

FALKIRK COUNCIL



Proposal for Revocation of Falkirk Town Centre Air Quality Management Area (AQMA)

In fulfillment of Part IV of the Environment Act 1995

Local Air Quality Management

February 2026

Falkirk Council - Proposal for Revocation of Falkirk Town Centre Air Quality Management Area (AQMA)

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1. INTRODUCTION

An Air Quality Management Area (AQMA) covering the town centre of Falkirk was declared in 2013 due to exceedances of the nitrogen dioxide (NO₂) annual mean national air quality strategy (NAQS) objective. Measured NO₂ concentrations in Falkirk town centre have declined over recent years and have been compliant with the NAQS objective for five years (since 2020).

This document provides supporting evidence for the proposal by Falkirk Council to revoke the Falkirk Town Centre AQMA. Local air quality monitoring shows that air quality objectives are consistently being met in the Falkirk Town Centre AQMA. Falkirk Council therefore seek approval from the Scottish Government for the revocation of this AQMA. The aim of the Council in seeking this revocation is to reduce unnecessary regulation while maintaining oversight through continued monitoring and existing strategies.

This report includes the following elements:

- Regulatory background;
- Description and history of the Falkirk Town Centre AQMA;
- Description of local NO₂ pollution sources;
- Monitoring equipment used;
- A review of measured NO₂ concentrations;
- Future actions; and
- Conclusions and recommendations.

Revocation of this AQMA would substantiate the improvement in air quality within this designated area, achieved through the on-going work of the Air Quality Strategy (AQS) 2025-2029¹ and associated improvements in road transport. This improvement brings health benefits to residents and visitors to Falkirk.

2. REGULATORY BACKGROUND

Part IV of the Environment Act 1995 required the UK Government and the devolved administrations, to publish a national Air Quality Strategy² and establish the system of Local Air Quality Management (LAQM) and Air Quality Objectives for specified pollutants.

The air quality objectives for Scotland are set out in:

- The Air Quality (Scotland) Regulations 2000³;
- The Air Quality (Scotland) Amendment Regulations 2002⁴; and
- The Air Quality (Scotland) Amendment Regulations 2016⁵.

¹ <https://www.falkirk.gov.uk/environmental-policy/air-quality/local-air-quality>

² <https://www.legislation.gov.uk/ukpga/1995/25/contents>

³ <https://www.legislation.gov.uk/ssi/2000/97/made>

⁴ <https://www.legislation.gov.uk/ssi/2002/297/contents/made>

⁵ <https://www.legislation.gov.uk/ssi/2016/376/contents/made>

Falkirk Council has a responsibility to comply with the above regulations when managing local air quality. The Council completes its LAQM duties by managing an extensive air quality monitoring network, assessing results and reporting on areas of existing or anticipated poor air quality which are declared via AQMAs.

