

Annual Progress Report (APR)



2024 Air Quality Annual Progress Report (APR) for East Lothian Council

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

Local Air Quality Management

November 2024

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Executive Summary: Air Quality in Our Area

Air Quality in East Lothian

East Lothian Council considered the declaration of an Air Quality Management Area (AQMA) for potential exceedance of the Nitrogen dioxide (NO₂) annual mean Air Quality Objective (AQO) after submission of the 2013 Progress Report (Ref 1). In November 2013, following completion of the 2013 Progress Report, an AQMA was declared in Musselburgh (Ref 2) in relation to breaches and likely breaches of the Nitrogen Dioxide annual mean air quality objective. The extent of the AQMA is High Street, Musselburgh (A199) from its junction with Newbigging and extending westwards to the junction with Bridge Street and Mall Avenue. A map of the extent and location of the AQMA is provided in Appendix D.

Following declaration of the AQMA East Lothian Council commissioned a Further Assessment (Ref 3) of Air Quality in Musselburgh. The assessment provided the technical justification for the measures the authority later included in any Air Quality Action Plan (AQAP). The Further Assessment was completed in September 2014 and confirmed the findings of the previous Detailed Assessment in 2012 (Ref 4), namely that there were likely to be continued exceedances of the annual mean NO₂ objective where relevant exposure exists.

The Further Assessment estimated that ambient Nitrogen oxides (NO_x) reductions in the AQMA of up to 27% at some locations were required in order to achieve compliance with the annual mean NO₂ objective and, furthermore, that a source apportionment exercise indicates that emissions from buses form the largest contribution at all locations along the High Street AQMA. An integrated package of interventions would most likely be required to provide the best NO_x reductions. Measures that reduced overall traffic, reduced queuing and reduced bus numbers, where appropriate, would reduce road NO_x significantly. These measures are however very challenging (both financially and technically) to implement.

The contour plots and dispersion modelling prepared for the Further Assessment indicated that the AQMA boundary included all relevant sources and did not require revocation or amendment at that time.

The 2014 Progress Report (Ref 5) and 2015 Updating & Screening Assessment (Ref 6) confirmed that NO₂ emissions in 2013 and 2014 continued to exceed, or were very close to, the Annual Mean Air Quality Objective for NO₂ at some locations within the AQMA. The 2016 Progress Report (Ref 7) and monitoring results from 2015 indicated that all Air Quality Objectives (AQO) were complied with and there were no exceedances of any objectives, including the NO₂ Annual Mean AQO.

East Lothian Council continued to develop and, in February 2017, published an AQAP to outline the measures to be taken to ensure compliance with the Objectives (Ref 8).

However, the 2017 Progress Report (Ref 9) confirmed that during 2016 exceedances of the NO₂ Annual Mean AQO within the AQMA were again recorded at two locations. There were no other exceedances of any other AQO noted throughout the County.

The 2018 Progress Report (Ref 10) and monitoring results from 2017 indicated that all Air Quality Objectives were complied with and there were no exceedances of any objectives, including the NO₂ Annual Mean AQO.

The 2019 Progress Report (Ref 11) and monitoring results from 2018 again confirmed no exceedance of any Air Quality Objectives, including within the AQMA.

The 2020 Progress Report (Ref 12) and monitoring results from 2019 confirms there were no exceedances of any AQO during 2019.

The 2021 Progress Report (Ref 13) and monitoring results from 2020 confirms there were no exceedances of any AQO during 2020 with the last exceedance being recorded in 2016.

The 2022 Progress Report concluded that monitoring results from 2021 confirm there were no exceedances of any AQO during 2021.

East Lothian Council have also carried out a Detailed Assessment of Air Quality in Musselburgh (Ref 14) which was published in September 2022 and the results confirm that there were no exceedances of any AQO within the AQMA since 2016 and also concludes that future exceedances are unlikely. As such, East Lothian Council sought

permission from the Scottish Government to revoke the Musselburgh AQMA, which was granted in December 2022. East Lothian Council are in the process of carrying out a consultation exercise with relevant stakeholders to seek their comments on the proposed revocation of the AQMA. A draft Revocation Report will be available to consultees as part of the revocation process. It is anticipated that the revocation of the AQMA will be completed by Spring 2025.

