East Lothian Council

Proposed Revocation of the East Lothian Council (Musselburgh) Air Quality Management Area Order 2013

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management (LAQM)

October 2025

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Contents

Table of Figures 3
1. Introduction 4
2. Monitoring Equipment in Musselburgh 5
3. Air Quality Management Area – NO_2 (annual mean objective) 10
4. More Recent NO_2 Monitoring Results 11
6. Air Quality Action Plan 2017 13
7. Detailed Assessment 2022 13
8. Conclusion 14
9. References 16

Table of Figures

Figure 1 – Musselburgh Air Quality Management Area 5
Figure 2 – Location of Musselburgh Automatic Monitoring Station 7
Figure 3 - Location of NO_2 Diffusion Tubes in Musselburgh 9

1. Introduction

Part IV of the Environment Act 1995 required the UK Government and the devolved administrations to publish a national Air Quality Strategy (see Ref.1) and establish the system of Local Air Quality Management (LAQM) and Air Quality Objectives (AQO) for specified pollutants.

The air quality objectives for Scotland are set out in;

- The Air Quality (Scotland) Regulations 2000 (see Ref. 2);
- The Air Quality (Scotland) Amendment Regulations 2002 (see Ref. 3); and
- The Air Quality (Scotland) Amendment Regulations 2016 (see Ref. 4).

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the AQO are likely to be achieved. Where an exceedance is considered likely, the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

East Lothian Council fulfils its LAQM duties by maintaining an automatic air quality station located in Musselburgh. There is also a network of passive NO_2 diffusion tubes located throughout the county. Results from this monitoring are assessed and an Annual Progress Report is produced each year - in line with statutory guidance.

In 2013, due to the potential for a breach in an AQO, an AQMA was declared within East Lothian. This AQMA is located in Musselburgh – please see **Figure 1** for an outline of this AQMA. Following monitoring, modelling and extensive consultation, this AQMA was declared in 2013 by issuing The East Lothian Council (High Street, Musselburgh) Air Quality Management Area Order 2013 (see Ref. 5). The AQMA was declared for exceedances of the nitrogen dioxide (NO_2) Annual Mean AQO.

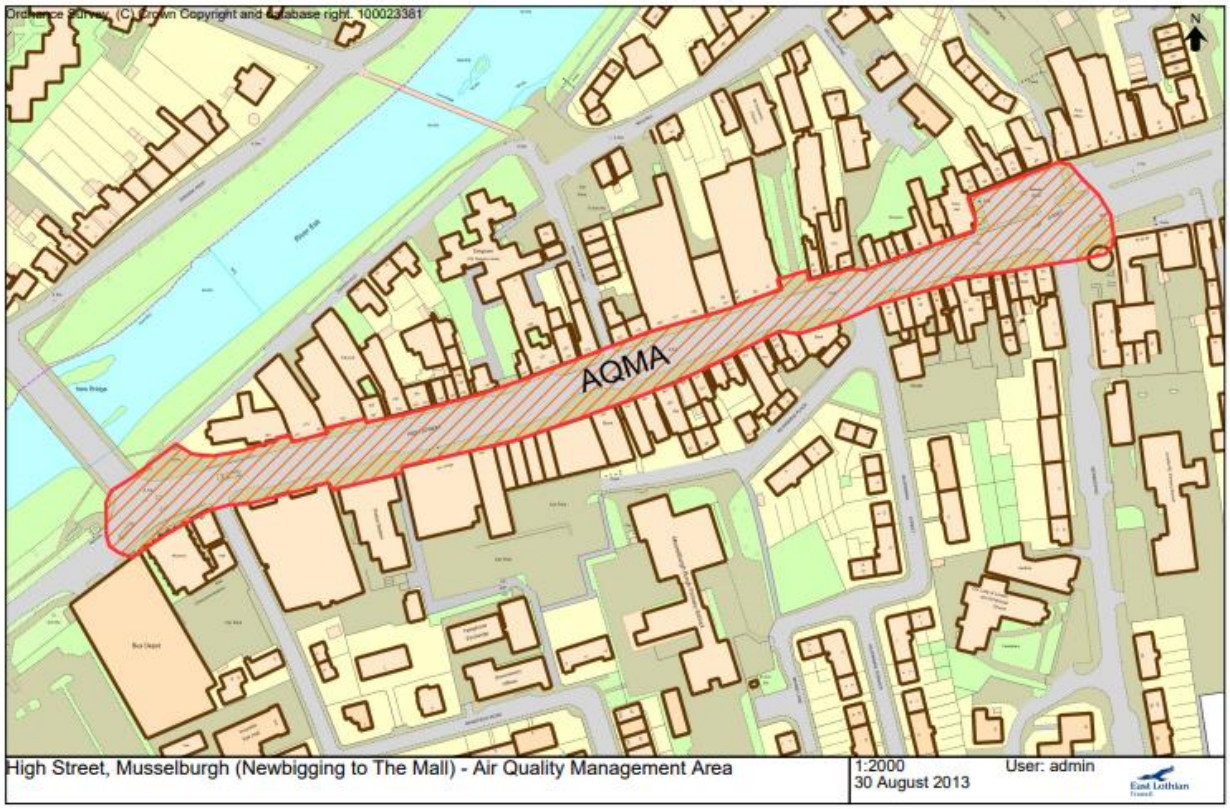
Following completion of the 2025 Annual Progress Report (see Ref. 6) it was noted that the AQO (see **Table 1**) for NO_2 have been met within the Musselburgh AQMA for several consecutive years.