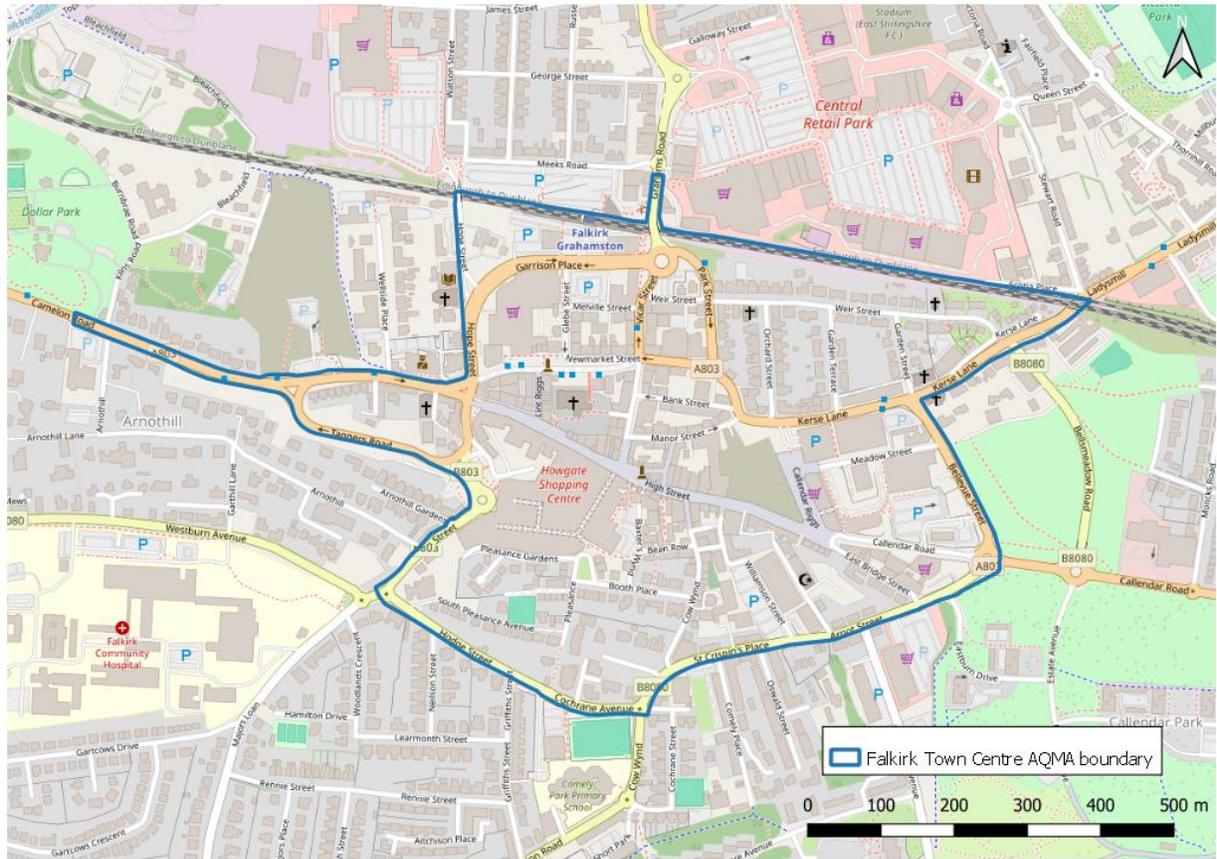
Section 4 “AQMA” of Part IV of the Environment Act 1995⁶ states: “There are no set criteria on which an AQMA amendment or revocation decision will be based, and the Scottish Government considers each request on a case-by-case basis. A minimum requirement however will normally be at least three consecutive years where the NAQS objectives of concern are being achieved and where monitoring data demonstrates that further exceedances of the objectives are unlikely to occur.” On this basis, Falkirk Council are proposing to revoke the Falkirk Town Centre AQMA (NO₂ annual mean).

3. DESCRIPTION OF FALKIRK TOWN CENTRE AQMA

Five AQMAs were declared within Falkirk Council, four of which have now been revoked. The remaining AQMA is in Falkirk town centre, an outline of which is shown in Figure 1. The AQMA covers part of the town centre. The Falkirk Town Centre AQMA was declared on the 31st January 2013 for exceedances of the nitrogen dioxide (NO₂ annual mean) air quality objective which requires concentrations to remain below 40 µg/m³.

⁶ <https://www.gov.scot/publications/local-air-quality-management-policy-guidance-2/>

Figure 1: Map showing the boundary of the Falkirk Town Centre Air Quality Management Area



4. DESCRIPTION OF LOCAL POLLUTION SOURCES

Road traffic is the largest source of NO₂ in Falkirk, accounting for 60% of emissions in 2021⁷. Industrial emissions, domestic combustion (household fuel burning) and other transport contribute around 10 to 15% each to the total emissions within the Falkirk Council area.