The 2023 Progress Report concluded there were no exceedances of any Air Quality Objectives during 2022.

This report concludes there were no further exceedances of any Air Quality Objectives during 2023. Monitoring of NO₂, PM₁₀ and PM_{2.5} will continue and the 2024 monitoring results will be presented in the APR due to be published by end of June 2025.

Actions to Improve Air Quality

Results of monitoring for the 12-month period from 01/01/23 to 31/12/23 indicate no exceedances of the NO₂ Annual Mean AQO. East Lothian Council published the Musselburgh Air Quality Action Plan in February 2017. The AQAP outlines 13 short medium- and longer-term measures to be implemented to improve air quality within the AQMA and throughout the County in general.

East Lothian Council have carried out a Detailed Assessment of Air Quality in Musselburgh (Ref 14) and the results confirm that there were no exceedances of any AQO within the AQMA since 2016 and also concludes that future exceedances are unlikely. As such, East Lothian Council is in the process of revoking the AQMA with this expected to be completed during Spring 2025.

In February 2022 East Lothian Council also commenced monitoring of PM_{2.5} at the automatic monitoring site in Musselburgh. This is in addition to existing automatic monitoring at the site of PM₁₀ and NO₂.

Local Priorities and Challenges

Some of the mitigation measures outlined in the AQAP continue to be very challenging (both financially and technically) to implement and sustain. In particular the development and implementation of the Local Transport Strategy in conjunction with the Local

Development Plan will be key to managing air quality. The proposed transport mitigation measures set out in the LDP are anticipated to help improve Air Quality within the Musselburgh AQMA and beyond.

Assessing the impact of the Covid 19 pandemic as we move into the recovery phase and beyond, continues to be challenging due to a potential lack of public confidence in using public transport aligned with increased working from home and reduced traffic journeys by commuters.

How to Get Involved

Further information on Air Quality within East Lothian, including access to annual air quality reports, can be obtained from the Council's App or website at:

[Air quality | Pollution | East Lothian Council](#)

Information on local and national Air Quality, including access to real-time data and maps can be obtained from the Air Quality in Scotland website at: [Home page | Scottish Air Quality](#)

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1 Local Air Quality Management

This report provides an overview of air quality in East Lothian during 2023. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

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

Table 1.1 – Summary of Air Quality Objectives in Scotland

Pollutant	Air Quality Objective Concentration	Air Quality Objective Measured as	Date to be Achieved by
Nitrogen dioxide (NO ₂)	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
Nitrogen dioxide (NO ₂)	40 µg/m ³	Annual mean	31.12.2005
Particulate Matter (PM ₁₀)	50 µg/m ³ , not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
Particulate Matter (PM ₁₀)	18 µg/m ³	Annual mean	31.12.2010
Particulate Matter (PM _{2.5})	10 µg/m ³	Annual mean	31.12.2021
Sulphur dioxide (SO ₂)	350 µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
Sulphur dioxide (SO ₂)	125 µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
Sulphur dioxide (SO ₂)	266 µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005
Benzene	3.25 µg/m ³	Running annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m ³	Running annual mean	31.12.2003
Carbon Monoxide	10.0 mg/m ³	Running 8-Hour mean	31.12.2003

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

A summary of AQMAs declared by East Lothian Council can be found in Table 2.1. Further information related to declared or revoked AQMAs, including maps of AQMA boundaries are available online at [Air quality | Pollution | East Lothian Council](https://www.eastlothian.gov.uk/pollution/air-quality).