As such, East Lothian Council propose to revoke the Musselburgh AQMA Order 2013 for NO_2. This report brings together all the relevant monitoring information to support the revocation.

Table 1 – Summary of NO_2 Air Quality Objectives for NO2 Scotland

Pollutant	Air Quality Objective Concentration	Air Quality Objective Measured as	Date to be Achieved by
Nitrogen dioxide (NO_2)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
Nitrogen dioxide (NO_2)	40 µg/m^3	Annual mean	31.12.2005

Figure 1 – Musselburgh Air Quality Management Area



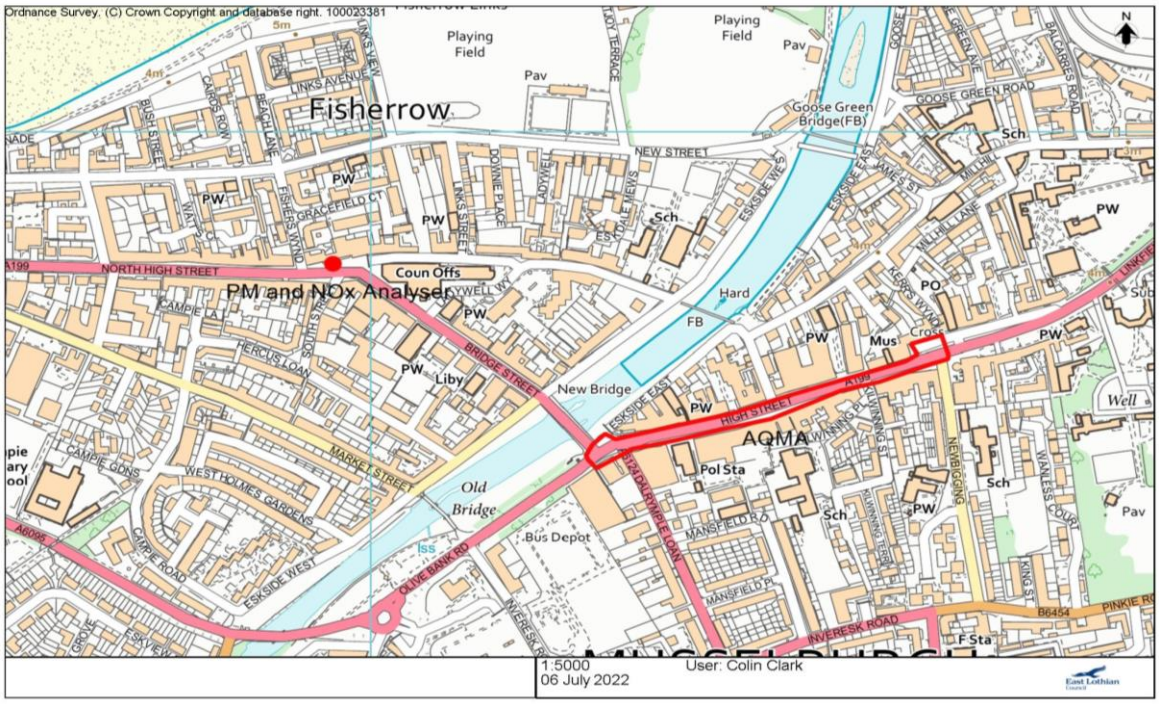
2. Monitoring Equipment in Musselburgh