Road traffic contributes to nitrogen dioxide (NO₂) emissions primarily through the combustion of fossil fuels in vehicle engines. When petrol or diesel burns, nitrogen in the air reacts with oxygen at high temperatures inside the engine, forming nitrogen oxides (NO_x). These NO_x compounds are then released through the exhaust system, and in the atmosphere, some of them convert into NO₂. Diesel vehicles, in particular, tend to emit higher levels of NO_x compared to petrol vehicles. Traffic congestion and stop-start driving can further increase emissions because engines operate less efficiently under these conditions.

In Falkirk, as in the UK overall, road traffic was significantly affected by the COVID-19 lockdowns. In 2020, traffic volumes fell sharply, with car journeys particularly impacted, while cycling activity surged to

⁷ Emissions of air pollutants in the UK – Summary, DEFRA, 2024. Accessible at: <https://www.gov.uk/government/statistics/emissions-of-air-pollutants>

record levels. From 2021 to 2023, traffic gradually recovered but remained slightly below pre-pandemic levels. By 2024, overall traffic had largely returned to near 2019 figures.

Despite this rebound, monitoring data continues to show a sustained reduction in NO₂ emissions both nationally and within Falkirk town centre, reflecting the effectiveness of mitigation measures implemented by the UK Government and Falkirk Council.

5. LOCAL MONITORING

Falkirk Council monitors NO₂ and other pollutants at several locations throughout the Council area using automatic and manual sampling methods. Full details of all monitoring undertaken by Falkirk Council can be found in the latest Annual Progress Report⁸.

Automatic Monitoring

Since the declaration of the FTC AQMA in 2013, the Council has operated two automatic monitoring stations within the FTC AQMA (as detailed in Table 1). These are located on Hope Street⁹ and West Bridge Street¹⁰ and are continuously operating reference method analysers that form part of the Scottish Automatic Urban Network. The automatic monitoring data used in this report has been fully checked and ratified in accordance with the Scottish Air Quality Database Quality Assurance / Quality Control (QA/QC) process¹¹.

The locations of the Falkirk Hope Street and West Bridge Street automatic monitoring stations are displayed in Appendix A – Map of Automatic Monitoring Locations.

Non-automatic Monitoring

Since the declaration of the FTC AQMA, Falkirk Council has operated non-automatic (passive) monitoring of NO₂ at 14 sites within the AQMA. Table 2 provides the details of these sites and the locations are shown in Appendix B – Map of Non-Automatic Monitoring Locations.

⁸ <https://www.falkirk.gov.uk/environmental-policy/air-quality/local-air-quality>

⁹ <https://www.scottishairquality.scot/latest/site-info/FAL3>

¹⁰ <https://www.scottishairquality.scot/latest/site-info/FAL6>

¹¹ <https://www.scottishairquality.scot/data/verification-ratification>

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Table 1: Automatic NO₂ monitoring station details

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	NO ₂ Monitoring Technique	Distance to Relevant Exposure (m)	Distance to kerb of nearest road (m)	Inlet Height (m)
Falkirk Hope Street	288688	680218	Roadside	<u>01/07/2007 – 09/03/2022:</u> Horiba 360 APNA, Chemiluminescence <u>09/03/2022 – 19/11/2025:</u> API Teledyne T200, Chemiluminescence <u>19/11/2025 – present:</u> API Teledyne N200, Chemiluminescence	1	5	1.5
Falkirk West Bridge Street	288457	680064	Roadside	<u>07/11/2007 – 25/03/2015:</u> Monitor Labs ML9841B, Chemiluminescence <u>25/03/2015 – 19/11/2025:</u> API Teledyne T200, Chemiluminescence <u>19/11/2025 – present:</u> API Teledyne N200, Chemiluminescence	1	2	1.2

