

ITEM No ...5.....

REPORT TO: CLIMATE, ENVIRONMENT AND BIODIVERSITY COMMITTEE – 10 JUNE 2024
REPORT ON: AIR QUALITY UPDATE
REPORT BY: EXECUTIVE DIRECTOR OF NEIGHBOURHOOD SERVICES
REPORT NO: 151-2024

1.0 PURPOSE OF REPORT

- 1.1 To summarise the 2023 air quality monitoring data and update on progress made with the Air Quality Action Plan (AQAP) measures during 2023; and
- 1.2 To provide an update on provision air quality monitoring data for the early months of 2024; and
- 1.3 To inform Committee of the draft 2024 AQAP update and seek approval to carry out statutory and public consultation on a draft version of this Plan.

2.0 RECOMMENDATIONS

- 2.1 It is recommended that Committee note the contents of this report and to:
 - 1. Remit the Executive Director of Neighbourhood Services to submit the 2024 Air Quality Annual Progress Report (APR) to the statutory bodies.
 - 2. Remit the Executive Director of Neighbourhood Services to engage with the Statutory Authorities on the revocation process for the 1-hour mean nitrogen dioxide (NO₂) air quality objective component of the Dundee Air Quality Management Area (AQMA) (as outlined in 4.6 below).
 - 3. Note the information provided in Appendix 2 on provisional air quality monitoring data for the months of January to April 2024.
 - 4. Remit the Executive Director of Neighbourhood Services to progress with the update of the AQAP and carry out statutory consultation, in line with the requirements of the Local Air Quality Management (LAQM) Policy Guidance (Scotland) 2023, on the draft 2024 AQAP. A further report to update on the outcome of the consultation and any subsequent amendments to the draft AQAP and to seek approval to submit the final AQAP to the Scottish Government will be brought to Committee in the Spring of 2024.

3.0 FINANCIAL IMPLICATIONS

- 3.1 Costs associated with the progression of AQAP measures and LAQM duties are contained within the grant funding being sought from the Scottish Government, as outlined in Section 4.10.

4.0 AIR QUALITY UPDATE

- 4.1 Reference is made to Article V of the Environmental Services and Sustainability Committee of 20th February 2006, when the original Committee Report approved the establishment of an AQMA in the city and the basis of the necessary air quality monitoring and measures the Council requires to implement to work towards meeting the required air quality standards. As well as meeting the EU/UK National Air Quality Standards (NAQS), for the purposes of LAQM, local authorities in Scotland are also required to meet the more stringent statutory Scottish Objectives.

- 4.2 Of the seven NAQS pollutants, there continues to be no anticipated risk of exceeding the statutory objectives for benzene, carbon monoxide, 1,3-butadiene, sulphur dioxide and lead.
- 4.3 Through 2023, reference standard continuous monitoring for NO₂ took place at six locations in Dundee. These were at monitoring stations on Broughty Ferry Road, Lochee Road, Mains Loan (background reference monitor), Meadowside, the Seagate, and Whitehall Street. Reference standard continuous monitoring of Particulate Matter (PM) (PM¹⁰ & PM^{2.5}) also took place at these locations, with additional indicative PM¹⁰ analysers located at Albert Street, Broughty Ferry Road, Logie Street, Myrekirk Terrace, and the Stannergate.
- 4.4 The 2023 ratified monitoring data shows compliance was met for all air quality objectives at all reference standard monitoring locations. Details of these measurements are contained in Table 1 in **Appendix 1**. An annual summary report for Dundee City Council is also available on the Scottish Air Quality website at: www.scottishairquality.scot/assets/reports/365/Dundee_City_annual_2023
- 4.5 Since 2021 our Annual Progress Reports have advised that lockdown measures imposed in response to the COVID19 pandemic during 2020 resulted in a significant reduction in road traffic within Scotland's cities, including Dundee, which contributed to large decreases in measured NO₂ concentrations. Due to the gradual return of traffic levels, NO₂ concentration levels increased slightly in 2021 however in 2022 the levels reduced to lower than measured in 2020. Improvements to bus fleets in readiness for the forthcoming Low Emission Zone (LEZ) is considered a main factor for the improvements. NO₂ concentration levels for 2023 were again in compliance with the annual mean NO₂ air quality objective for Scotland, with slight variations on 2022 levels observed across the reference standard NO₂ monitoring locations.
- 4.6 In 2013 the Dundee AQMA was amended to include the 1-hour mean NO₂ air quality objective due to exceedance of this objective at the Lochee Road monitoring site in the years prior to then. This air quality objective requires that the 1-hour mean limit of 200ug/m³ is not exceeded more than 18 times per year at a location. As of the end of 2023, there have been no exceedance of this objective at the Lochee Road monitor, or any other monitor, for the past 10 years. The 2023 APR suggested that one further year compliance post COVID-19 pandemic should be observed before concluding that this part of the Dundee AQMA can be considered for revocation. The statutory agencies that appraised the 2023 APR included that they would encourage the Council to discuss revocation of the AQMA for hourly NO₂ within the 2024 APR. As 2023 monitoring data showed compliance with the 1-hour mean objective, it is appropriate to progress with the revocation of this part of the Dundee AQMA.
- 4.7 Reductions in the annual mean levels for PM¹⁰ and PM^{2.5} on 2022 levels were observed across the reference analysers in 2023. Local PM levels can be influenced by transboundary events, with the 2023 APR referring to such events being observed in 2022. No specific events were reported on in 2023, and compliance with the air quality objectives for PM¹⁰ and PM^{2.5} were observed across the reference analysers in 2023.
- 4.8 Provisional data for the months of January – April 2024 for NO₂, PM¹⁰ and PM^{2.5} is contained within **Tables 2 – 19** in **Appendix 2** of this report. Whilst this data has not yet been ratified, the monthly figures suggest likely compliance with the air quality objectives although annual mean air quality objectives are based on the calendar year, so this is an early observation for the 2024 period. This data has been sourced from the Scottish Air Quality Database, which is available through the Air Quality in Scotland website www.scottishairquality.scot .
- 4.9 The Council's current 2011 AQAP includes wide ranging measures that aim to assist with achieving further improvements in air quality across the city. The measures are not focussed on specific locations but in combination contribute to improvements in air quality across the city. A summary of the progression of some of the AQAP related measures undertaken during 2023 and measures proposed to be progressed during 2024 are contained within Appendix 3 of this report. As outlined in Section 5, an updated AQAP is proposed to be published in 2024, with the next step in its production being consultation on a draft AQAP.

4.10 As with previous years, funding to progress selected AQAP measures during 2024/25 is being sought through the Scottish Government Air Quality Action Plan grant scheme. An application for LAQM related work is also being sought through the Scottish Government Local Air Quality Management grant scheme. At the time of writing this report the outcome of these applications have not been determined by the Scottish Government.

5.0 AIR QUALITY ACTION PLAN REVIEW AND UPDATE

5.1 In line with Part IV of the Environment Act 1995, Dundee City Council published its AQAP in 2011 following the declaration of the Dundee AQMA for not meeting the annual mean objectives for NO₂ and PM¹⁰. The 2011 AQAP contains 32 measures aimed to assist with achieving improvements in air quality across the city. Since the implementation of this AQAP, air quality has improved and in recent years has met air quality objectives (AQO) for these pollutants. At least three consecutive years of compliance with the AQO's for all pollutants is to be demonstrated before an AQMA can begin to be considered for revocation. As the pandemic contributed to lower pollutant concentrations, particularly for NO₂, during 2020 and 2021, it is considered that the current period of compliance applies from 2022.

5.2 In March 2023 the Scottish Government published updated LAQM Policy Guidance (PG(S)2023) in response to recommendations made to them by Environmental Standards Scotland (ESS) following the ESS 2021 – 2022 investigation on air quality in Scotland. The updated PG(S)2023 includes that all current AQAPs should be reviewed and, where necessary, updated within one year of the revised Policy Guidance being introduced, and every five years subsequently. Work on updating our 2011 AQAP will now include the impact of the forthcoming Dundee LEZ scheme.

5.3 The revised Policy Guidance introduces some new requirements for AQAPs, such as the inclusion of specified target dates for completing each action plan measure and estimated reduction in pollutant concentrations contributed by each AQAP measure if possible. The revised Policy Guidance also includes that local authorities are to achieve AQMA and AQAP objectives within a specified target date, which must be as short a time as possible. An AQAP template has been developed by the Scottish Government to assist local authorities in the preparation of updated AQAPs.

5.4 The proposed draft 2024 Dundee AQAP update is contained within Appendix 4 of this report. The draft plan includes actions that Dundee City Council aim to deliver between 2024 – 2029 to maintain air pollutant concentrations below current air quality objectives and where practicable, reduce emissions further to protect health across the city. The draft AQAP includes actions that can be considered under ten broad topics

:

- Alternatives to private vehicle use
- Policy Guidance and development control
- Low emission plant
- Domestic solid fuel burning
- Promoting low emission transport
- Promoting travel alternatives
- Public information
- Transport planning and infrastructure
- Traffic management
- Vehicle fleet efficiency

5.5 The draft 2024 Dundee AQAP is to be subject to statutory consultation and will also be open to public consultation. The public consultation will be conducted through the consultation pages of the DCC website, with promotion of this being made via social media and direct contact with relevant consultees. The consultation period will commence in mid-June 2024, running for six weeks with views being sought on the AQAP as a whole and the proposed actions within.

5.6 Following conclusion of the consultation, responses will be analysed and taken into consideration for the finalised AQAP. A further report to update on the outcomes of the consultation and any subsequent amendments to the draft AQAP and to seek approval to

submit the final AQAP to the Scottish Government will be brought to Committee in the Autumn of 2024.

6.0 POLICY IMPLICATIONS

- 6.1 This report has been subject to an Integrated Impact Assessment to identify impacts on Equality & Diversity, Fairness & Poverty, Environment and Corporate Risk. An impact, positive or negative, on one or more of these issues was identified. An appropriate senior manager has checked and agreed with this assessment. A copy of the Integrated Impact Assessment showing the impacts and accompanying benefits of / mitigating factors for them is included as an Appendix to this report.

7.0 CONSULTATIONS

- 7.1 The Council Leadership Team were consulted in the preparation of this report and agree with its content.

8.0 BACKGROUND PAPERS

- 8.1 None

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Executive Director of Neighbourhood Services

Tom Stirling
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7 May 2024

APPENDICES

- Appendix 1: 2023 ratified monitoring data results for each of the pollutants monitored at the continuous monitoring locations in Dundee against the Air Quality Objectives for Scotland
- Appendix 2: Provisional monitoring data for January – April 2024 (monthly averages)
- Appendix 3: Content for the 2024 Air Quality Annual Progress Report on measures linked to the Air Quality Action Plan and actions to be progressed during 2024
- Appendix 4: Draft version of the 2024 Air Quality Action Plan for statutory consultation
- Appendix 5: Integrated Impact Assessment

Appendix 1: 2023 ratified monitoring data results for each of the pollutants monitored at the continuous monitoring locations in Dundee against the Air Quality Objectives for Scotland)

Table 1: Ratified monitoring data results for 2023 for continuous monitoring locations in Dundee City Council

Continuous Monitor location	Site type ^B	NO ₂ annual mean (ug/m ³)	NO ₂ hourly mean (# times hourly 200ug/m ³ limit exceeded)	PM ₁₀ annual mean (ug/m ³)		PM ₁₀ daily mean (# times that 50ug/m ³ daily mean exceeded)	PM _{2.5} annual mean (ug/m ³)	
				measured	corrected ^D		measured	corrected ^D
Air Quality Objective^A		40	18	18		7	10	
Albert St ^(O)	K							
Broughty Ferry Rd ^C	UI	11.8	0	10.2 ^(F) (O) (P)	11.2	0	5.0	5.3
Lochee Rd	R	28.5	0	10.8	11.9	2	5.4	5.7
Logie St ^(O)	K							
Mains Loan	UB	7.3	0	7.6	8.4	0	4.3	5.6
Meadowside	R	24.7	0	10.7	11.8	0	5.2	5.6
Myrekirk Tce ^(O)	R							
Seagate	R	28.7	0	13.2	14.5	0	6.2	6.5
Stannergate ^(O)	R							
Whitehall St	R	21.3	0	9.8	10.8	0	5.3	5.6

A. Air Quality Objectives (Scotland): NO₂ annual mean – 40ug/m³, NO₂ hourly – 200ug/m³ not to be exceeded more than 18 times per year, PM₁₀ annual mean – 18ug/m³, PM₁₀ daily mean – 50ug/m³ not to be exceeded more than 7 times per year, PM_{2.5} annual mean – 10ug/m³

B. Site type: K = kerbside, R = roadside, UI = urban industrial, UB = urban background, I = indicative

C. The Broughty Ferry Road site includes 3 analysers that monitor PM₁₀(Fidas (F) / Osiris (O) / Partisol (P))

D. The Scottish Government published a guidance note on 17 May 2023* advising that annual mean PM data collected using Fidas 200 is to be corrected using factors (PM₁₀ divided by 0.909 and PM_{2.5} multiplied by 1.06) identified by the “Scottish Government Equivalence Study to Investigate Particulate Matter Monitoring In Scotland Using The Fidas 200”. Local authorities are to present both measured and corrected data for LAQM reporting.