Table 2 provides details for NO_2 monitoring equipment currently installed at our Musselburgh automatic air quality monitoring site. The location of the automatic site is shown in **Figure 2** (labelled as PM and NO_X Analyser).

Table 2 - Musselburgh NO_2 Air Quality Station - Automatic Monitoring Equipment

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
NO_X	Musselburgh North High Street - NO_x	Roadside	333 941	672837	NO_2	N	Gas-phase chemilluminescence detection	5	3	1.5

Figure 2 – Location of Musselburgh Automatic Monitoring Station



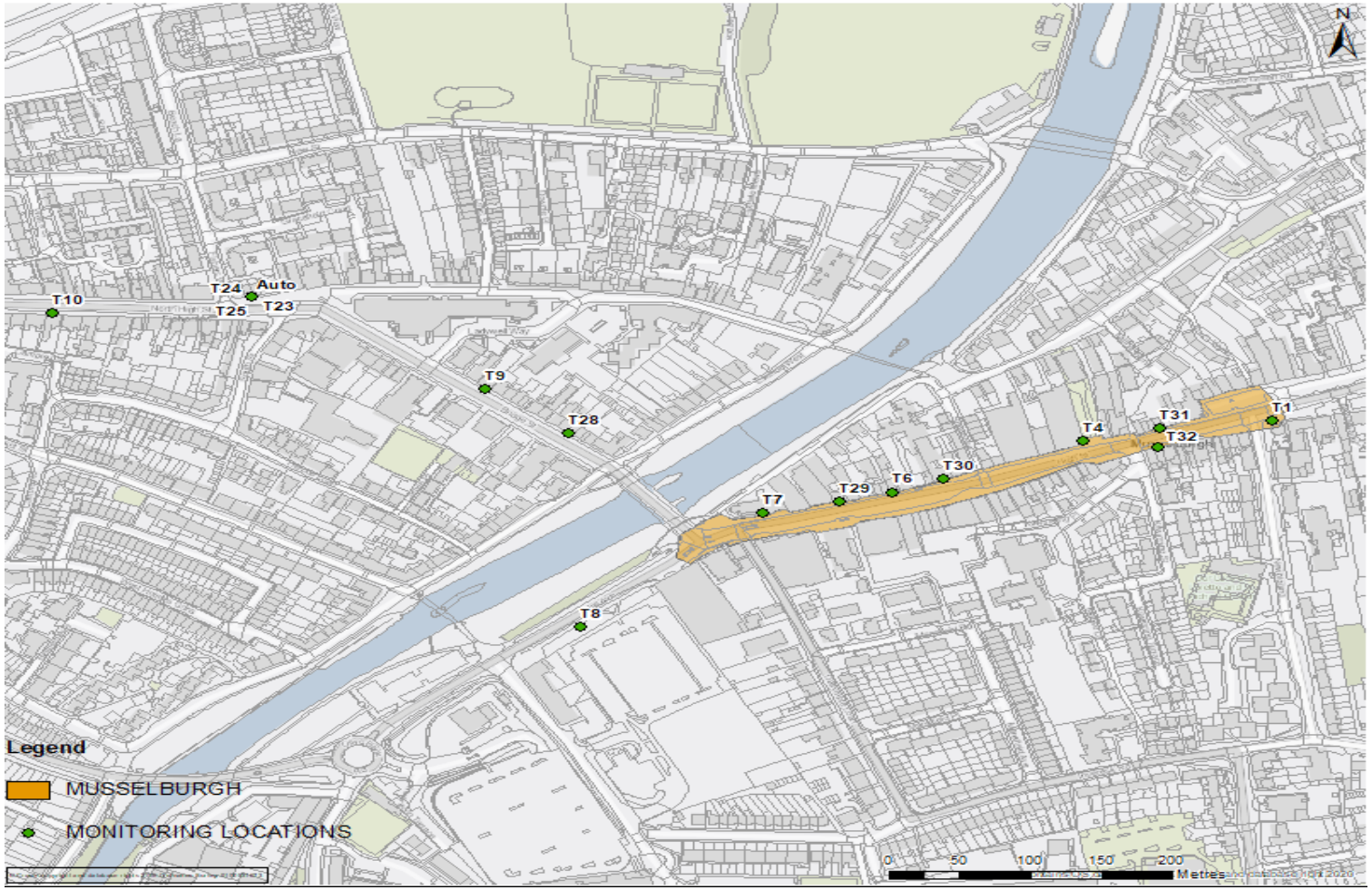
In addition to the above automatic monitor East Lothian Council also operates a network of passive NO_2 diffusion tubes, 15 of which are in Musselburgh with another 12 tubes located in other towns throughout the county.