Table 2: Non-automatic NO₂ monitoring station details

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Diffusion Tube ID	Site Name	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Distance to Relevant Exposure (m)	Distance to kerb of nearest road (m)	Inlet Height (m)	Tube collocated with a Continuous Analyser?
24	Kerse Lane, Falkirk	289189	680018	Roadside	<2	3	2.5	N
26	Weir St, Falkirk	289234	680121	Urban Background	<5	1.7	2.5	N
27	West Bridge St, Falkirk	288490	680055	Roadside	<2	0.5	2.2	Y
50	Upper Newmarket St, Falkirk	288671	680047	Urban Background	<5	9	2.3	N
62	Arnot St, Falkirk	289125	679705	Roadside	<2	1.6	2.3	N
63	Camelon Rd, Falkirk	288055	680134	Roadside	<5	1.4	2.3	N
69	Kerse Lane, Falkirk	289025	679991	Roadside	<2	2.3	2.7	N
71	Park St, Falkirk	288910	680112	Roadside	<2	1.5	2.1	N
72	Vicar St, Falkirk	288824	680120	Roadside	<2	1.5	2.5	N
73	West Bridge St RHS, Falkirk	288467	680048	Roadside	<2	0.3	2.5	N
89	Grahams Rd / Meeks Rd, Falkirk	288856	680336	Roadside	<2	2.2	2.3	N
99	St Crispins Pl, Falkirk	288924	679675	Roadside	7.6	2.7	2	N
111	Falkirk West Bridge St, Air Quality Station	288457	680064	Urban Centre	4.3	2.3	1.8	Y
118	Glebe Street, Falkirk	288726	680096	Roadside	2.5	1.6	2.27	N

6. NO₂ ANNUAL MEAN RESULTS (2013 – 2024)

Since the AQMA was declared in 2013, there has been one exceedance of the NO₂ annual mean NAQS objective recorded in 2014 at Falkirk West Bridge Street (41 µg/m³) (Table 3). No further NAQS objective exceedances have been recorded since 2013 at any other automatic monitoring site within the FTC AQMA. Between 2013 and the present day, monitoring results from both automatic sites display a decreasing trend in annual mean concentration results, most notable from 2020 onwards (Figure 2).

Most of the diffusion tubes have not exceeded the NO₂ annual mean NAQS objective during the period 2013 to 2024 (Table 4). Site 27 (West Bridge Street) has observed the most exceedances, with 6 in total, the last of these occurring in 2019. Site 24 (Kerse Lane) and site 111 (Falkirk West Bridge Street Air Quality Station) have recorded one exceedance each, in 2013 and 2016, respectively. As with the automatic monitoring results, results from all non-automatic sites display a decreasing trend in annual mean concentration results over the past decade, most notable from 2020 onwards (Figure 3).

These results demonstrate that the annual mean NO₂ concentrations for the past five years (since 2020) have complied with the NAQS objective. Falkirk Council expects that NO₂ annual mean concentrations will remain within the NAQS objective for many years in the future due to the ongoing work detailed in the Air Quality Strategy.

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Table 3: Automatic NO₂ monitoring results 2013 to 2024 (µg/m³)

Site ID	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Falkirk Hope Street	23	23	21	23	19	21	20	14	15.5	14	17.1	14
Falkirk West Bridge Street	39	41	37	37	36	39	38	27	31.4	27	28.5	24

Table 4: Non-automatic NO₂ monitoring results 2013 to 2024 (µg/m³)

Diffusion Tube ID	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
24	42	37	38	35	39	34	33	25	24.0	24.0	24.5	21.6
26	21	18	17	16	17	20	18	13	13.6	12.0	12.6	10.4
27	53	45	47	48	38	44	47	35	34.8	30.0	34.3	32.2
50	30	27	22	24	20	24	24	18	18.2	15.0	14.9	18.4
62	36	38	39	39	34	34	34	27	23.6	25.0	25.8	21.7
63	38	36	36	36	33	35	34	27	27.0	24.0	26.6	23.2
69	33	35	30	34	30	32	30	23	23.3	21.0	24.3	20.1
71	35	33	35	29	30	31	30	25	24.4	22.0	23.4	21.8
72	33	32	30	32	25	26	27	22	20.8	18.0	19.4	17.9
73	35	33	31	22	28	31	31	24	23.4	21.0	22.6	19.3
89	34	30	31	32	28	30	30	23	21.8	20.0	21.0	18.2
99	26	25	22	21	24	25	25	20	18.2	18.0	18.1	17.1
111	N/A	33	33	43	36	37	38	31	29.4	27.0	28.9	25.2
118	N/A	N/A	N/A	N/A	N/A	N/A	23	18	17.3	15.0	18.7	18.2