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Pollutants and Air Quality Objectives	City / Town	Description	Action Plan
High Street Musselburgh	NO ₂ Annual Mean	Musselburgh	High Street Musselburgh (A199) from its junction with Newbiggin and extending westwards to the junction with Bridge Street and Mall Avenue.	https://www.eastlothian.gov.uk/downloads/file/23473/air_quality_action_plan_2017

2.2 Cleaner Air for Scotland 2

Cleaner Air for Scotland 2 – Towards a Better Place for Everyone (CAFS2) is Scotland's second air quality strategy. CAFS2 sets out how the Scottish Government and its partner organisations propose to further reduce air pollution to protect human health and fulfil Scotland's legal responsibilities over the period 2021 – 2026. CAFS2 was published in July 2021 and replaces Cleaner Air for Scotland – The Road to a Healthier Future (CAFS), which was published in 2015. CAFS2 aims to achieve the ambitious vision for Scotland "to have the best air quality in Europe". A series of actions across a range of policy areas are outlined, a summary of which is available on the Scottish Government's website.

Progress by East Lothian Council against relevant actions for which local authorities are the lead delivery bodies within this strategy is demonstrated below.

2.2.1 Placemaking – Plans and Policies

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

2.2.2 Climate Change and Air Quality

East Lothian Council's Climate Change Strategy 2020–2025 (Ref 21) was approved by Cabinet in January 2020. The Climate Change Strategy sets out the Council's commitment to tackling the Climate Emergency at a local level with the vision and overall aims for a 'Net Zero Council' and a 'Carbon Neutral East Lothian'. The strategy was developed with an extensive consultation process, including input from the Council's Climate Change Planning & Monitoring Group (which includes the Senior Environmental Health & Public Protection Officer with responsibility for Air Quality Management) and two rounds of public consultation. This included public drop-in consultation events, which were also an opportunity for awareness-raising and engagement on ways to reduce carbon emissions and promote a more sustainable lifestyle.

One of the seven key Outcomes set out in the Council's Climate Change Strategy is: "Active Travel and Sustainable Transport are used for everyday journeys, to drastically cut

emissions from transport and improve air quality”, with the ambition and targets to: “Ensure that East Lothian has well-connected, healthy, active communities with improved air quality, where active travel and sustainable transport modes are the norm to access local services and amenities”. This Outcome includes the specific Key Priority Area of “Improving Air Quality”, which sets out five actions that are annually updated to track progress. These actions are to:

Continue to improve air quality in Musselburgh’s Air Quality Management Area with traffic management solutions, active travel and public transport improvements, increased access to electric vehicle charging points and public awareness-raising campaigns;

Investigate collaborative working with City of Edinburgh Council to identify solutions to tackle traffic congestion and air quality in Musselburgh;

Reduce exposure to poor air quality through urban placemaking, including appropriate green network solutions such as hedges / use of landscaping to buffer emitting development;

Expand Air Quality awareness-raising campaign to end idling of vehicles; including promoting health and wellbeing implications of cleaner air. This will be achieved through:

- 1) Continue supporting the work of the East Central Scotland Vehicle Emissions Partnership to promote and raise awareness of air quality, particularly around our schools, and to deter idling vehicles, and
- 2) Promoting implications for long-term health and wellbeing, contribution to Placemaking, reducing social isolation and reducing inequalities through reduced reliance on cars.

The Climate Change Strategy also promotes active travel (walking/cycling) and sustainable transport (e.g. electric vehicles; taking the bus or train), particularly for shorter journeys. The strategy aims to encourage behaviour change towards active and sustainable travel, which will help to reduce traffic-related air pollution (as well as wider benefits including contributing to reducing the carbon emissions that cause global warming, and improving health, wellbeing and physical activity levels).