Table 3 provides details for the NO_2 tube locations within Musselburgh while **Figure 3** shows their locations.

Table 3 - NO_2 Diffusion Tune locations within Musselburgh

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?
T1	Musselburgh – Newbigging Junction	Roadside	334659	672720	NO_2	Y	Y (15m)	2m	N
T4	Musselburgh - 87 High St	Roadside	334526	672700	NO_2	Y	Y (15m)	4m	N
T6	Musselburgh – 147 High Street	Roadside	334392	672652	NO_2	Y	Y 20m)	3m	N
T7	Musselburgh – 183 High St	Roadside	334301	672632	NO_2	Y	Y 20m)	3m	N
T8	Musselburgh - Mall Av	Roadside	334172	672524	NO_2	N	Y (25m)	4m	N
T9	Musselburgh – 45 Bridge Street	Roadside	334105	672750	NO_2	N	Y (3m)	4m	N
T10	Musselburgh – 150 North High St	Roadside	333800	672822	NO_2	N	Y (3m)	4m	N
T23	Musselburgh - Co-located 133 N High St	Roadside	333941	672837	NO_2	N	Y (5m)	3m	Y
T24	Musselburgh - Co-located 133 N High St	Roadside	333941	672837	NO_2	N	Y (5m)	3m	Y
T25	Musselburgh - Co-located 133 N High St	Roadside	333941	672837	NO_2	N	Y (5m)	3m	Y
T28	Musselburgh - 15 Bridge Street	Roadside	334164	672708	NO_2	N	Y (5m)	3m	N
T29	Musselburgh - 167 High Street	Roadside	334354	672643	NO_2	Y	Y (5m)	3m	N
T30	Musselburgh - 137 High Street	Roadside	334427	672664	NO_2	Y	Y (5m)	3m	N
T31	Musselburgh - 69 High Street	Roadside	334580	672713	NO_2	Y	Y (5m)	3m	N
T32	Musselburgh - 86 High Street	Roadside	334578	672695	NO_2	Y	Y (5m)	3m	N

Figure 3 - Location of NO_2 Diffusion Tubes in Musselburgh



3. Air Quality Management Area – NO_2 (annual mean objective)

The Council's Annual Progress Report 2013 (see Ref. 7) found concentrations of NO_2 at various locations on Musselburgh High Street during 2012 that had exceeded, or were very close to, the Annual Mean AQO of 40 µg/m^3. Accordingly, an AQMA was declared for Musselburgh in relation to breaches and likely breaches of this objective. NO_2 monitoring results from 2012 are shown in **Table 4** below with breaches and close to breaching figures are highlighted in red and amber.