* www.scottishairquality.scot/news/local-authority-guidance-note-laqm-reporting-scottish-pm-data

NOTE: full information on monitoring results in respect to type of analyser, % data capture, annualised results, and 99.8th percentiles will be available in Appendix 1 of the 2024 Air Quality Annual Progress Report for Dundee City Council.

Appendix 2: Provisional monitoring data for January – April 2024 (monthly averages)

All data in this appendix was sourced from the Scottish Air Quality database held on the Scottish Air Quality website, www.scottishairquality.scot on 1 May 2024.

Nitrogen dioxide (NO₂) monthly averages and annual mean

(Air Quality Objectives (Scotland): NO₂ annual mean – 40ug/m³) (N/D = no data) (= provisional data)

Table 2: Broughty Ferry Road NO₂

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	19.6	15.2	11.9	7.8									
2023	16.9	13.6	14.2	11.2	9.4	9.2	7.5	8.2	9.7	9.3	17.6	15.7	11.8
2022	13.8	10.6	18.9	11.5	7.6	6.5	6.8	8.2	8.1	9.7	14.6	18.2	11.2
2021	27	N/D	N/D	N/D	N/D	12	8	8	11	13	14	19	13
2020	21	22	23	20	17	18	11	10	N/D	20	22	25	20

Table 3: Lochee Road NO₂

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	39.6	34.6	24.8	19.1									
2023	43.1	35.0	32.3	23.7	23.0	21.6	20.7	21.1	23.9	23.6	39.7	34.6	28.5
2022	39.2	34.2	36.2	24.6	22.4	18.4	19.2	22.0	24.7	27.6	35.4	44.1	29.0
2021	43	30	29	30	27	22	21	24	31	35	42	45	32
2020	47	46	35	17	15	19	22	24	32	36	40	42	31

Table 4: Mains Loan NO₂ (background)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	10.3	6.8	7.3	4.4									
2023	10.8	8.4	9.2	6.4	4.8	4.3	3.7	4.7	6.6	5.9	11.6	11.1	7.3
2022	8.9	7.8	13.9	6.7	N/D	N/D	N/D	N/D	5.0	6.4	11.5	12.7	9.1 (53%)
2021	13	9	8	8	7	5	5	7	8	9	10	14	8
2020	10	11	9	6	4	5	4	6	8	10	13	15	8

Table 5: Meadowside NO₂

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	N/D	36.4	27.4	22.2									
2023	36.9	29.7	31.1	24.1	23.4	20.0	18.6	20.2	18.5	N/D	N/D	N/D	24.7(73%)
2022	34.5	27.0	39.3	27.2	20.3	16.6	17.9	18.2	20.3	25.0	31.3	36	26.1
2021	N/D	N/D	25	27	26	19	19	21	27	32	34	42	27
2020	39	36	31	13	13	9	N/D	N/D	N/D	N/D	N/D	N/D	24

Table 6: Seagate NO₂

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	37.3	32.8	30.5	23.5									
2023	34.8	30.9	32.4	27.6	26.2	24.6	21.9	22.0	26.0	27.3	35.6	32.2	28.7
2022	28.6	25.7	35.0	27.3	19.9	19.2	14.4	24.8	20.0	25.0	32.3	35.7	26.5
2021	36	32	28	31	30	22	27	26	29	30	32	39	30
2020	40	41	33	18	13	17	20	26	29	33	34	37	28

Table 7: Whitehall Street NO₂

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	22.1	21.7	25.1	18.1									
2023	25.5	21.7	25.7	22.5	20.8	18.9	16.4	17.2	17.7	17.9	26.5	25.1	21.3
2022	21.2	18.2	27.2	21.1	15.2	14.1	16.6	17.5	15.9	19.0	26.6	28.9	20.1
2021	31	33	24	30	29	22	27	25	25	26	26	34	28
2020	28	30	26	13	13	11	18	24	24	31	28	33	24

Particulate Matter (PM) 10 monthly averages and annual mean

(Air Quality Objectives (Scotland): PM¹⁰ annual mean – 18ug/m³) (N/D = no data) (= provisional data)

Table 8: Broughty Ferry Rd PM¹⁰

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	8.8	9.3	14.9	8.1									
2023	7.0	11.1	12.1	14.9	12.5	12.4	7.5	7.4	11.6	9.5	8.2	8.5	10.2
2022	11.4	8.6	27.8	14.3	10.4	9.9	8.3	9.8	13.1	8.5	11.6	7.8	11.8
2021	6	10	11	14	9	11	12	11	12	7	7	N/D	10
2020	7	8	13	14	9	10	7	9	9	7	8	6	9

Table 9: Lochee Road PM¹⁰

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	9.2	10.7	15.2	8.9									
2023	7.9	15.6	17.3	14.4	12.9	12.0	7.9	7.2	9.6	9.8	8.0	7.9	10.8
2022	12.8	10.7	29	14.7	11.2	10.7	9.6	9.2	11.1	9.6	11.7	9.2	12.5
2021	8	11	12	15	9	10	14	11	11	8	9	12	11
2020	8	10	15	12	9	9	6	10	10	8	10	8	10

Table 10: Mains Loan PM¹⁰ (background)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	10.0	6.8	14.3	8.9									
2023	5.4	8.3	7.4	12.3	9.6	9.5	5.7	5.5	8.4	9.0	5.3	5.6	7.6
2022	7.7	5.9	20.7	10.6	8.5	8.4	6.4	7.2	7.9	7.3	9.8	6.5	8.9
2021	5	8	7	9	6	8	9	9	9	6	5	8	8
2020	6	6	8	11	7	8	5	7	7	6	8	6	7

Table 11: Meadowside PM¹⁰

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	9.5	10.6	16.1	8.9									
2023	8.8	14.3	14.4	15.1	12.6	11.9	7.9	7.8	10.0	10.3	7.8	7.7	10.7
2022	11.1	10.5	31.5	14.9	10.3	9.8	8.1	8.9	9.6	9.3	11.8	7.9	12.0
2021	6	11	15	14	8	10	11	11	11	8	8	10	10
2020	8	10	14	13	9	9	7	8	9	7	9	7	9

Table 12: Seagate PM¹⁰

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	11.2	11.0	17.0	10.3									
2023	13.1	16.3	15.9	18.3	16.1	15.0	10.0	10.1	12.2	12.6	9.6	9.7	13.2
2022	12.5	11.2	28.5	15.5	12.2	12.2	11.4	11.6	11.5	11.0	15.1	10.1	13.6
2021	7	11	12	15	10	11	12	13	12	9	9	11	11
2020	8	10	14	13	9	9	8	10	10	8	10	7	10

Table 13: Whitehall Street PM¹⁰

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	8.9	8.5	15.2	8.8									
2023	6.7	10.7	10.7	14.5	11.8	11.0	7.5	7.5	10.1	11.3	7.8	8.3	9.8
2022	8.9	7.3	22.1	11.9	9.1	8.9	7.4	8.4	9.4	9.4	11.5	7.6	10.2
2021	5	9	8	9	7	9	10	10	10	7	6	9	8
2020	7	8	10	11	8	9	6	8	8	7	8	6	8

Particulate Matter (PM) 2.5 monthly averages and annual mean

(Air Quality Objectives (Scotland): PM^{2.5} annual mean – 10µg/m³) (N/D = no data) (Yellow = provisional data)

Table 14: Broughty Ferry Road PM^{2.5}

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	4.6	4.2	8.2	3.8									
2023	3.9	5.6	4.7	7.9	6.8	6.1	3.6	3.2	5.1	4.5	4.3	4.6	5.0
2022	5.2	3.8	15.2	6.9	4.8	4.9	3.6	4.4	7.1	4.3	6.5	4.5	6.0
2021	4	5	5	6	5	5	6	5	6	3	3	N/D	5
2020	4	4	5	7	5	5	3	4	4	3	5	3	4

Table 15: Lochee Road PM^{2.5}

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	5.0	4.7	8.6	4.2									
2023	4.4	6.4	5.7	8.0	7.1	6.4	3.8	3.5	5.2	4.8	4.6	4.5	5.4
2022	6.2	4.7	16.5	7.7	5.6	5.8	4.8	4.6	5.2	4.7	6.8	5.3	6.5
2021	4	5	6	6	5	6	7	6	7	4	4	7	6
2020	4	5	6	7	5	5	2	6	5	4	6	5	5

Table 16: Mains Loan PM^{2.5} (background)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	5.2	3.8	8.5	4.2									
2023	3.4	5.1	3.9	7.2	5.8	5.3	3.0	2.8	4.6	4.5	3.0	3.2	4.3
2022	4.4	3.3	13.9	6.2	4.7	4.7	3.2	3.9	4.2	3.9	5.8	4	5.2
2021	3	5	5	5	4	5	6	5	5	3	3	5	4
2020	4	4	5	6	4	5	2	4	4	3	5	3	4

Table 17: Meadowside PM^{2.5}

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	4.8	4.5	8.7	4.1									
2023	4.4	6.2	5.2	8.1	6.9	6.3	3.8	3.6	5.2	4.7	4.3	4.2	5.2
2022	5.4	4.1	14.9	6.6	4.7	4.8	3.7	4.5	4.8	4.6	6.7	4.6	5.8
2021	4	5	7	6	5	5	7	5	6	4	4	6	5
2020	4	5	6	6	4	5	3	4	4	3	6	4	5

Table 18: Seagate PM^{2.5}

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	6.0	5.2	8.8	4.5									
2023	5.8	6.7	5.9	8.8	7.9	7.0	4.6	4.5	6.4	5.9	5.4	5.5	6.2
2022	6.4	4.9	15.6	7.4	5.6	5.7	4.8	5.4	5.5	5.6	7.8	5.7	6.7
2021	4	6	5	6	5	6	7	6	7	5	4	7	6
2020	5	5	6	7	5	5	3	5	5	4	6	4	5

Table 19: Whitehall Street PM^{2.5}

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	5.0	4.4	8.4	4.3									
2023	4.0	5.9	5.0	8.1	6.9	6.1	3.9	3.9	5.5	5.3	4.6	4.8	5.3
2022	5.1	3.9	13.9	6.5	4.9	4.9	3.7	4.5	4.8	4.9	6.5	4.7	5.7
2021	3	4	4	5	4	5	7	5	6	4	3	6	5
2020	4	4	5	6	4	5	3	4	4	4	5	4	4

Appendix 3: Content for the proposed 2024 Air Quality Annual Progress Report on measures linked to the Air Quality Action Plan (AQAP) and proposed actions for 2024.

Dundee City Council has taken forward a number of measures linked to our AQAP during the current reporting year of 2023 in pursuit of improving local air quality.

