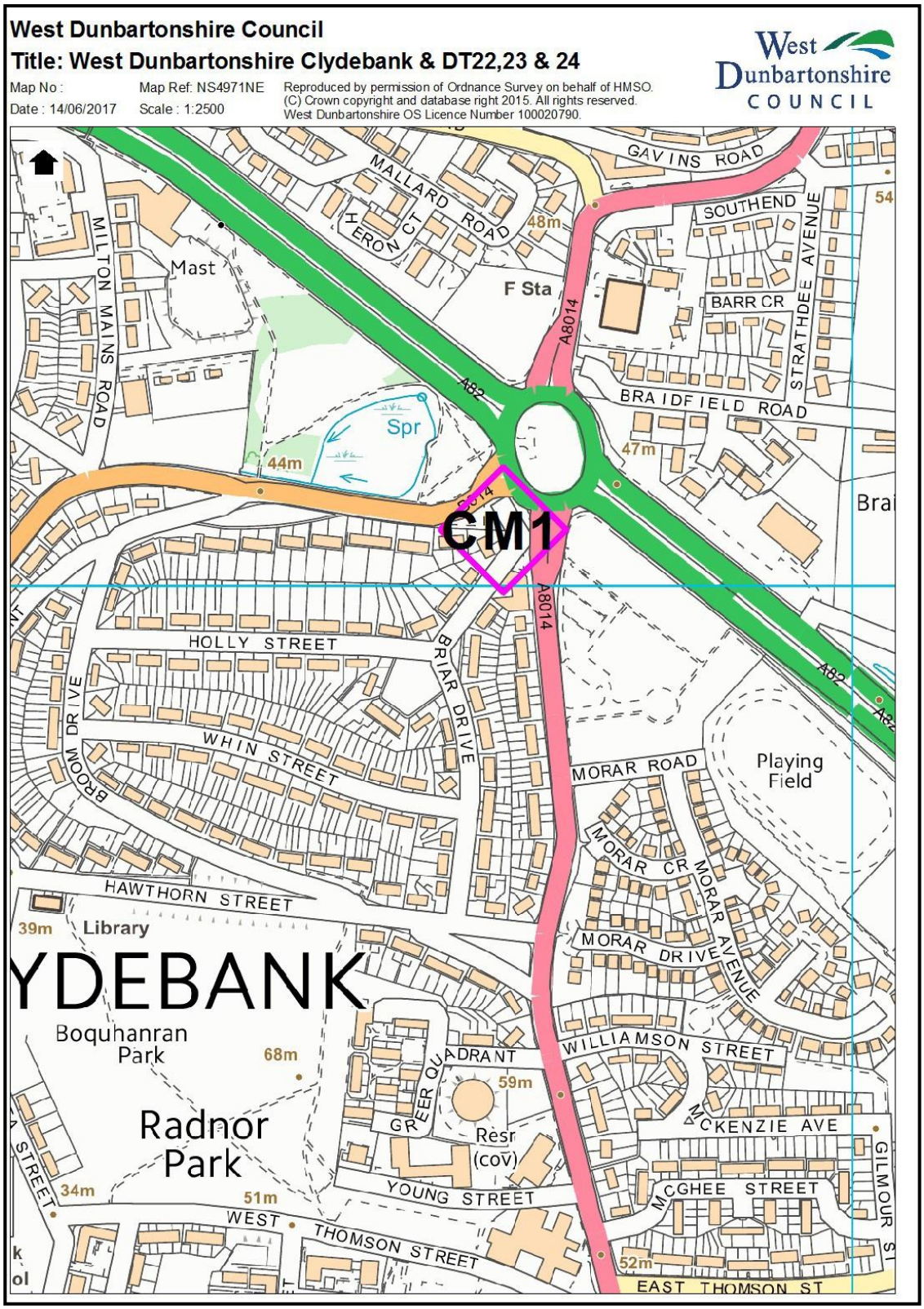
NO_2 Fall-off with Distance from the Road