Table 4 - Nitrogen Dioxide Diffusion Tubes results in Musselburgh in 2012

Site ID	Location	Site Type	Within AQMA	Triplicate or Co-located	Data Capture 2012 (%)	Data with less than 9 months has been annualised (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 0.8)
								2012 (µg/m^3)
T1	Musselburgh - Newbigging/High Street Junction	Roadside	N	N	100	N	N	30
T4	Musselburgh - 87 High Street	Roadside	N	N	100	N	N	25
T6	Musselburgh - 147 High Street	Roadside	N	N	100	N	N	**43**
T7	Musselburgh - 183 High Street (Day Centre)	Roadside	N	N	100	N	N	**39**
T8	Musselburgh - Mall Avenue (Opposite tesco)	Roadside	N	N	100	N	N	24
T9	Musselburgh - 45 Bridge Street	Roadside	N	N	100	N	N	27
T10	Musselburgh - 150 North High Street	Roadside	N	N	100	N	N	33
T23	Musselburgh 133 North High Street - Co-located	Roadside	N	Triplicate & Co-located	100	N	N	24
T24	Musselburgh 133 North High Street - Co-located	Roadside	N	Triplicate & Co-located	100	N	N	25
T25	Musselburgh 133 North High Street - Co-located	Roadside	N	Triplicate & Co-located	100	N	N	26
T28	Musselburgh - 15 Bridge Strreet	Roadside	N	N	67	N	N	29
T29	Musselburgh - 167 High Street	Roadside	N	N	67	N	N	**42**
T30	Musselburgh - 137 High Street	Roadside	N	N	67	N	N	34
T31	Musselburgh - 69 High Street	Roadside	N	N	67	N	N	**47**
T32	Musselburgh - 86 High Street	Roadside	N	N	67	N	N	32

4. More Recent NO_2 Monitoring Results

Since 2016, within the Council's Annual Progress reports, it has been noted that NO_2 levels are consistently below the AQO annual mean level of 40 µg/m^3 at both at the automatic monitoring site and diffusion tube sites within Musselburgh. The results of monitoring between 2020-2024 are shown in **Table 5** below.

Table 5 - NO_2 monitoring results in Musselburgh between 2020 - 2024 (annual mean µg/m^3)

Site ID	Location	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2023 (%)	NO_2 Annual Mean Concentration (µg/m^3)				
						2020	2021	2022	2023	2024*
NOX	Musselburgh 133 North High Street	Roadside	Automatic	99.8	46.8	15	16	14.5	17.1	15.3
T1	Musselburgh - Newbigging/High Street Junction	Roadside	Passive Diffusion Tube	100	100.0	16	19	20.1	19.9	14.9
T4	Musselburgh - 87 High Street	Roadside	Passive Diffusion Tube	100	100.0	13	19	16.5	16.2	20.3
T6	Musselburgh - 147 High Street	Roadside	Passive Diffusion Tube	92.3	92.3	19	26	24.3	26.5	19.2
T7	Musselburgh - 183 High Street (Day Centre)	Roadside	Passive Diffusion Tube	100	100.0	19	25	24.4	27.5	14.3
T8	Musselburgh - Mall Avenue (Opposite tesco)	Roadside	Passive Diffusion Tube	100	100.0	14	20	19.8	18.8	12.5
T9	Musselburgh - 45 Bridge Street	Roadside	Passive Diffusion Tube	100	100.0	12	19	15.3	18.2	16.1
T10	Musselburgh - 150 North High Street	Roadside	Passive Diffusion Tube	100	100.0	19	21	16.9	19.4	15.7
T11	Tranent - 89 High Street	Roadside	Passive Diffusion Tube	100	100.0	17	23	23.7	21.0	14.5
T12	Tranent - 82 High Street (Opposite chip shop)	Roadside	Passive Diffusion Tube	100	100.0	15	21	20.7	20.6	14.2
T13	Tranent - 55 High Street	Roadside	Passive Diffusion Tube	100	100.0	15	20	19.6	19.6	11.8
T14	Tranent - 26 High Street - opposite Post office	Roadside	Passive Diffusion Tube	100	100.0	11	17	16.1	17.0	10.2
T15	Tranent - 58 Bridge Street	Roadside	Passive Diffusion Tube	90.4	90.4	11	14	12.6	12.8	3.8
T16	Haddington - Lynlea	Urban Background	Passive Diffusion Tube	90.4	90.4	4	6	5.2	5.2	11.3
T23	Musselburgh 133 North High Street - Co-located	Roadside	Passive Diffusion Tube	90.4	90.4	11	16	-	14.3	11.3
T24	Musselburgh 133 North High Street - Co-located	Roadside	Passive Diffusion Tube	90.4	90.4	11	17	-	15.2	11.3