2.2.3 Planning Policy and Air Quality

The East Lothian Local Development Plan 2018 (Ref 19) was adopted on the 27th of September 2018. The Local Development Plan 2018 used a compact spatial strategy to allocate land for over 10,000 new homes and land for new employment in East Lothian. This primarily involved the expansion of existing settlements in order to deliver the level of growth as sustainably as possible. Where possible, existing infrastructure such as transport, utilities and education facilities were upgraded to accommodate this growth. In some areas new infrastructure was required. The majority of these new homes and infrastructure are either completed, are under construction, or have live planning consents. Improvements to existing transport infrastructure are also being made which will assist with improving air quality and reductions in private car journeys. A new rail station at East Linton opened in December 2023. The project, which also includes car parking, EV charging points and a bus stop, was part of PROP T12 of the current LDP. Work has been completed at the Old Craighall junction of the A1 as part of improvement set out in PROP T15. Furthermore, the Segregated Active Travel Corridor (SATC) continues to be constructed as part of PROP T3. Increased cycle parking at railway stations is also being introduced. Further consultation events on Musselburgh Active Toun proposals took place in October and November 2024 and more information on this project is available here [Musselburgh Active Toun](#) . Once implemented, this project will see improvements to the cycling and walking network in East Lothian's largest town. Policy T30 set out proposals for 20mph limits in towns, and this has also been rolled out across the county. As part of policy T31, the electric vehicle charging network is being expanded, as well as the implementation of journey hubs, all contributing to reducing greenhouse gas emissions and improving air quality.

Policies in the LDP 2018 set out how new development must contribute towards sustainable growth, and also how the social, economic and environmental impacts are managed. In relation to air quality and environmental impacts, policy NH12 is used to manage the effects of new development and sets out when an Air Quality Assessment would be required in support of a proposal. Policies relating to development location and transport impact (T1 and T2) as well as design policies (DP2, DP3 and DP4) assist with decision making on new development proposals and their impacts upon air quality.

Supplementary Guidance (SG) provides more detailed and location specific measures on how the LDP 2018 strategies would be delivered and how policies would be applied. This included the Town Centre Strategies SG which seeks to encourage less vehicle use within town centres, more public transport use, and more walking and cycling, all of which contribute to better air quality. The Developer Contributions Framework SG set out the type of contributions that developers would be required to provide as part of new development in order to ensure both residential only sites and mixed-use sites have access to facilities. This reduces the need to travel therefore reducing environmental impacts and improving air quality.

Supplementary Planning Guidance further expands upon specific policy areas or strategies of the LDP 2018. This includes the Green Network Strategy SPG which provides guidance on how to connect parts of East Lothian via walking and cycling routes, reducing car travel and emissions. The Design Standards for New Housing Areas SPG places the movement and experiences of people at the top of the design agenda and sets out criteria for designing new development to provide easy walking routes, access to open space, improving health and wellbeing through better air quality, reducing levels of noise, and managing the effects of climate change. It also encourages electric vehicle charging in new developments to reduce carbon emissions.

East Lothian has one air quality management area (AQMA) at Musselburgh High Street which is in the process of being revoked. This, together with other parts of the county, are continually monitored. The LDP 2018 contains proposals (PROP T19, T20 and T21) setting out a range of improvements to improve air quality in this AQMA. The annual air quality progress report provides the latest figures and shows how Musselburgh High Street and other areas are performing. The results of this report are used to inform policy planning.

Following the introduction of the Planning (Scotland) Act 2019 (Ref 20), the Scottish Parliament approved a National Planning Framework 4 (NPF4). The NPF4 is part of the development plan and includes national policy. East Lothian has started the early stages of reviewing the LDP 2018 and preparing the next LDP under the new development planning system set out in the 2019 Act. The first stage of the LDP process is the production of an Evidence Report which will then lead to a draft LDP2. The Evidence Report must contain information on the issues set out in the 2019 Act. Preparation of the

Evidence Report took place in 2023 and 2024 and to facilitate this process the Council undertook a public engagement exercise to gather the views of the communities and other interested groups ([Evidence Report engagement | LDP2 and Local Place Plans | East Lothian Council](#)). East Lothian Council approved the Evidence Report at its meeting on 27th of August 2024 ([Agendas, reports and minutes | East Lothian Council](#)).