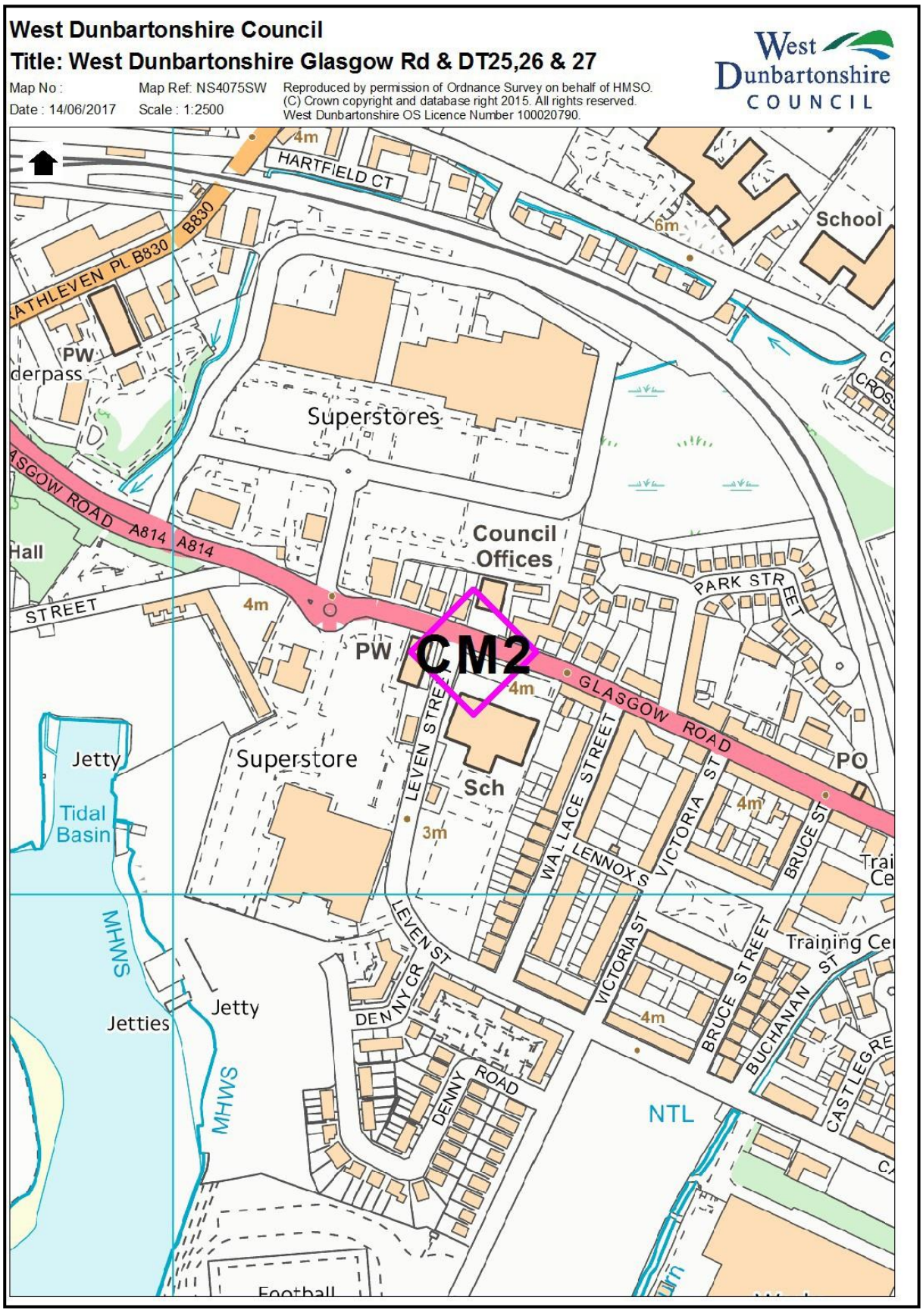
No automatic NO_2 monitoring locations within West Dunbartonshire required distance correction during 2024.