T25	Musselburgh 133 North High Street - Co-located	Roadside	Passive Diffusion Tube	90.4	90.4	11	18	14.1	15.5	11.3
T26	Wallyford - 116 Salters Road	Roadside	Passive Diffusion Tube	90.4	90.4	14	19	16.2	15.5	11.3
T27	Wallyford - 71 Salters Road	Roadside	Passive Diffusion Tube	90.4	90.4	10	18	16.2	14.9	11.1
T28	Musselburgh - 15 Bridge Strreet	Roadside	Passive Diffusion Tube	100	100.0	12	19	17	19.1	14.0
T29	Musselburgh - 167 High Street	Roadside	Passive Diffusion Tube	100	100.0	19	28	26.4	27.6	21.6
T30	Musselburgh - 137 High Street	Roadside	Passive Diffusion Tube	92.3	92.3	15	21	19	19.5	14.0
T31	Musselburgh - 69 High Street	Roadside	Passive Diffusion Tube	92.3	92.3	18	30	31.1	32.7	23.2
T32	Musselburgh - 86 High Street	Roadside	Passive Diffusion Tube	100	100.0	27	23	21.4	22.9	15.9
T33	Haddington - 23 Hardgate	Roadside	Passive Diffusion Tube	100	100.0	11	15	14.1	14.2	10.7
T34	Haddington - 2 Bothwell Bank, Hardgate	Roadside	Passive Diffusion Tube	100	100.0	8	10	8.9	9.7	7.3
T35	North Berwick - Police Station, High St	Roadside	Passive Diffusion Tube	90.4	90.4	9	9	7.5	7.4	6.1
T36	North Berwick - 108 High Street	Roadside	Passive Diffusion Tube	100	100.0	6	9	7.9	7.8	6.2

* The national bias adjustment factor (0.83) was used over the local bias adjustment factor (0.85) in the annual mean concentration calculations for 2024 due to poor overall precision and data capture from the automatic monitor. The observed drop in concentrations for 2024 may therefore be linked to the use of this value as opposed to an observed improvement in air quality.

It is evident that measured levels have been significantly below the annual AQO for many years. Measured results for 2020 are lower due to the Coronavirus pandemic, however, several years of data before and after this have remained below the objective level. As the pandemic eased and traffic levels increased in 2021, it is notable that the measured NO_2 level also returned to closer to their pre-pandemic levels.

6. Air Quality Action Plan 2017

Between November 2013 and Feb 2017, an Air Quality Action Plan was developed and published for and on behalf of East Lothian Council by Ricardo Energy and Environment consultants (see Ref. 8). The development of an action plan is a statutory requirement, following the declaration of an AQMA. The plan outlined a number of measures to improve air quality. These measures were also the subject of a public consultation exercise. Many of the measures set out in the action plan have been actioned since 2017 and are listed below.

- Improving Links with Local Transport Strategy (Measure No 1)
- Improving Links with Local Development Plan (Measure No 2)
- Bus Stop Relocations on High Street, Musselburgh (Measure No 3)
- Eco Stars Fleet Recognition Scheme has expanded its membership each year since East Lothian Council became a member in 2017 (Measure No 6)
- SCOOT Traffic Management System implementation and upgrading (Measure No 7)
- East Lothian Council has become a member of The East Central Scotland Vehicle Emissions Partnership (Measure No 10)
- Development of Green Travel Plans (Measure No 11) and Promotion of Cycling and Walking (Measure 12)
- Electric Vehicle infrastructure provision continues to expand within East Lothian. Our strategy has moved on from a focus on our now well-stablished strategic network to concentrate on ensuring that people who do not have a safe place to re-fuel at home, can access affordable charging. East Lothian Council are also developing policies to require developers to provide appropriate charging infrastructure alongside new housing and on retail and industrial sites and are working to ensure charge points are integrated into our own developments e.g. school extensions, and social housing.