East Lothian has grown quite significantly in the last 5-10 years, and the Evidence Report captures a baseline in terms of the social, economic and environmental position that will help us to look to the future and consider future policies and proposals of the next Local Development Plan. Amongst other things the Council will look at areas that may be constrained in terms of air quality and what could be done to improve areas that are not performing well. An overall strategy will emerge from the information gathered and engagement undertaken. Once the Evidence Report has passed the gate check procedure, LDP2 can be prepared. The LDP2 will then set out a clear long-term direction in terms of growth, investment and change. There will be further extensive engagement carried out during the preparation of LDP2 during the summer and autumn of 2025. We will continue use tools such as the Place Standard Tool in order to help us to ascertain public opinions on their area and how and where improvements can be made. This is particularly important for the place-making aspects of LDP2, with a focus on improvements at a local level. Air quality plays a key part of this as it affects people's health and their ability to use and enjoy their environment. We hope we will be able to gather information on air quality using this approach and this will feed into policies aiming to achieve a range of localised improvements.

East Lothian contributed towards the preparation of an Indicative Regional Spatial Strategy (RSS). The RSS is a high-level strategic planning document prepared jointly for regions of Scotland. East Lothian remains in the defined southeast region, and jointly contributed towards the RSS with other authorities (Edinburgh, Midlothian, West Lothian and Fife).

The Regional Spatial Strategy ([iRSS+final+.pdf \(squarespace.com\)](#)) provides a long-term strategic approach to planning across south east Scotland. It focuses on environmental and climate issues primarily and how to continue to support southeast Scotland in terms of sustainable growth. Air quality is linked closely with various aspects of spatial planning

including regional aspirations for improvements to health, transport, employment, construction and materials.

East Lothian Council will continue to work both at the local and regional levels of development planning to continually improve air quality in the short and longer term, and will work closely with the public, landowners, businesses, and regulatory bodies on effective strategies to support this on small and large scale projects and development proposals.

2.2.4 Transport – Low Emission Zones

Local authorities working with Transport Scotland and SEPA will look at opportunities to promote zero-carbon city centres within the existing LEZ structure.

East Lothian has no Low Emission Zone within the Local Authority area.

East Lothian Council has a Local transport Strategy (LTS) that outlines a range of problems and issues affecting Transport in East Lothian. To support the delivery of the LTS and address the identified problems & Issues a series of 4 main action plans have been developed. These include:

- Active Travel Improvement Plan
- Parking Management Strategy
- Road Asset Management Plan
- Road Safety Plan

One of the key proposals to improve air quality is the creation of Journey Hubs. The proposed new housing developments in both East Lothian and the surrounding area will only mean increased demand on the transport network.

Thirty-four locations for Journey Hubs have been identified with the aim of making it easier for commuters, students and tourists to travel more actively. As well as being able to hire bikes, advice on routes, public transport options and local points of interest can be highlighted. Switching shorter car journeys to active travel options will result in carbon savings and local air quality improvements. Brompton Bikes, supported by SEStran and East Lothian Council, have recently introduced a local bike hire scheme.

Using external funding, East Lothian Council has, for the past five years, employed a Behavioural Change Officer to encourage alternative transport modes in particular active travel.

2.2.5 EV Infrastructure

As well as offering significant environmental benefits - less air pollution, less noise, lower CO₂ emissions - electric vehicles can save you money. To support the public in making the switch to electric power, East Lothian Council provides a reliable network of around 400 chargers including:

- High-power Journey chargers (>50kW) located just off the A1 at Wallyford Journey Hub, suitable for cars with trailers (including caravans) and vehicles up to 12m long.
- Journey chargers (43-50kW) in all of our larger towns, for quick top-ups when needed.
- Destination chargers in towns and at community centres providing unrestricted overnight parking and up to four hours during the day, for affordable charging close to home.
- On-street bollard-style chargers with no associated parking bays - the space can be occupied by any vehicle, whether or not it's electric. These are being installed in areas where properties tend not to have driveways.
- multiple chargers with all-day unrestricted parking in long-stay car parks
- workplace chargers for council staff and visitors at many buildings
- chargers for our own pool vehicles and works vans as we increasingly electrify our fleet.