Updates on AQAP related actions progressed during 2023 include:

- Installation of on street enforcement infrastructure, road markings and signage for the Dundee Low Emission Zone scheme progressed during 2023 in preparation for the commencement of enforcement on 30th May 2024. Awareness raising included the running of television advertisements during March and April 2023.
- 40 Cyclehoop Bikehangars were installed at various locations across the city in 2023. The rental of these spaces is managed by Cyclehoop and DCC have worked with them, community groups and active travel organisations across the city to promote these.
- Membership of the ECO Stars commercial fleet scheme increased by 17 to 276 members in 2023. This increased number of vehicles included by 606, bring the total number of vehicles included to 10,086. The number of members of the Taxi / Private Hire scheme increased by 4 to 20 members in 2023, with 576 vehicles now included.
- A new electric vehicle (EV) charging hub at Clepington Road opened in 2023. In 2023 DCC also deployed a series of on street chargers across the city that are fully PAS 1899:2022 compliant charge point.
- The Drive Dundee Electric campaign continued to successfully engage with current and potential electric vehicle (EV) owners (both in public and business) through the local media in the form of EV related articles encouraging people to make the switch to EV.
- There were 250 fully electric vehicles within the fleet at DCC by the end of 2023 which is an increase of 43 from the year before.
- At the end of 2023 there were 202 pure electric taxis in Dundee, representing 31% of taxis in Dundee.
- A small event was held at Douglas Community Park in June to promote Clean Air Day 2023.
- School Streets (vehicle exclusion zone) were launched at another five schools in 2023. The introduction of these School Streets was supported by other behavioural change programmes such as walking buses, Dr. Bike sessions, banner competitions and school assemblies.
- Places for Everyone projects continued throughout Dundee during 2023 with funding secured to move to their next stages of delivery in Broughty Ferry, Union Street, East End Campus, Ninewells, Western Gateway, St. Leonard Park, Bell Street and Magdalen Green.

Air Quality Action Plan linked measures to be progressed over the course of the next reporting year include:

- Support for Active Travel related projects will continue, such as the School Active Travel Delivery programme, through joint working with the Dundee Cycle Hub and the Ancrum School Active Travel Team.
- Work on provision of EV infrastructure at the Bell Street carpark will progress as a part of its redevelopment to a Low Carbon Hub.
- Enforcement of the Dundee LEZ scheme will commence on 30th May 2024.
- Revocation of the 1-hour mean NO₂ air quality objective aspect from Dundee AQMA will be progressed with the Statutory Authorities.
- The review and update of the 2011 AQAP in line with LAQM PG(S)2023 will be progressed in 2024 with the updated AQAP to be published in the second half of the year.



Dundee City Council

Air Quality Action Plan

In fulfilment of Part IV of the Environment Act 1995

Local Air Quality Management

2024

Information	Dundee City Council
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Report Reference Number	DCC_AQAP2024_APR24
Date	30 th April 2024

Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in Dundee between 2024-2029.

This action plan replaces the previous action plan which ran from 2011. Projects delivered through the past action plan include:

- Numerous infrastructure improvement schemes to reduce congestion and bus idling, improve road safety and reduce pollutant concentrations. Specific locations have included Union Street, Lochee Road, and Meadowside;
- Upgraded traffic control systems to improve junction efficiency and reduce congestion. Upgrades include the installation of fibre optic connections to the Urban Traffic Management and Control (UTMC) system, expansion of the UTMC, traffic light refurbishment at Seagate / Commercial Street, and the introduction of a Bluetooth Traffic Speed Monitoring System on all major arterial routes leading into the city centre;
- Provision of active travel schemes to encourage the uptake of cycling and other active travel alternatives. Measures include the Dundee Cycle Hub at the Waterfront and the expansion of the Active Travel Schools Bikeability scheme;
- Introduction of School Streets projects to exclude vehicles from entering roads surrounding schools to reduce idling and emissions where there are particularly vulnerable populations;
- Promotion of low emission transport through the ECO Stars fleet management recognition scheme, Drive Dundee Electric campaign, and new taxi and private hire car licenses restricted to electric vehicles from an approved list;
- Upgrades to the Council's own fleet, replacing older vehicles with electric vehicles. There were 223 fully electric vehicles within the fleet at DCC by the end of 2023, an increase of 16 from 2022. An order for a further 50 has been committed and due to be delivered by the end of this financial year;

- Publication of Air Quality & Land Use Planning Supplementary Guidance to ensure air quality is accounted for in the planning process for new developments; and
- Invested £47m in the External Wall Insulation programme, improving energy efficiency and thus reducing emissions for almost 5,000 residents.

There is scientific consensus that exposure to air pollution is harmful to people's health in terms of premature mortality and morbidity. Air pollution is associated with a number of adverse health impacts, and particularly affects the most vulnerable in society: children and older people, and those with pre-existing health conditions.

Dundee City Council is committed to reducing the exposure of people in Dundee to poor air quality in order to improve health.

We have developed actions that can be considered under ten broad topics:

- Alternatives to private vehicle use
- Policy guidance and development control
- Low emission plant
- Domestic solid fuel burning
- Promoting low emission transport
- Promoting travel alternatives
- Public information
- Transport planning and infrastructure
- Traffic management
- Vehicle fleet efficiency

Our priorities are:

- To maintain air pollutant concentrations below current air quality objectives and where practicable, reduce emissions further to improve health across the city;
- Continue the implementation of the LEZ to protect public health through improving air quality in Dundee and achieving air quality compliance under

section 87(1) of the Environment Act 1995, as well as to develop an environment that helps promote more active and sustainable travel choices in Dundee and contributes to meeting emission reduction targets set out in Part 1 of the Climate Change (Scotland) Act 2009;

- Work collaboratively with Scottish Government, Transport Scotland and regional organisations to ensure that wider transport measures are delivered, in particular to increase the use of active travel and public transport and reduce the use of private vehicles, and to increase the proportions of low and zero emission vehicles where modal shift is not feasible;
- Ensure that plans being developed and implemented for placemaking and climate change are closely co-ordinated and aligned with those for air quality in order to maximise co-benefits; and
- Report on an annual basis to Scottish Government the implementation of the measures set out in this report, as well as monitored concentrations within the AQMAs and the effects of the Low Emission Zone.

In this AQAP we outline how we plan to effectively tackle air quality issues within our control to meet statutory air quality objectives within the shortest possible time. However, we recognise that there are a large number of air quality policy areas that are outside of our influence, but for which we may have useful evidence, and so we will continue to work with the Scottish Government and partner organisations on policies and issues beyond Dundee City Council's direct influence.

In accordance with the requirements of PG (S) (23) Dundee City Council expects the process for revoking the hourly NO₂ objective element of the AQMA to be started in 2024, and for the annual mean NO₂ and PM₁₀ AQMA to be revoked in 2028, or no later than the end date of this AQAP and where possible in the shortest possible time.

Responsibilities and Commitment

This AQAP was prepared by Regulatory Services of Dundee City Council with the assistance of Air Quality Consultants Ltd. and the support and agreement of the following officers and departments:

- Environment/Public Health Manager
- Environmental Health Officer
- Climate Change and Sustainability Manager
- Senior Sustainability and Climate Change Officer
- Senior Manager Planning
- Low Carbon Project Manager
- Corporate Fleet Manager
- Parking & Sustainable Transport Team Leader
- Traffic & Road Safety Team Leader

Both the draft and final versions of the AQAP will be presented to the Climate, Environment and Biodiversity Committee for approval. The report will also be circulated to the Council Management Team prior to going to Committee.

This AQAP will be formally reviewed and republished on a five-yearly cycle from date of initial publication. Progress each year will be reported in the Annual Progress Report (APR) produced by Dundee City Council, as part of our statutory Local Air Quality Management duties.

A local authority should allow 12 months for the formal action plan review process to take place and to ensure the revised action plan is republished within the five-yearly cycle.

If you have any comments on this AQAP, please send them to Regulatory Services at:

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1. Introduction

This report outlines the actions that Dundee City Council will deliver between 2024-2029 in order to reduce concentrations of air pollutants and exposure to air pollution; thereby positively impacting on the health and quality of life of residents and visitors to the city of Dundee.

It has been developed in recognition of the legal requirement on the local authority to work towards Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the Local Air Quality Management (LAQM) statutory process.

This Plan will be reviewed every five years at the latest and progress on measures set out within this Plan will be reported on annually within Dundee City Council's air quality Annual Progress Report (APR).

2. Summary of Current Air Quality in Dundee

In 2006 Dundee City Council (DCC) declared the whole of the DCC local authority area as an Air Quality Management Area (AQMA) for the annual mean nitrogen dioxide (NO₂) Air Quality Objective (AQO). In 2010, DCC amended the initial AQMA to include the annual mean AQO for particulate matter (PM₁₀), and in 2013 DCC further amended the AQMA to include the 1-hour mean AQO for NO₂. Historically, the predominant source of pollution in Dundee has been from road transport.

DCC currently monitors concentrations of NO₂, PM₁₀ and PM_{2.5} through a network of over 80 passive diffusion tube sites and 10 automatic (continuous) monitoring sites. Concentrations have declined considerably since the AQMA was first declared in 2006; concentrations at all monitoring sites were below the NO₂ annual mean and 1-hour mean AQOs in 2022 and 2023. The last recorded exceedance of the 1-hour mean NO₂ AQO was in 2013 on Lochee Road, and the last recorded exceedance of the annual mean NO₂ AQO was in 2021 at the Victoria Rd/Hilltown site.

Concentrations of PM₁₀ at all automatic monitoring sites were also below the annual mean AQO in 2022. There was an exceedance of the PM₁₀ AQO in 2018 at the Logie Street monitoring site (an extension of Lochee Road). Since then the only exceedance has been in 2022 at Albert Street. However, this exceedance should be treated with caution as is at an indicative monitor and was greatly influenced by a transboundary pollution event (i.e., not one which was caused by local emissions). At the time of writing, 2023 data were not available for PM₁₀ or PM_{2.5}.

Travel restrictions put in place during 2020 due to the Covid-19 pandemic resulted in reduced concentrations of NO₂. However, NO₂ concentrations in 2022 fell below even those measured during 2020 at many locations. This significant decrease compared to pre-pandemic concentrations is considered to be largely attributed to the implementation of the LEZ, and in particular, improvements in the bus fleet. The two main bus operators, Xplore Dundee and Stagecoach, have in recent years introduced fully electric and EURO VI standard retrofitted buses, ahead of the Low Emission Zone (LEZ) being introduced on 30th May 2022. The LEZ will be enforced from 30th May 2024 at the end of a two-year grace period.

For more detailed information on current air quality, please refer to the [latest APR](#) from Dundee City Council.

DRAFT

3. Dundee City Council's Air Quality Priorities

The priority for this revised AQAP is meeting the statutory air quality objectives, but also, where practicable and feasible, to reduce local air pollutant emissions across the city. These priorities are consistent with Cleaner Air for Scotland 2 (CAFS2), in which the first theme is adopting a precautionary public health approach to air pollution reduction, with compliance with domestic and international air quality standards being a minimum.

Policy Context

The [City Centre - Strategic Investment Plan 2050](#) sets out a long-term vision and identifies a wide variety of opportunities, including radical ideas for our future city centre, and conceptual plans and visuals for seven strategic development opportunity sites. The next stage of the city centre's journey will be led by people – to encourage more people to live in the city centre, more people to work in the city centre and more people to travel sustainably to the city centre via active travel (walking, cycling, wheeling) and clean public transport. The plan includes ambitions to double the resident population living in and around the city centre, as well as double the number of visitors, while supporting the creation and safeguarding of 3,000 jobs in the city centre. Low emission private cars and delivery vehicles will play a continuing, but more limited role in the future and pedestrians will be given priority where feasible. Although the Strategic Investment Plan is a long-term plan, this AQAP will support the themes and alignment with local air quality management will be crucial to ensuring sustainable economic growth.

In June 2019, the Council declared a Climate Emergency, recognising the serious and accelerating environmental, social and economic challenges faced by climate change. To respond to this challenge, a partnership [Climate Action Plan](#) has been prepared which has been the culmination of collaborative work, led by Dundee City Council and co-designed with public, private and community organisations, recognising that a concerted city-wide effort is required. The Plan contains 64 actions in a long-term pathway to a target of 40% reduction in greenhouse gas emissions by 2030 and then to achieve net-zero greenhouse gas emissions by 2045 or sooner.

The actions are under the themes of Energy, Transport, Waste and Resilience with each theme including an initial set of actions to reduce emissions or adapt to a changing climate, taking into account existing projects, stakeholder priorities and national initiatives. The actions include measures to:

- reduce the consumption of energy, promote energy efficiency and increase the proportion of power and heat from low and zero carbon technologies;
- encourage active travel through walking, cycling and public transport and deploy sustainable alternatives to decarbonise transport;
- manage waste sustainably by reducing, reusing, recycling and recovering waste to improve resource efficiency whilst working towards a circular economy; and
- ensure our communities, green networks and infrastructure are adaptable to a changing climate and reduce the risks and vulnerability to unavoidable impacts.