7. Detailed Assessment 2022

In considering whether the revocation of the Musselburgh AQMA is appropriate, a detailed assessment of air quality in Musselburgh was also undertaken and subsequently published in September 2022 (see Ref. 9). The detailed assessment considered:

- The last 6 years of monitoring data.
- 2019 traffic flow data, due to the pandemic it was not possible to consider a more recent year due to changes in traffic patterns as a result of Covid-19 lockdown measures at the time. It has been considered that this would be worst case.
    - Assessment of potential future emissions
- Future with City of Edinburgh LEZ in operation.
- Met sensitivity of 5 years of metrological conditions.

- The potential impact from the Local Development Flow full build out.
- The potential increase in traffic volume required to result in exceedances of the NO2 annual mean objective.

The report has indicated the following:

- Local diffusion tube monitoring has not recorded an exceedance in AQO since 2016 where sites T6 and T31 measured 40 µg/m3 and 43 µg/m3 , respectively.
- 103 sensitive receptors were identified across Musselburgh, all residential. This included receptors within the High Street AQMA placed at 4m to represent the human exposure at the first-floor level on the High Street.
- The modelling did not predict any exceedances of the AQOs for annual mean NO_2 at any of the sensitive receptors across the study area.
- Modelling of the potential future impacts from the City of Edinburgh LEZ were also considered. This assumed all buses would be Euro 6. This resulted in a reduction of annual mean concentration of approximately 7 µg/m3 in the High Street.

The detailed assessment concluded:

- That it is considered unlikely that the annual mean NO_2 AQO will be exceeded in future years, thus the requirement for the AQMA no longer remains valid and can be revoked. It was recommended that the Council gives consideration to doing so under Section 83 (2) of the Environment Act 1995.
- It is further recommended that East Lothian Council continue to undertake monitoring within the AQMA to identify any changes in air quality concentrations as a precaution.

8. Conclusion

The Musselburgh AQMA was declared on the 13th November 2013 after monitoring and modelling found exceedances of NO_2 AQO at various residential receptors in the Musselburgh study area. Since the AQMA was declared, measured concentrations of NO_2 have consistently been below the air quality objective since 2016.

As stated within the Air Quality in Scotland (LAQM) website in relation to AQMA Revocation: ‘Where a local authority feels that it has sufficient evidence to justify the need to amend/revoke an AQMA at any time, it should submit that evidence to the Scottish Government for appraisal. For those authorities that have continuous monitoring, the Scottish Government would expect them to keep the AQMA under regular review, and to take action where necessary, rather than await the next round of reviews and assessments.’

The proposal to revoke the Musselburgh Air Quality Management Area was presented to the Scottish Government in December 2022 to seek agreement for revocation of the AQMA to allow consultations on the Musselburgh draft revocation report to begin.

The Scottish Government were content for the revocation of Musselburgh AQMA to proceed for NO_2.

In considering all the information available from several years of monitoring and from modelling carried out in the 2022 detailed assessment, East Lothian Council intend to revoke the AQMA for NO_2. The Council will, however, continue to monitor NO_2 within Musselburgh.

East Lothian Council will notify all other statutory consultees and publicise the revocation through local / social media, so that the public, local businesses and other stakeholders are fully aware of the revocation proposal.

9. References

1. The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volume 1, July 2007, Department for Environment, Food and Rural Affairs in partnership with the Scottish Executive, Welsh Assembly Government and Department of the Environment Norther Ireland)
2. The Air Quality (Scotland) Regulations 2000 (31st March 2000, The Scottish Government)
3. The Air Quality (Scotland) Amendment Regulations 2002 (11th June 2002, The Scottish Government)
4. The Air Quality (Scotland) Amendment Regulations 2016 (1st April 2016, The Scottish Government)
5. Musselburgh Air Quality Management Order and Map (November 2013, East Lothian Council). Available here.
6. Annual Progress Report 2025 (August 2025, East Lothian Council). Available here.
7. Annual Progress Report 2013 (August 2013, East Lothian Council). Available here.
8. Musselburgh Air Quality Action Plan (February 2017, East Lothian Council). Available here.
9. Detailed Assessment of Musselburgh AQMA (SWECO Consultants on behalf of East Lothian Council, September 2022). Available here.