Figure 2: Measured Automatic NO₂ Annual Mean Results with NAQS Objective Limit (2013 – 2024)

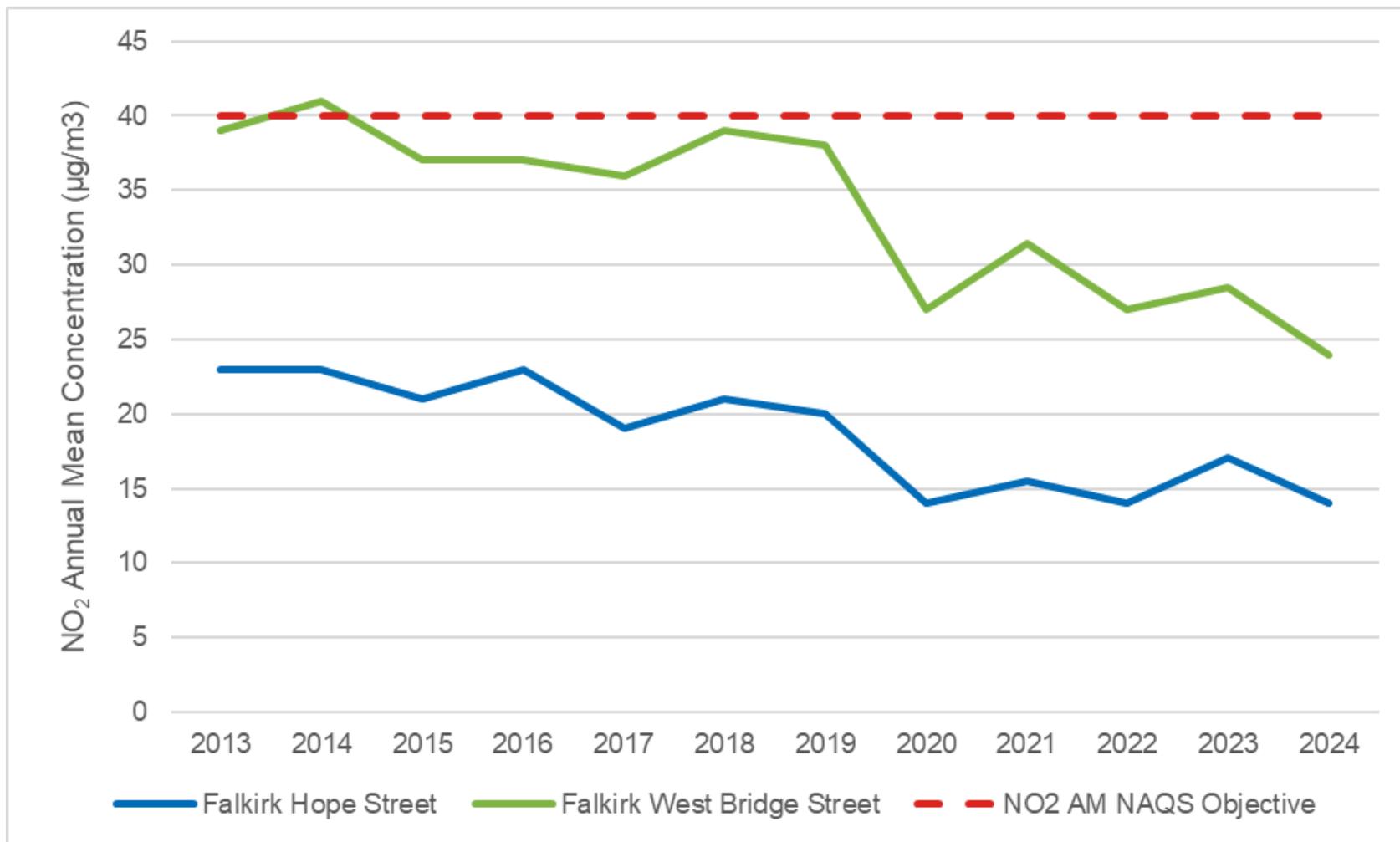
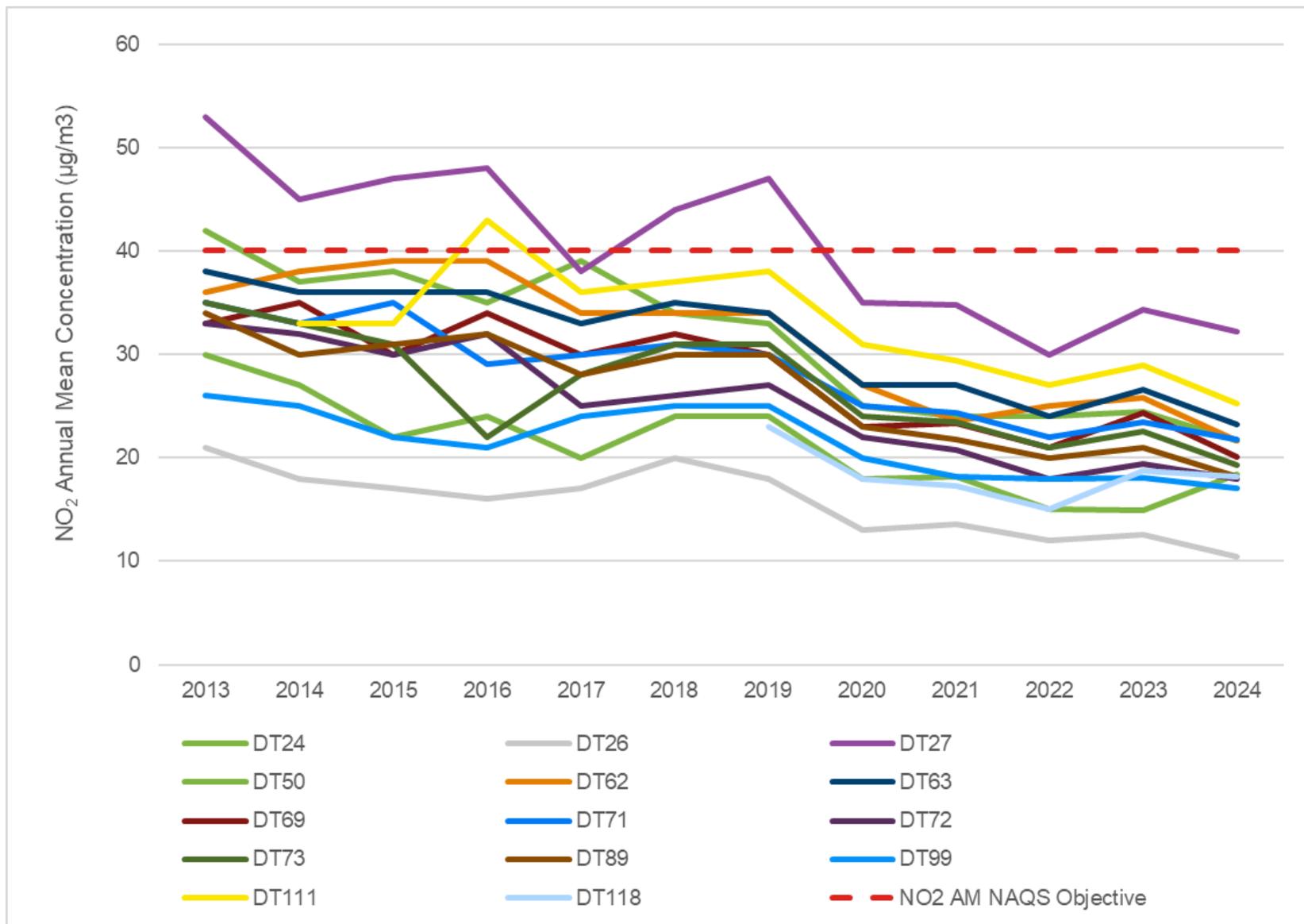