Local air pollutants and climate change gases often have the same sources, and as such, within the Climate Action Plan, there are numerous actions which will work towards reducing air pollution. Actions relevant to air quality have been incorporated into Section 5 and are outlined in Table 2. Collaborative working across the Climate Change Action Plan, and the Air Quality Action Plan will be strengthened.

To help inform the plan, a Climate Risk and Vulnerability Assessment has been carried out. It determines the nature and extent of climate-related risks by analysing potential hazards and assessing the vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment of Dundee. Other areas key to the delivery of this AQAP are the [Sustainable Transport Delivery Plan](#), [Dundee Local Development Plan](#) and [Net Zero Transition Plan](#) which will help shape the Council's priorities over the 5 years of this AQAP.

Source Apportionment

The AQAP measures presented in this report are intended to be targeted towards the predominant sources of emissions within Dundee City Council's area.

Source apportionment exercises have been carried out for Dundee City Council in the development, and since the introduction, of the Dundee LEZ. These studies were focused on NO₂ as the primary pollutant of concern as it is largely a result of NO_x emissions¹ from road vehicles. For the preparation of this Plan, further source apportionment has been completed for PM₁₀ and PM_{2.5} as the importance with regards to health effects has grown, and the focus is likely to move further to PM over the timescale of this plan as concentrations of NO₂ decrease further. Summaries of the findings from the source apportionment exercises are presented in the following sections, grouped by pollutant.

Nitrogen Dioxide

LEZ feasibility study

At the time of developing the Dundee LEZ, there were exceedances of the NO₂ annual mean AQO at 11 locations but no exceedances of the PM₁₀ AQO (based on 2019 monitoring data). Therefore, the LEZ focused on reducing concentrations of NO₂, as outlined in the [National Low Emission Framework \(NLEF\) report](#).

Transport Scotland commissioned Automatic Number Plate Recognition (ANPR) surveys in 2017 to understand the fleet composition in Dundee for the development of the National Modelling Framework Dundee City Air Quality Model. The source apportionment [report produced by SEPA](#) identified that NO_x emissions on some roads in the Dundee city centre were largely dominated by buses and coaches, which accounted for approximately 80% of emissions. Figure 1 shows the roads where bus emissions predominated prior to the LEZ implementation.

¹ Nitrogen oxides (NO_x) refers to nitric oxide (NO) and nitrogen dioxide (NO₂), both of which are mainly formed during the combustion of fossil fuels. The dominant gas is NO. NO can react with other gases in the atmosphere to form NO₂. These reactions take place very quickly and are reversible, so the two gases are referred to together as NO_x.



Figure 1 Roads in City Centre where emissions from Buses predominated prior to LEZ Implementation (taken from SEPA Spotfire tool)

Meanwhile on roads surrounding the city centre, such as West Marketgait on the inner ring road and Lochee Road leading into the city centre, the predominant source of NO_x emissions was identified to be from diesel cars.

The modelling undertaken as part of the NLEF assessment showed that the introduction of the Dundee LEZ would result in a 70% decrease of NO_x emissions inside the LEZ boundary, and a 20% decrease of NO_x emissions on Lochee Road. The air quality model results indicated that at all of the locations where annual mean NO₂ exceedances were measured in 2019 the exceedance would be removed as a result of the LEZ.

Remote Sensing (2021)

For eight days in April and May 2021 a remote sensing campaign monitored real-world emissions from vehicles at two locations outside the LEZ boundary (Lochee Road and Blackscroft). The campaign measured emissions from 29,000 vehicles and matched the number plate of vehicles to [DVLA](#) and [SMMT](#) databases to determine Euro standard and fuel type (amongst other characteristics).

The findings showed that emissions in both locations were found to be dominated by diesel cars and diesel LGVs. The results for Lochee Road are shown in Figure 2 and the results for Blackscroft shown in Figure 3. This presents a more recent and finer resolution dataset than the 2017 fleet which the initial LEZ development was based upon. With regards to cars, there is a predominance of emissions from Euro 5 diesel vehicles, which should, as the LEZ is enforced, decrease, even outside the zone.

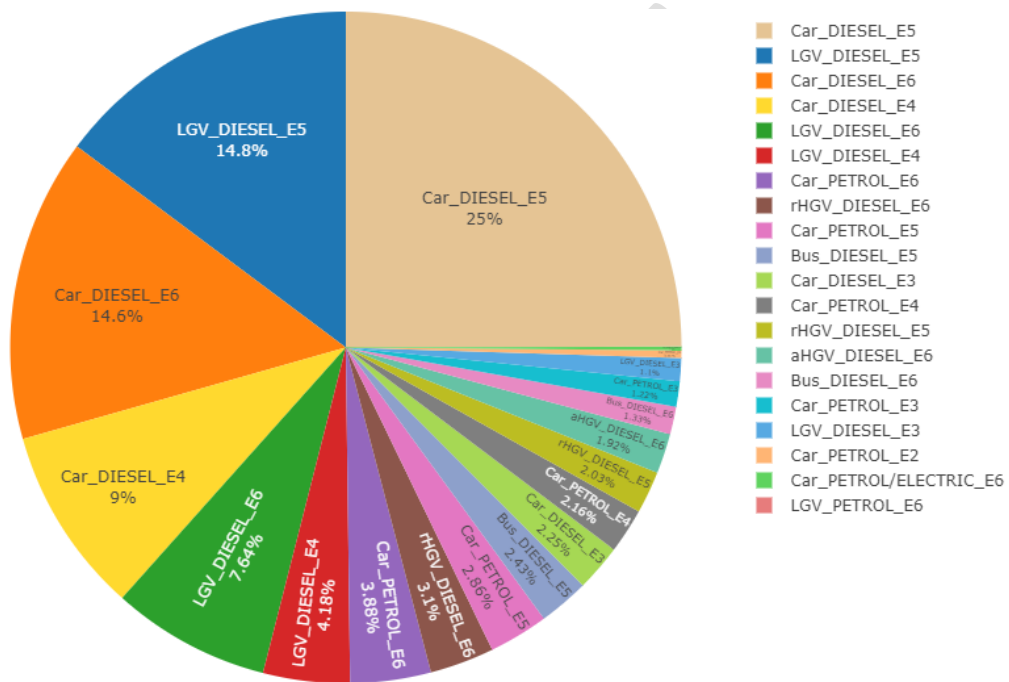


Figure 2 Source apportionment of NOx emissions by fuel type and Euro standard based on real-world emission factors and fleet composition at Lochee Road in 2021

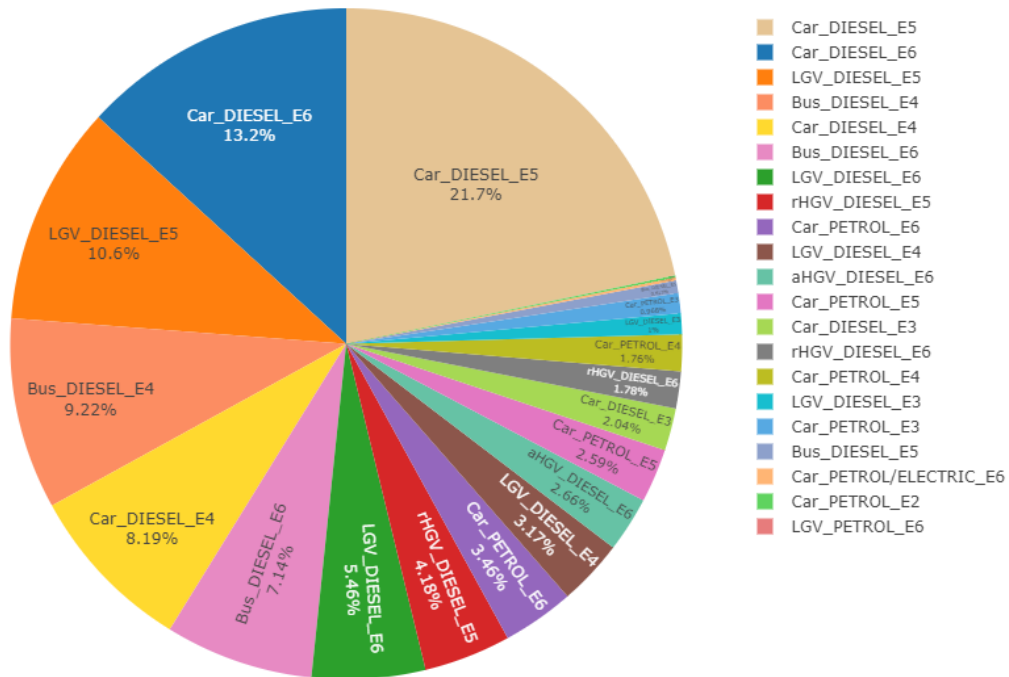


Figure 3 Source apportionment of NOx emissions by fuel type and Euro standard based on real-world emission factors and fleet composition at Blackscroft in 2021

Lochee Road Options Study

Lochee Road was highlighted in the initial LEZ development as an area of historic exceedance of the annual mean NO₂ AQO. However, it was not feasible to include the Lochee Road within the LEZ boundary as all scenarios tested led to traffic displacement and re-routing to roads with limited capacity. Therefore, while Lochee Road was not included within the LEZ scheme, an additional study was completed to explore standalone road improvement options in the area of exceedance. While the additional study did identify air quality improvements being made with the stand alone road improvement options, these options have now been superseded by the Active Freeways project.

To complete the study, updated traffic data were collected in February 2022. The modelling accounted for the bus fleet upgrades in recent years such as Xplore Dundee introducing their electric bus fleet on routes operating along Lochee Road in early 2022. Additionally, the Scottish urban national fleet (based on EFT v10.1) was adjusted based on ANPR data; the Lochee Road fleet was found to be similar to the national fleet, but slightly older. For example, the national 2022 fleet assumes 65% of

cars and 69% of LGVs are Euro 6, while ANPR data for Lochee Road showed this was 55% and 53%, respectively. The study identified that approximately 80% of total NO_x emissions along Lochee Road were from cars and LGVs.

NO₂ Summary

There have been several recent and detailed studies into the sources of NO_x emissions in different areas of Dundee. The key findings are:

- Road vehicles are the predominant source of NO_x emissions;
- Different roads have different vehicle fleet distributions that influence NO_x emissions;
- Buses and coaches were identified as the predominant source of NO_x emissions within the city centre before the LEZ was introduced. However, there have recently been significant upgrades to the bus fleet to be LEZ-compliant, which has contributed to reduced NO₂ concentrations in the city centre;
- Diesel cars and LGVs were found to be the predominant source of NO_x emissions on the inner ring road and other 'feeder' roads, such as Lochee Road;
- Due to the significant improvements in the bus fleet, diesel cars and LGVs are now, proportionally, the largest sources of road traffic NO_x emissions; and
- The LEZ is likely to have led, and continue to lead, to improvements in emissions from diesel cars and LGVs, by shifting towards a fleet of higher Euro classes (and therefore result in lower emissions) and electric vehicles.

Particulate Matter

In contrast to NO₂, the primary source of fine particulate matter (PM₁₀ and PM_{2.5}) in Dundee is not road transport. Four monitoring sites (CM14, CM4, CM5, CM6) measure both PM₁₀ and PM_{2.5}, and have been selected for further analysis. Figure 4 shows where the four monitoring sites are located within Dundee.