Table C.2 – Diffusion Tube Annualisation Summary (concentrations presented in µg/m^3)

Site ID	Annualisation Factor Clydebank	Annualisation Factor Dumbarton	Annualisation Factor <Site 3 Name>	Annualisation Factor <Site 4 Name>	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
DT31	0.9187	0.9465			0.9326	11.5	10.7	

Appendix D: Monitoring Site Location Maps




West Dunbartonshire Council
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Map No :
Map Ref: NS4075SW
Date : 14/06/2017
Scale : 1:2500
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Superstore
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LEVEN STREET
WALLACE STREET
LENNOX S
VICTORIA ST
BRUCE ST
PO
MHWS
Jetties
Jetty
LEVEN ST
DENNY CR
DENNY ROAD
BRUCE STREET
BUCHANAN ST
NTL
Training Ce
Football
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West Dunbartonshire Council

Title : Clydebank NO2

Map No :
Date : 21/06/2023
Map Ref : NS4970
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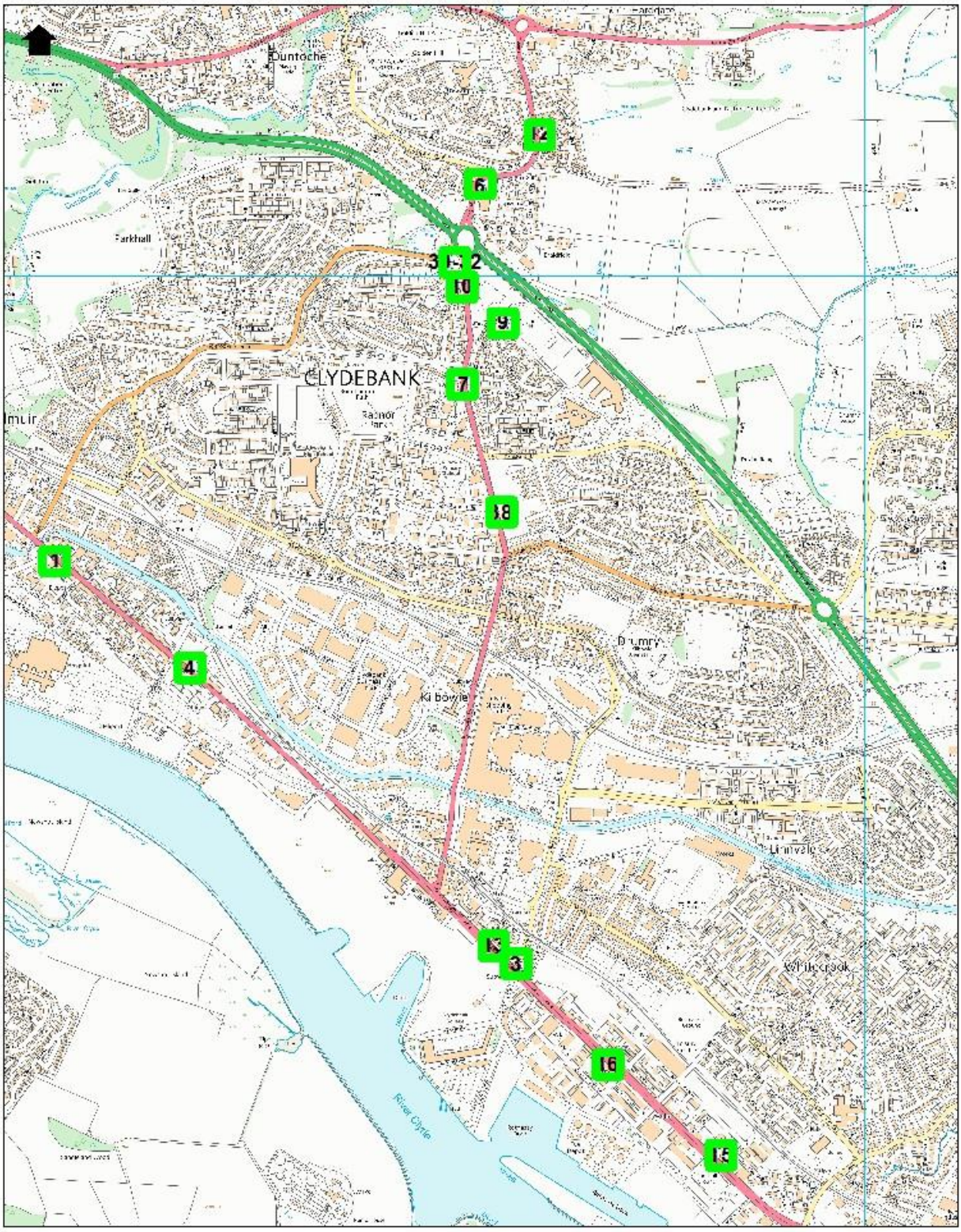