Figure 3: Measured Non-Automatic NO2 Annual Mean Results with NAQS Objective Limit (2013 – 2024)



7. FUTURE ACTIONS

Falkirk Council has made significant progress in implementing air quality improvement measures initially set out in the Air Quality Action Plan and now encompassed within the Air Quality Strategy. The work to bring air quality improvements will continue and relevant measures will be developed and implemented through the Air Quality Strategy and working collaboratively with the Falkirk Council Transport Planning and Climate Change departments to promote alternative, sustainable local transport and clean energy solutions.

To illustrate, there are now over one-hundred charging bays providing various charging capacities throughout the Falkirk Council area and more planned for the future. A Council-wide Green Fleet initiative to achieve a zero-emission fleet is ongoing, new electric vehicles (EV) are being brought in to replace the ageing diesel vehicles used by various Council departments. The Falkirk Council Environmental Health department now own a fully electric van and this is used for all routine local air quality site work.

Falkirk Council Fleet is trialing hydrogenated vegetable oil (HVO) in heavy goods vehicles (HGV), including refuse collection vehicles and Roads department vehicles. HVO is a low carbon, low emission, fossil-free and sustainable alternative to conventional fossil fuels. Using HVO instead of using traditional fossil fuels such as diesel saves a huge 90% on Falkirk Council's carbon footprint and supports Scotland's Net Zero targets.

Membership of the ECO Stars scheme continues to grow¹². ECO Stars is a scheme which rates the environmental performance of commercial vehicles. It gives commercial vehicle operators advice on how to improve their fuel efficiency and reduce their running costs. It also encourages them to help improve local air quality and other environmental issues by improving their fleet performance.

Falkirk's Active Travel Strategy 2023-33¹³ aims to reduce overall local road traffic emissions. Air quality is an integral part of this Falkirk Council policy, specifically:

“Longer journeys combine walking, wheeling or cycling with reliable, affordable public transport. Roads are more attractive and welcoming communal spaces, and reduced congestion increases air quality and decreases journey times for bus routes and emergency services.”

The Council continue to promote a variety of active and sustainable travel measures such as Take the Right Route¹⁴. Engagement with local schools will continue through promotion of air quality education resources such as the Learn About Air teaching package and Clean Air Day Scotland.

Falkirk Council will update the Air Quality Strategy every five years to include ongoing air quality improvement measures. The Falkirk Council Annual Progress Reports will keep a record of achievements.