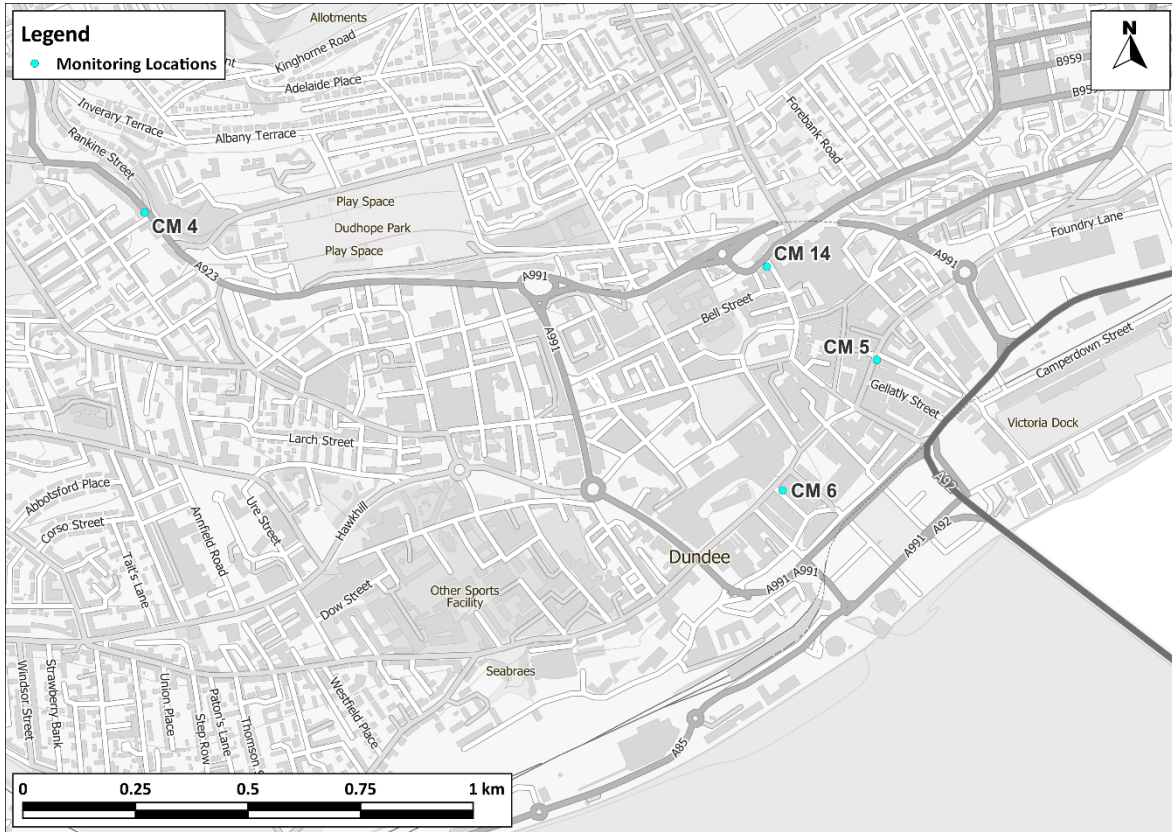


Figure 4 Map of monitoring sites selected for source apportionment analysis of PM₁₀, PM_{2.5} and NO₂

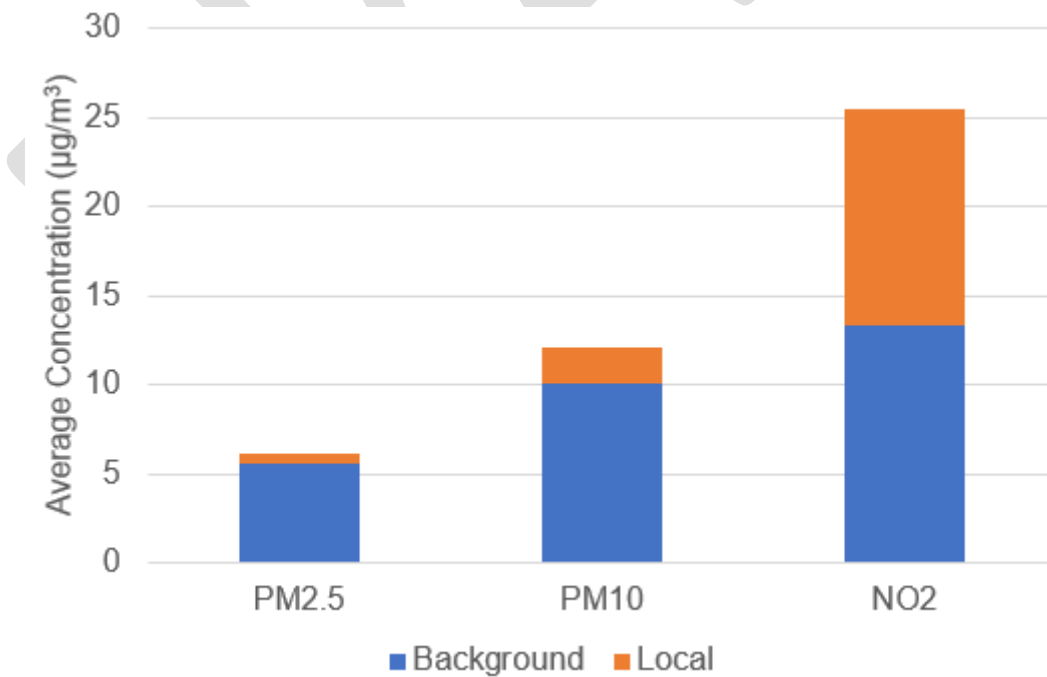


Figure 5 shows the source distribution between background and local sources of PM_{2.5} and PM₁₀ at these monitoring sites. Modelled background concentrations were

obtained from [Air Quality Scotland](#) (PM₁₀) and [Defra](#) (PM_{2.5}). The average measured concentration across the four sites in 2022 is represented in Figure 5 as the total bar (6.2 µg/m³, 12.1 µg/m³ and 25.4 µg/m³ for PM_{2.5}, PM₁₀ and NO₂ respectively), which is proportioned into the average modelled background concentration (blue), and the remaining local concentration (orange).

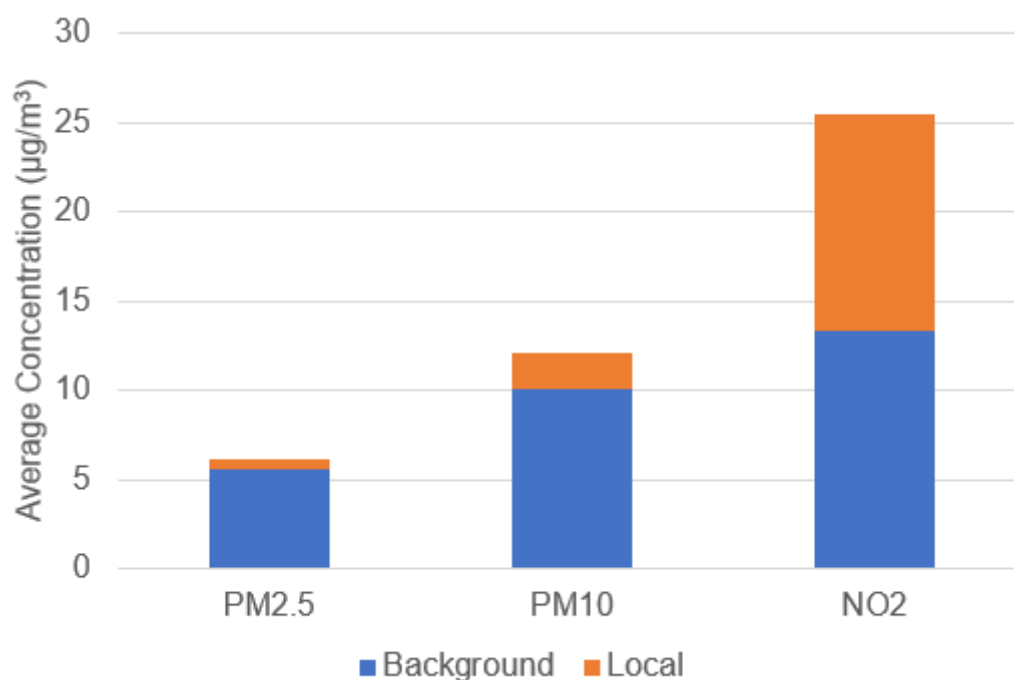


Figure 5 Average concentration distribution between 'background' and 'local' sources at roadside monitoring sites

On average, the local sources only account for 10% of PM_{2.5} concentrations and 16% of PM₁₀ concentrations. Therefore, any actions which affect local sources will not have a large effect on overall concentrations. This is in contrast with NO₂, which at these sites, local sources account for approximately half of the concentration (48%).

The majority of particulate matter concentrations in Dundee are classed as being derived from 'background' sources. The background maps [user guide](#) defines background concentrations as:

"The total concentration of a pollutant comprises those from explicit local emission sources such as, roads, chimney-stacks, etc., and those that are transported into an area by the wind from further

away. If all the local sources were removed, all that would remain is that which comes in from further away; it is this component that is called 'background'."

The average contribution of different background sources across all 1 km x 1 km grid cells in the Dundee region are shown in Figure 6 for PM₁₀ and Figure 7 for PM_{2.5} (taken from mapped backgrounds published at <https://uk-air.defra.gov.uk/data/laqm-background-home>). The background component for both PM₁₀ and PM_{2.5} is largely attributable to the 'secondary formation' and 'residual & salt' categories. There are very limited actions that DCC can incorporate within the Dundee AQAP to reduce concentrations from these sources. The next largest category within the control of DCC is that from domestic sources, such as solid fuel burning, which accounts for 9% of the background component of both PM₁₀ and PM_{2.5}. Some of this background component will originate outside of the Dundee area.

Although at this stage we do not have any quantified source contributions for local emissions, they are likely to be made up of domestic solid fuel burning, industrial, commercial heating and transport. In relation to road transport related sources the predominant source of PM_{2.5} and PM₁₀ is 'brake & tyre wear' and 'road abrasion', which are not affected by reductions in tailpipe emissions and therefore, wider changes in the vehicle fleets, such as moving towards more stringent Euro standards and/or electric vehicles, will have a minimal effect on PM₁₀/PM_{2.5} concentrations in Dundee. In terms of PM₁₀ and PM_{2.5} this plan needs to focus on non-transport sources and for road transport emissions, the emphasis should be on taking vehicles off the road (ie modal shift to active travel and public transport). Actions for PM₁₀ and PM_{2.5} are often co-beneficial with climate change actions.