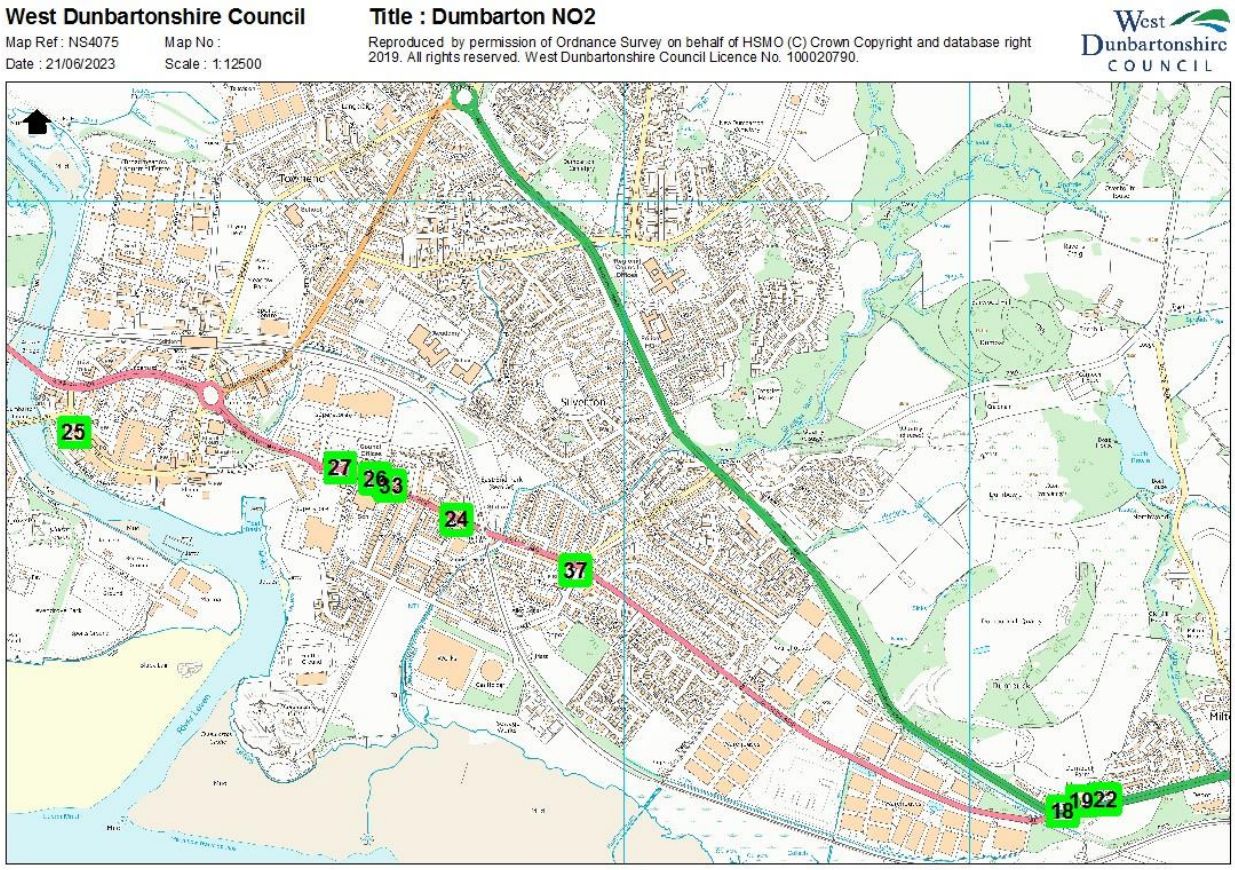

Glossary of Terms

<Please add a description of any abbreviation included in the APR – An example is provided below.>

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the LA intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
APR	Annual Progress Report
AURN	Automatic Urban and Rural Network (UK air quality monitoring network)
Defra	Department for Environment, Food and Rural Affairs

DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
DT	Diffusion Tube
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

Please provide a list of all documents referred to in the report.

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