¹² <https://www.falkirk.gov.uk/environmental-policy/air-quality/eco-stars>

¹³ <https://www.falkirk.gov.uk/environmental-policy/climate-change>

¹⁴ <https://www.falkirk.gov.uk/transport/take-the-right-route>

8. CONCLUSIONS AND RECOMMENDATIONS

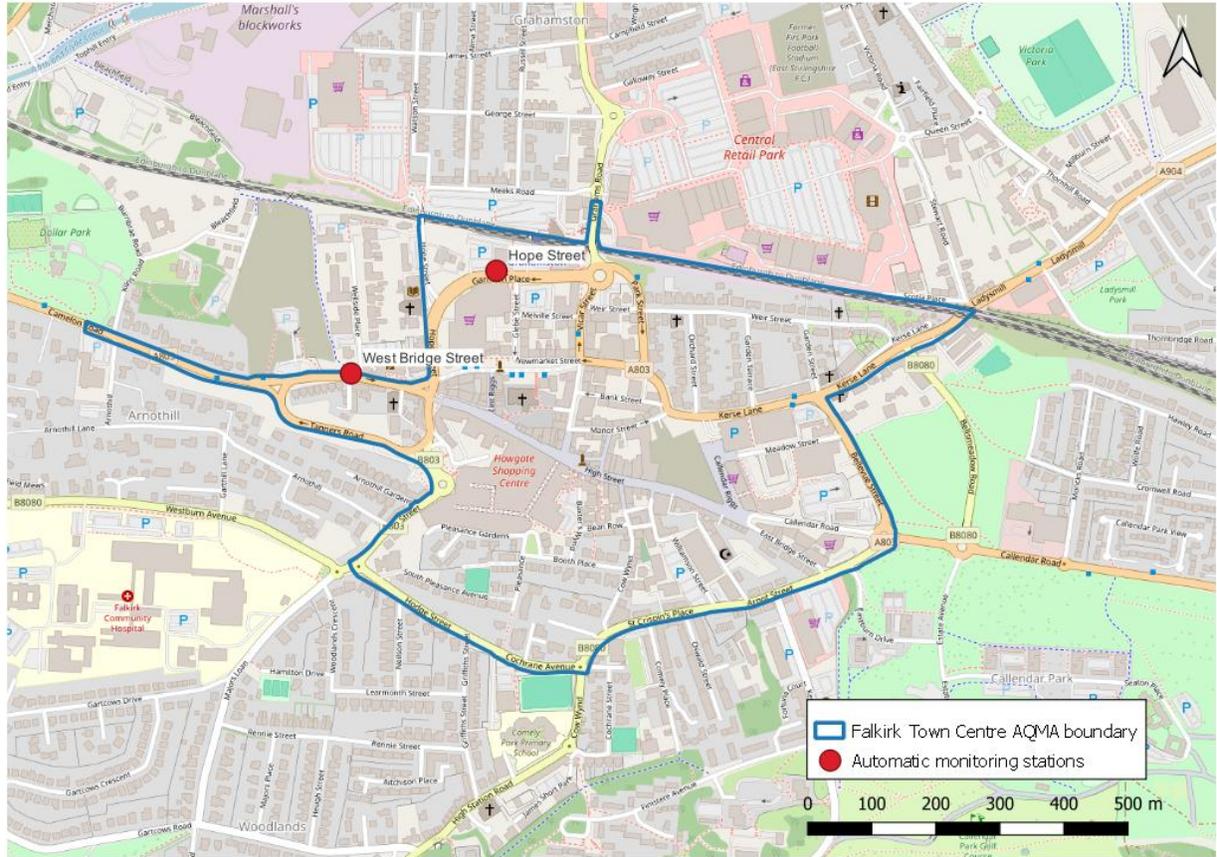
The Falkirk town centre AQMA was declared in 2013 due to exceedances of the NO₂ annual mean NAQS objective. Measured NO₂ concentrations in Falkirk town centre have declined over recent years and have been compliant with the NAQS objective for five years (since 2020).

The main sources of NO₂ in Falkirk town centre are summarised in Section 4: Description of Local Pollution Sources. Road transport is responsible for the majority of NO₂ emissions in the town centre area. As a result of the achievements and on-going work of the measures initially outlined in the AQAP and now in the AQS, Falkirk Council has demonstrated that measured annual mean concentrations of NO₂ comply with the relevant NAQS objective and that the Falkirk AQMA should be revoked. It is unlikely that the NO₂ NAQS objective will be exceeded in future years.

Falkirk Council will continue to have (automatic, reference method) NO₂ monitoring capabilities within the town centre area for many years to come. It is anticipated that annual Scottish Government LAQM funding will continue to be provided for this. This will provide a valuable resource for public health resources into the future.

APPENDIX A

Figure A 1: The locations of the Falkirk Hope Street and West Bridge Street automatic monitoring stations.



APPENDIX B

Figure B 1: The locations of the diffusion tube monitoring sites.