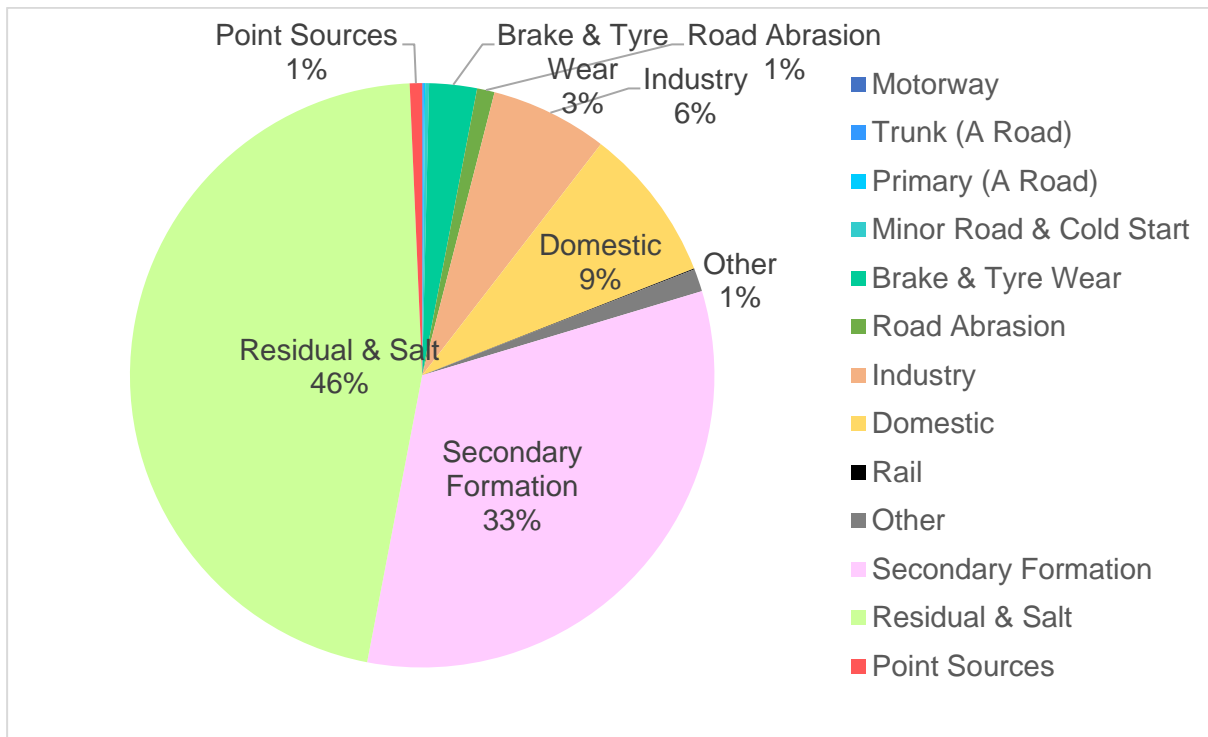


Figure 6 Source apportionment of background PM₁₀ concentrations

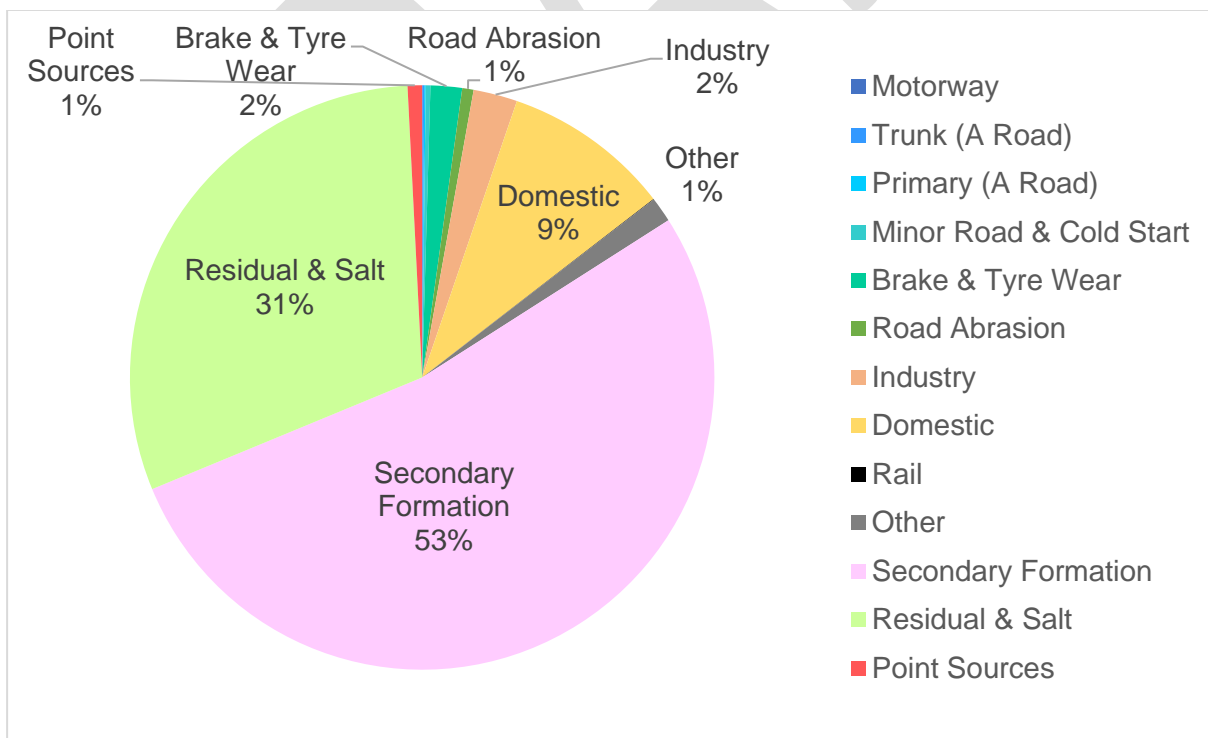


Figure 7 Source apportionment of background PM_{2.5} concentrations

PM₁₀ and PM_{2.5} Summary

- The majority of PM₁₀ and PM_{2.5} in Dundee is from background sources, rather than local (e.g. road) sources.
- Of the background sources, the largest sources are 'secondary formation' and 'residual & salt', which DCC have very little control over.
- Although no quantified information on local emissions is available, they are likely to be made up of domestic solid fuel burning, commercial heating industrial, and transport.
- In relation to road transport related sources the predominant source of PM_{2.5} and PM₁₀ is 'brake & tyre wear' and 'road abrasion', which are not affected by reductions in tailpipe emissions.

Required Reduction in Emissions

Trends in pollutant concentrations outlined annually in DCC's APR's indicates that NO₂ is reducing considerably; in 2022 or 2023 there were no exceedances of the AQO across Dundee, and the last recorded exceedance of an AQO was in 2021.

It should also be noted that although compliance with air quality objectives is important, from a health perspective, a general reduction in emissions of the key pollutants (including PM₁₀ and PM_{2.5}) may provide better health outcomes than focussing on hotspot locations. For this reason, wider, more strategic measures have been included.

Key Priorities

Based on the source apportionment set out in section 1.2, and a proportionate approach to actions in relation to the air quality concentrations, whilst recognising the ambition to reduce concentrations further than the current air quality objectives, the following priorities have been identified:

- Priority 1: To maintain air pollutant concentrations below current air quality objectives and where practicable, reduce emissions further to protect health across the city;

- Priority 2: Continue the implementation of the LEZ to protect public health through improving air quality in Dundee and achieving air quality compliance under section 87(1) of the Environment Act 1995, as well as to develop an environment that helps promote more active and sustainable travel choices in Dundee and contributes to meeting emission reduction targets set out in Part 1 of the Climate Change (Scotland) Act 2009;
- Priority 3: Work collaboratively with Scottish Government, Transport Scotland and regionally to ensure that wider transport measures are delivered, in particular to increase the use of active travel and public transport and reduce the use of private vehicles, and to increase the proportions of low and zero emission vehicles where modal shift is not feasible;
- Priority 4: Ensure that plans being developed and implemented for placemaking and climate change are closely co-ordinated and aligned with those for air quality in order to maximise co-benefits;
- Priority 5: Develop a Communications Strategy to provide a more strategic approach to public awareness and behaviour change, particularly for domestic solid fuel burning and vehicle idling; and
- Priority 6: Report on an annual basis to Scottish Government the implementation of the measures set out in this report, as well as monitored concentrations within the AQMAs and the effects of the Low Emission Zone.

4. Development and Implementation of Dundee City Council AQAP

Consultation and Stakeholder Engagement

In developing/updating this AQAP, we have worked with other local authorities, and agencies to improve local air quality. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 1.

A period of consultation and engagement will be undertaken following this report being taken to the Climate, Environment and Biodiversity Committee in June 2024. The AQAP will be made available on the consultation pages of the DCC website, with the consultation advertised through various social media channels and directly to consultees. The consultees identified below will be directly contacted.

The response to our consultation stakeholder engagement will be provided in the final AQAP in Appendix A.

Table 1 – Consultation Undertaken

Consultee	Consultation Undertaken
The Scottish Government	Yes, draft report to be submitted to the Scottish Government
The Scottish Environment Protection Agency (SEPA)	Yes, will be sent link to draft report
Transport Scotland	Yes, will be sent link to draft report
All neighbouring local authorities	Yes, will be sent link to draft report
Other public authorities as appropriate, such as NHS Scotland and Health Boards	Yes, will be sent link to draft report

Consultee	Consultation Undertaken
Bodies representing local business interests and other organisations such as community groups as appropriate	Yes, will be sent link to draft report

Steering Group

The AQAP was taken forward through an existing Air Quality Steering Group, with meetings held specifically for the AQAP update. Prior to consultation, two Steering Group meetings were held (29th February and 22nd March 2024), which involved the collaboration of officers across the Council in different disciplines, and wider organisations such as NHS Tayside were invited to attend.

The Steering Group was made up of the following members:

- Environment/Public Health Manager
- Environmental Health Officer
- Climate Change and Sustainability Manager
- Senior Sustainability and Climate Change Officer
- Senior Manager Planning
- Low Carbon Project Manager
- Corporate Fleet Manager
- Parking & Sustainable Transport Team Leader
- Traffic & Road Safety Team Leader
- Consultant in Public Health Medicine, NHS Tayside

The meetings have involved; setting out the background to the air quality issue in Dundee, the process of the AQAP, previous work undertaken on air quality and gaining input and insight into existing and future policy measures within Dundee and how these may assist in the implementation of the aims of this Plan (and vice versa). Discussions have focused on each of the categories of actions and sought updates

on current actions and new actions were also discussed. The Steering Group will continue to be fully involved, and consulted on as the process continues.

Separate meetings were held where required, for example if a particular stakeholder could not attend the main meeting, or where additional detail on measures needed to be discussed.

A third meeting of the Steering Group will be held prior to the consultation period.

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5.AQAP Measures

Table shows the Dundee City Council AQAP measures. It contains:

- A list of the measures that form part of the plan.
- Expected or actual completion year for measures.
- Measure status (whether the measures are planned, in progress, completed or delayed)
- The responsible individual and departments/organisations who will deliver these measures.
- How the measure will be funded (Scottish Government or other).
- Estimated cost of implementing each measure (overall cost and cost to the local authority).
- Expected benefit in terms of pollutant emission and/or concentration reduction.
- Key milestones towards delivery.

NB: Please see future Annual Progress Report for annual updates on implementation of these measures.

In accordance with the requirements of PG (S) (23) Dundee City Council expects the process for revoking the hourly NO₂ objective element of the AQMA to be started in 2024, and for the annual mean NO₂ and PM₁₀ AQMA to be revoked in 2028, or no later than the end date of this AQAP and where possible in the shortest possible time.

Table 2 – Air Quality Action Plan Measures

Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
1	Continue to work with the Tayside Bus Alliance to increase patronage on buses within Dundee, through reducing variability in journey times	Transport Planning and Infrastructure: Bus Route Improvements	2029 (across the delivery of this Plan)	In Progress	Transport Scotland, Tayside Bus Alliance, Dundee City Council	Transport Scotland, Bus Partnership Fund	Initial Assessment funded – Funding awarded for design stage through the Places for Everyone (Pfe) programme.	>£10 million	Very difficult to quantify at this stage	Initial Assessment of bus improvement measures has been undertaken: https://taysidebusalliance.co.uk/wp-content/uploads/2023/02/20230222_Tayside-DOA-Summary_vFinal.pdf Two packages of transport options assessed at a detailed level. Both packages scored positively overall. This study will now progress into a Strategic Business Case. Bus Priority Fund (BPF) now on hold. Arbroath Road and Lochee Road - funding bid for design stage grant awarded by Sustrans through the Pfe programme.	Bus priority funding has been put on hold by Transport Scotland. Likely to be funded through Active Freeways process (see Action 2)
2	Support delivery of Six Active Freeways to encourage a greater number of journeys by walking, wheeling and cycling	Promoting Travel Alternatives: Promotion of cycling/ Promotion of walking	Ongoing - medium term delivery in Sustainable Transport Development Plan (4-6 years)	In Progress	Transport Scotland, TACTRAN and Dundee City Council	Transport Scotland Active Travel Transformation Fund	Transport Scotland, TACTRAN and Dundee City Council are funding the £325,000 for the preparation work towards creating the various routes	>£10 million	Not quantifiable at this stage, but could reduce concentrations along specific corridors by a measurable amount	“Active Freeways” aim to encourage people to make their journeys by walking, wheeling and cycling by providing active travel infrastructure on high-demand travel routes. The six routes will link: City centre with Ninewells via the Hawkhill/Perth Road corridor; Lochee to Stobswell via Harefield Road, Strathmore Avenue, Dens Road corridor; Stobswell and Fintry/Whitfield with the city centre via the Pitkerro Road corridor; City centre and Broughty Ferry via the Arbroath Road corridor; City centre with Strathmartine via the Hilltown/Strathmartine Road corridor; and Coupar Angus Road/Lochee.	Still require funding for detailed design. Medium to Long timescale, as require statutory consultation/ committee approval etc. Some areas have had funding for outline design, but need further funding for detailed design work (incorporating bus priority measures)
3	Increase the use of car clubs through promotion of existing clubs and encouragement of expansion through planning system	Alternatives to Private Vehicle Use: Car Clubs	2029 (ongoing through plan period)	Planned	Dundee City Council	External funding not required, will be undertaken through planning system and comms strategy (see Action 25)	Not funded	<£10K for comms.	Not quantifiable at this stage	Cowheels and Enterprise car club are current businesses operating. Not had much Council intervention.	Increase in use of shared vehicles will require cultural change to use of vehicles.

Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
4	Monitor and evaluate the effect of the LEZ through traffic counts, fleet data and, where feasible, the NMF modelling framework	Promoting Low Emission Transport: Low Emission Zone (LEZ)	2028	Planned	Dundee City Council	Within Council budgets Scottish Government	Fully funded for implementation. Funding will be sought to assist with aspects such as road traffic counts if ANPR surveys needed	£10k - £50K per annum	Monitoring the effectiveness of LEZ will not in itself reduce emissions	Not yet started - Guidance from Transport Scotland: https://www.transport.gov.scot/media/50416/low-emission-zone-guidance-october-2021.pdf AQ monitoring data includes locations that are covered by the LEZ so impact in terms of AQ improvements can be monitored. Enforcement of the LEZ will commence on 30 May 2024 so reporting on the effect of the LEZ will commence in 2025.	Due to the "soft start" to the LEZ, a proportion of non-compliant vehicles will have already been replaced. As such the positive effects are likely to have happened to an extent. Levels of pollutants have decreased since 2020 with improvements to the bus fleets considered to be a main contributor to this post COVID. This is evident on Seagate where bus emissions historically accounted for a high proportion of emissions. Concentrations have fallen to below 30µg/m ³ since main operators have either retro fitted buses to EURO VI or replaced diesel buses with fully electric versions.
5	Support longer term changes to the City Centre to reduce emissions further, through processes including the City Centre Investment Plan, future LDP	Traffic Management: Strategic Highway Improvements	2029 (ongoing through plan period)	Planned	Dundee City Council with partners	Transport Scotland	Not yet funded	>£10 million	Not quantifiable at this stage	City Centre Investment Plan - not statutory, ambitious but no legal mechanism for enforcement. Includes transport and connectivity technical note which sets out transport schemes to support plan.	Dependant on funding and political will
6	Ensure the emerging LDP integrates air quality considerations into future planning policy	Policy Guidance and Development Control: Air Quality Planning and Policy Guidance	2028	Planned	Dundee City Council	Within Council budgets	Funded through staffing budgets	Unknown	Emission reductions will be over timescale longer than this plan	Development Plan Scheme agreed - outlines expected timescales. Adoption forecast to be 2028. New LDP requires evidence report, which will include Air Quality.	Planning legislation does allow supplementary guidance. Air Quality policies will be contained in LDP. Technical guidance outside planning would still apply.
7	Ensure that, where relevant, air quality assessments are submitted with planning applications and mitigation negotiated where required	Policy Guidance and Development Control: Air Quality Planning and Policy Guidance	2029 (ongoing through plan period)	In Progress	Dundee City Council	Within Council budgets	Funded through staffing budgets	Unknown	Emission reductions will be over long timescale	Include Travel Plan conditions. In line with current Supplementary Guidance Air Quality & Land Use Planning	

Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
8	Improve the Council's vehicle fuel consumption efficiency by better management of fleet activities.	Vehicle Fleet Efficiency: Fleet efficiency and recognition schemes	2026	In Progress	Dundee City Council	Within Council budgets	Partially Funded	Unknown	Difficult to quantify. only relevant to Council fleet	The council has continued to increase the deployment of its GIS route optimisation system further increase efficiency across the council corporate fleet	
9	Support the expansion of Electric Vehicle (EV) charging hubs and infrastructure across the City	Promoting Low Emission Transport: Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2029 (ongoing through plan period)	In Progress	Dundee City Council	Scottish Government Electric Vehicle Infrastructure Fund (EVIF), Bell Street Infrastructure Hub awarded £14.4 million from Department for Transport Levelling Up Fund	Partially Funded	>£10 million	Difficult to quantify as a measure, likely to have significant benefit for NOx emissions as part of overall shift to EVs. Not as much benefit for PM _{2.5} .	At present, the charging infrastructure deployed in Dundee can support 11.4% of the city's vehicles being electric. Currently estimated to be 56 publicly available rapid chargers in the city and 134 fast chargers. Since 2020 DCC has operated an HGV charging station at their Marchbanks facility - presently supporting eight fully electric bin lorries. DCC also provides charging for HGV's at its Greenmarket site which facilitates intercity electric bus operators, coach operators and other early adopters of electric HGVs. Preliminary work has started onsite at Bell Street Car Park. This Low Carbon Hub will prioritise active travel and accommodate a new active freeway through the heart of the facility providing connections to the north of the city. The facility will also provide EV charging for city centre residents and commuters and cycle parking for onward travel. DCC currently have 114 depot chargers spread across the estate. Clepington Road Depot currently has 21 x 7kW, 1 x 100kW and 2 x 50kW to support over 200 electric vehicles.	Need more overnight on-street chargers. Only 43% of homes have access to off-street parking, home charging will continue to have a significant role in transport energy refuelling. DCC are in the final stages of publishing a procurement tender for the next 10-20 years. It is envisaged that the successful contractor for each lot will work in partnership with Dundee City Council to deliver an attractive and industry leading network in the city ensuring that customers have a positive experience while using the Dundee City Council owned network. Lot 1 will have a focus on new on-street and community solutions and existing on-street charge points.
10	Consider the introduction of taxi licensing conditions to include a policy with an age limit for taxis.	Promoting Low Emission Transport: Taxi Licensing conditions	2027	Planned	Dundee City Council	Within Council budgets	Funded through staffing budgets	>£10K	Minimal improvement in emissions as taxis already covered by LEZ	At the end of 2023 there were 202 pure electric taxis in Dundee (31% of taxi fleet). The introduction of Dundee's LEZ is helping to accelerate EV taxi adoption. There are currently 68 taxis operating in Dundee that are not compliant with the LEZ and are	Taxi drivers feel they are being targeted, so careful communications required.

Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
										due to be replaced before the LEZ is enforced.	
11	Continue the ECO Stars Fleet Recognition Scheme	Vehicle Fleet Efficiency: Fleet Efficiency and Recognition Schemes	2029 (ongoing through plan period)	In Progress	Dundee City Council	Scottish Government	Funded Annually	£10k- £50K per annum	Not quantifiable	Dundee City Council received funding from the Scottish Government's Air Quality Support Funding to enable continuation of the ECO Stars scheme for larger commercial vehicles and the separate scheme for Taxis and Private Hire Vehicles during 2023. Membership of the commercial fleet scheme increased by 17 to 276 members in 2023. This increased number of vehicles included in the scheme by 606, bring the total number of vehicles included to 10,086. In 2023, the number of members of the Taxi / Private Hire scheme increased by 4 to 20 members, with the number of vehicles increasing to 576.	Reduction in Scottish AQ Grant Funding will limit the amount of work that the scheme operators, TRL, can put towards each of the Scottish LA schemes.
12	Implement key actions within the Sustainable Transport Delivery Plan and support Active Travel initiatives, improving cycle infrastructure across the city and the perception of cycling as a safe and positive mode of transport.	Promoting Travel Alternatives: Promotion of cycling/ Promotion of walking	2029 (ongoing through plan period)	In Progress	Dundee City Council	Transport Scotland	Not yet funded	>£10 million	Not quantifiable, but potential for large reductions in pollutant emissions	Approval to carry-out key stakeholder consultation on the draft Sustainable Transport Delivery Plan 2024- 2034 was obtained in September 2023.	Challenge to provide secure, accessible bike storage, not just the bikes themselves. Co-benefits for climate change gases.
13	Promotion of the local living concept to reduce the need for travel and encourage active travel such as walking, wheeling and cycling	Promoting Travel Alternatives: Other	2029 (ongoing through plan period)	Planned	Dundee City Council	Developments, Dundee City Council	Not yet funded	Unknown	Emission reductions will be over long timescale	Local Living and 20-minute neighbourhoods already in policy within NPF4 Policy 15. Scottish Government have consulted on guidance covering 20-minute neighbourhoods. LDPs should support local living, including 20-minute neighbourhoods within settlements, through the spatial	Long timescale for implementation. Note that this action relates to policy support for local living - not implementation of projects.

Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
										strategy, associated site briefs and masterplans. Should be incorporated into next LDP. DCC has developed a GIS tool already to assist with implementation.	
14	Adopt and Implement a Sustainable Procurement Strategy	Policy Guidance and Development Control: Sustainable Procurement Guidance	2025 for the Strategy, ongoing implementation	Planned	Dundee City Council	Within Council budgets	Fully funded	£10-£50K	Not quantifiable	It is acknowledged that the supply chain Carbon emissions can account for the biggest proportion of the Council's emissions and the Council has a responsibility to remove and or reduce its supply chain emissions as far as reasonably possible. The Council will collect data on its supply chain and construction activities, identify emissions reduction action plans and include those emissions and emissions reduction actions when the current NZTP is reviewed. A Corporate Procurement Strategy Group will be established	
15	Support work underway on the Local Heat and Energy Efficiency Strategy, Local Area Energy Plan, District Heat Network Zones	Promoting Low Emission Plant: Other Policy	2029 (ongoing through AQAP period and beyond to 2045)	Planned/ In progress	Dundee City Council	Scottish Government funding - £750,000 over 5 years.	Partially funded	>£10 million (Estimated total cost of all domestic tenures is £539 million)	Not quantifiable in terms of local pollutants. target net zero GHG emissions by 2045	LHEES Strategy received approval at the CEB committee on 22 April. The LHEES Delivery Plan is now under development, with the aim of receiving committee approval in autumn 2024.	Local Area Energy Planning is crucial to ensure the grid network is optimised for future challenges (electric vehicles etc).
16	Undertake work to provide a better evidence base for domestic solid fuel burning and change behaviour to reduce solid fuel burning where it is not a primary source of fuel	Domestic solid fuel burning: Gathering evidence on the contribution of domestic burning to key pollutants in the local area	2027	Planned	Dundee City Council	Scottish Government	Not funded	£10K-£50K	Better evidence base required to work out what level of emissions could be reduced	A high percentage of Dundee is within a 'Smoke Control Area' declared under the Clean Air Act 1993, while permitted development rights for new flues for biomass / wood burning do not apply within AQMAs. Domestic (household) combustion is a focus within the Scottish Government's CAFS2 air quality strategy, with potential measures such as the ban on house coal, sulphur content of smokeless fuels to be limited, and the sale of certain types of wet wood all proposed. DCC will keep up to date with the outputs of the CAFS2 working group, potential for evidence	Enforcement of SCAs difficult and time consuming. Behaviour change often difficult without large input to change culture around burning wood for aesthetic reasons, rather than being the primary source of heating for the property. Enforcement of SCAs to continue however CAFS2 also includes a consideration to work with local authorities and SEPA to revise the Clean Air Act 1993.

Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
										base to be enhanced (at national and local level).	
17	Continue work promoting sustainable travel options to schools, including support for school streets.	Promoting Travel Alternatives: School Travel Plans	2027	Partially completed/ In Progress	Dundee City Council	Transport Scotland	Not yet funded	not known at this stage	Localised emission reductions likely - https://www.agconsultants.co.uk/case-studies/school-streets	13 School Streets zones implemented https://www.dundee.gov.uk/service-area/city-development/sustainable-transport-and-roads/school-streets	There are issues around drivers complying with road closures around schools.
18	Ensure effective co-ordination between climate change and air quality strategies and action plan measures.	Policy Guidance and Development Control: Other policy	2029 (ongoing through plan period)	In Progress	Dundee City Council	Within Council budgets	Funded through staffing budgets	<£10K	Potential for significant emissions reductions in long term	Governance for the net zero implementation plan being set up with workshop for officers at the end of April 2024. There is a reporting template for the NZTP. Climate leadership team meet 6 monthly. Officer working group. Collaboration will increase.	Climate and Vulnerability Risk Assessment (CRVA) is being updated. Will engage internal and external stakeholders. New CRVA will be based on 2-degree and 4-degree scenarios to identify actions to help Dundee adapt to predicted climate change. Also working with Perth and Kinross and Angus to establish wider nature networks.
19	Work regionally as part of TACTRAN to provide integrated solutions for regional transport issues.	Policy Guidance and Development Control: Other policy	2029 (ongoing through plan period)	In Progress	Dundee City Council, TACTRAN	Within Council budgets	Funded through staffing budgets	Unknown	Potential for significant emissions reductions in long term	Draft Regional Transport Strategy submitted to Scottish Government: https://tactran.gov.uk/projects/regional-transport-strategy/ covers reducing carbon emissions and improving air quality - specifically to reduce transport emissions in AQMAs	
20	Review DCC Staff Travel Plan on a 3 yearly basis	Promoting Travel Alternatives: Workplace Travel Planning	2027	Planned	Dundee City Council	Not known	Not yet funded	<£10K per review		Staff travel plan has been launched. This action is to review and update it on 3 yearly basis (or more often if required).	
21	Complete Non-Domestic Energy Efficiency (NDEE) retrofit and heat decarbonisation of DCC public buildings	Promoting Low Emission Plant: Other Policy	2029 (ongoing through plan period)	In progress for NDEE and planned for heat decarbonisation plan	Dundee City Council	Mixture of funding - will seek external funding where possible - for example SG heat decarbonisation fund	Partially Funded	£1 million - £10 million	Not quantifiable at this stage in terms of local pollutants. target net zero GHG emissions.	None to date.	Needs further work before funding applications can go in for heat decarbonisation grants

Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
22	Enforce relevant legislation, and provide information, to reduce the burning of commercial and domestic waste.	Domestic Solid Fuel Burning: Other	2029 (ongoing through plan period)	In Progress	Dundee City Council, SEPA	Within Council budgets	Funded through staffing budgets	Unknown	Contribute to reduction in particulates from combustion.	In March 2020 a charge was introduced for the collection of garden waste. Householders who decided not to sign up were provided with different options for disposal of garden waste and discouraged from using the general waste bin or burning waste. DCC continued to offer a home composting bin as an alternative to the annual garden waste collection permit.	Cost of green waste collection increasing each year meaning some people burn garden waste instead.
23	Ensure that monitoring information is available to the public, and use to assist evidence-based decision making. maximise public information through Communications Strategy	Public Information: Via the internet	2029 (ongoing through plan period)	In Progress	Dundee City Council	Within Council budget	Funded Annually	£10K-£50K	No pollutant/emissions reduction	Comprehensive monitoring network already in place. Reviewed on regular basis. Details available on https://www.dundee.gov.uk/service-area/neighbourhood-services/community-safety-and-protection/air-quality-in-dundee/monitoring-air-quality-in-dundee . Following the recommendation made in the appraisal of the 2023 Annual Progress Report the Air Quality Management Area (AQMA) will be amended with the hourly-NO2 element revoked.	Resource (staff) availability
24	Develop a Communications Strategy to provide a more strategic approach to public awareness and behaviour change	Public Information: Other	2025 for Strategy, ongoing for implementation	Planned	Dundee City Council	Scottish Government, Council budget	Funded Annually	£10K-£50K	Emissions reductions will be dependent on level of behaviour change	Strategy to include domestic solid fuel burning, vehicle idling, active / sustainable travel, energy awareness, Clean Air Day etc. Still in planning phase, but progress in terms of input into Clean Air Day and other awareness raising campaigns such as "Hello Dundee" QR codes	Funding, changes to Scottish Government grant system
25	Complete improvements to domestic Council stock (and ex-Council properties in mixed tenure blocks) to achieve energy efficiency standard.	Promoting Low Emission Plant: Other Policy	2029 (ongoing through plan period)	In Progress	Dundee City Council	Energy Efficiency Scotland: Area Based Schemes and Dundee City Council	Funded Annually	>£10 million	NOx emissions reduction, but difficult to quantify	External Wall Insulation programme (EWI) started in 2013/14 and has been carried out on properties that are either solid wall or of non-traditional construction (without a treatable cavity). Scottish Government made EES:ABS (Energy Efficiency Scotland: Area Based Schemes) funding available to Councils to spend on energy efficiency measures for private	Following EWI work, work will start on the cavity-wall stock of almost 5,000 (with a further 1,500 of private flats embedded within blocks). All of this stock has CWI but much of it is more than 40 years old and needs to be replaced. Funding is unclear for this stage.

Measure No.	Measure	Category and Classification	Expected/Actual Completion Year	Measure Status	Delivery Organisation(s)	Funding Source	Funding Status	Estimated Cost of Measure	Target Reduction in Pollutant / Emission from Measure	Key Milestones	Comments
										residents in Fuel Poor areas. Mixed tenure blocks were funded, in conjunction with DCC funding to externally insulate the blocks. Between 2013/14 and 2020/21 5,227 properties (2,229 private, 2,998 Council) were insulated at a cost of >£55m. The EWI programme is now due to be completed (939 flats (561 private and 273 Council)).	
26	Ensure safer streets that enable active travel in Dundee including identifying suitable locations for 20mph zones and off road/ segregated active travel networks	Promoting Travel Alternatives: Promotion of cycling/ Promotion of walking	2029	In Progress	Dundee City Council	Transport Scotland Cycling, Walking, Safer Routes Fund	Partially funded	£500k - £1 million	Difficult to quantify, probably neutral as reductions in speeds could increase emissions, but smoothing of traffic flow will be beneficial, as well as encouraging active travel	Approximately 75% of the road network is assessed as suitable for 20mph and 30% of the road network has already been reduced to 20mph. It is proposed that the following areas are converted to 20mph zones in 2024/2025: Camphill Road Area; Downie Park Area; Elmwood Area; Logie Area; Lawers Drive Area; and Stobswell Area. % of road covered by 20mph will increase to approximately 45% when the 2024/2025 areas are implemented. The remaining roads will be assessed and future 20mph zones will be brought forward subject to resources	Detailed proposals for 20mph zones are subject to statutory consultation, public notice and advertisement as part of the Traffic Regulation Order process which can be lengthy. The Council also supports 20mph speed limits within new residential developments and through the planning process requires new residential road networks to be designed to limit traffic speeds.
27	Undertake an audit of the existing air quality monitoring network and ensure we have adequate air quality monitoring around appropriate DCC schools (i.e. where potential interventions are likely etc), installing further monitoring if necessary.	Public Information: Other	2025	Planned	Dundee City Council	Within existing Council budgets	Initial audit within current staff costs	<£10k for audit, costs unknown for additional monitoring	Monitoring itself will not reduce emissions, but interventions will have localised benefits	None to date	This action fulfils one of the additional recommendations from the ESS report. Whilst existing knowledge indicates that all sensitive receptors of this type currently meet the air quality objectives, the provision of this information will help quantify the progress required for longer term ambitions such as meeting the WHO guideline levels.

6. Appendix A: Response to Consultation

Table A.1 – Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Consultee	Category	Response
		To be completed following consultation

7. Appendix B: Reasons for Not Pursuing Action Plan Measures

Table B.1 – Action Plan Measures Not Pursued and the Reasons for that Decision.

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
Environmental Permits	Industrial Permitting process	DCC has ongoing liaison with SEPA who permit industrial processes, but not a sufficient enough source to require a specific action in this AQAP
Freight and Delivery Management	Freight consolidation	Not considered suitable measure for the AQMA, TACTRAN have undertaken feasibility work previously relating to freight consolidation.

8. Glossary of Terms

Abbreviation	Description
ANPR	Automatic Number Plate Recognition
APR	Annual Progress Report
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority 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
AQO	Air Quality Objective
AQS	Air Quality Strategy
CAFS2	Cleaner Air for Scotland 2
CRVA	Climate and Vulnerability Risk Assessment
DCC	Dundee City Council
Defra	Department for the environment, food and rural affairs
DVLA	Driver and Vehicle Licensing Agency
EES:ABS	Energy Efficiency Scotland: Area Based Schemes
EU	European Union
HGV	Heavy Goods Vehicle

LAQM	Local Air Quality Management
LDP	Local Development Plan
LEZ	Low Emission Zone
LGV	Light Goods Vehicle
NLEF	National Low Emission Framework
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
SCA	Smoke Control Area
SEPA	Scottish Environment Protection Agency
SMMT	The Society of Motor Manufacturers and Traders
TACTRAN	Tayside and Central Scotland Transport Partnership
UTMC	Urban Traffic Management and Control



Integrated Impact Assessment

Committee Report Number: 151-2024

Document Title: Air Quality Update

Document Type: Other

Description:

The purpose of the report is to summarise the 2023 air quality monitoring data and update on progress made with the Air Quality Action Plan (AQAP) measures during 2023; and to provide an update on provision air quality monitoring data for the early months of 2024; and to inform Committee of the draft 2024 AQAP update and seek approval to carry out statutory and public consultation on a draft version of this Plan.

Intended Outcome:

The intended outcome is for Committee to note the contents of this report and to (1) remit the Executive Director of Neighbourhood Services to submit the 2024 Air Quality Annual Progress Report (APR) to the statutory bodies; (2) remit the Executive Director of Neighbourhood Services to engage with the Statutory Authorities on the revocation process for the 1-hour mean nitrogen dioxide (NO₂) air quality objective component of the Dundee Air Quality Management Area (as outlined in 4.6 below); (3) note the information provided on provisional air quality monitoring data for the months of January to April 2024; and (4) remit the Executive Director of Neighbourhood Services to progress with the update of the AQAP and carry out statutory consultation, in line with the requirements of the LAQM Policy Guidance (Scotland) 2023, on the draft 2024 AQAP.

Period Covered: 10/06/2024 to 09/06/2025

Monitoring:

Further annual report will be submitted in 2025. A further Committee report will be required following the completion of the statutory consultation process for the draft 2024 AQAP and in advance of the final document being submitted to the Scottish Government later in 2024.

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Equality, Diversity and Human Rights

Impacts & Implications

Age: No Impact

Disability: No Impact

Gender Reassignment: No Impact

Marriage & Civil Partnership: No Impact

Pregenancy & Maternity: No Impact

Race / Ethnicity: No Impact

Religion or Belief: No Impact

Sex: No Impact

Sexual Orientation: No Impact

Are any Human Rights not covered by the Equalities questions above impacted by this report?

No

Fairness & Poverty

Geographic Impacts & Implications

Strathmartine:	No Impact
Lochee:	No Impact
Coldside:	No Impact
Maryfield:	No Impact
North East:	No Impact
East End:	No Impact
The Ferry:	No Impact
West End:	No Impact

Household Group Impacts and Implications

Looked After Children & Care Leavers: No Impact

Carers: No Impact

Lone Parent Families: No Impact

Household Group Impacts and Implications

Single Female Households with Children: No Impact

Greater number of children and/or young children: No Impact

Pensioners - single / couple: No Impact

Unskilled workers or unemployed: No Impact

Serious & enduring mental health problems: No Impact

Homeless: No Impact

Drug and/or alcohol problems: No Impact

Offenders & Ex-offenders: No Impact

Socio Economic Disadvantage Impacts & Implications

Employment Status: No Impact

Education & Skills: No Impact

Income: No Impact

Caring Responsibilities (including Childcare): No Impact

Affordability and accessibility of services: No Impact

Fuel Poverty: No Impact

Cost of Living / Poverty Premium: No Impact

Connectivity / Internet Access: No Impact

Income / Benefit Advice / Income Maximisation: No Impact

Employment Opportunities: No Impact

Education: No Impact

Health: No Impact

Life Expectancy: No Impact

Mental Health: No Impact

Overweight / Obesity: No Impact

Child Health: No Impact

Neighbourhood Satisfaction: No Impact

Transport: No Impact

Environment

Climate Change Impacts

Mitigating Greenhouse Gases: Positive

Supports measures to increase active and sustainable travel.

Adapting to the effects of climate change: No Impact

Resource Use Impacts

Energy efficiency & consumption: No Impact

Prevention, reduction, re-use, recovery or recycling of waste: No Impact

Sustainable Procurement: No Impact

Transport Impacts

Accessible transport provision: No Impact

Sustainable modes of transport: Positive

Supports measures to increase active and sustainable travel.

Natural Environment Impacts

Air, land & water quality: Positive

Supports measures to protect air quality in Dundee.

Biodiversity: No Impact

Open & green spaces: No Impact

Built Environment Impacts

Built Heritage: No Impact

Housing: No Impact

Is the proposal subject to a Strategic Environmental Assessment (SEA)?

No further action is required as it does not qualify as a Plan, Programme or Strategy as defined by the Environment Assessment (Scotland) Act 2005.

Corporate Risk

Corporate Risk Impacts

Political Reputational Risk: No Impact

Economic/Financial Sustainability / Security & Equipment: No Impact

Social Impact / Safety of Staff & Clients: No Impact

Technological / Business or Service Interruption: No Impact

Environmental: Positive

Supports measures to improve air quality and climate change.

Legal / Statutory Obligations: No Impact

Organisational / Staffing & Competence: No Impact

Corporate Risk Implications & Mitigation:

The risk implications associated with the subject matter of this report are "business as normal" risks and any increase to the level of risk to the Council is minimal. This is due either to the risk being inherently low or as a result of the risk being transferred in full or in part to another party on a fair and equitable basis. The subject matter is routine and has happened many times before without significant impact.