2.3 Implementation of Air Quality Action Plan(s) and/or measures to address air quality

In order to ensure that local authorities implement the measures within an action plan by the timescales stated within that plan, the Scottish Government expects authorities to submit updates on progress through the APR process. East Lothian has taken forward a number of measures within the action plan during the current reporting year of 2023 in pursuit of improving local air quality and meeting the air quality objectives within the shortest possible time. Details of all measures completed, in progress or planned are set out in

Table 2.2 Table 2.2. More detail on these measures can be found in the air quality Action Plan.

Key completed measures for this reporting year are:

Improving Links with Local Transport Strategy (Measure No 1) – The development of the Local Transport Strategy (Ref 24) was deferred because of the delay in determining the exact nature of the interventions associated with the LDP. To identify these interventions SIAS were commissioned to build a micro-simulation (S-paramics) model of the strategic and local road network to form a 2012 base and predict cumulative traffic impacts on the strategic and local road network having regard to future development of the preferred sites identified in the LDP. The micro-simulation traffic modelling work is now complete and East Lothian Council consulted on the LTS in conjunction with its Strategic environmental assessment. The Local Transport Strategy (LTS) and associated action plans were adopted by Council on 30th October 2018. At Council on 28th June approval to consult on the introduction of parking charges and associated parking mitigation was given with a goal to report back on public engagement in winter 2023. As part of wider considerations, as means to reduce unnecessary vehicular traffic, tackle climate change and contribute to improvements to health and well-being, a refresh of the Local Transport Strategy would run concurrently with the parking review and introduction of measures.

On 22 February 2022, East Lothian Council endorsed the draft Regional Transport Strategy, which is developed to provide a strategic framework for transport interventions across the region, to drive forward strategic objectives to transition to a post carbon, sustainable transport system, facilitate healthier travel, improve connectivity and access, and support safe, efficient movement of people and freight.

The East Lothian Access Study 2: Preliminary Options Appraisal is narrowing down over 40 Transport Planning Objective (TPO) options from the 'Case for Change' report into around a dozen more concrete proposals which were consulted on in 2021.

Due to funding uncertainty, there has been a 6-month hiatus on project delivery. Feedback from Transport Scotland following a review of the preliminary and detailed appraisal has questioned the case for change made in 2020. Accordingly, the TPO's are being reviewed and evidence examined as to whether the problems identified then currently exist now following the pandemic. Included will be further testing of high low scenarios in line with

Government policy and the packaging of interventions, all within the programme being accelerated to meet the fund closing on the 29th of March 2024.

Separate, but intricately linked, work to develop models to inform LDP2 evidence report has started and will be available by the end of the year. In association, testing of timeframe, and sequencing when LDP1 interventions is also ongoing to understand the changing demand and when adaptation of the road network is necessary.

Improving Links with Local Development Plan (Measure No 2) – Refer to Section 2.2.3 above.

Bus Stop Relocations on High Street, Musselburgh (Measure No 3) - The local network Musselburgh town centre mitigations tested within the Musselburgh and Tranent Traffic Model (MTTM) for the High Street are:

- Adjusting the eastbound lane arrangement for Mall Avenue at the A199 High Street/ Bridge Street junction.
- Consolidation of pedestrian crossings between Bridge Street and Kilwinning Street.
- Moving westbound bus lay-by into car parking spaces and further back from the Bridge Street junction to remove the traffic obstruction on the High Street.
- Extending the eastbound bus lay-by to remove bus dwell obstruction on the High Street before Shorthope Street
- Adding a bus lay-by westbound on the A199 Linkfield road opposite Loretto School
- A right turn on the High Street for Kilwinning street.

The timing of these measures is currently unknown but will include new signalised junctions and re-signalisation of junctions. Following an initial consultation in 2018 to examine options to future proof Musselburgh's infrastructure for sustainable modes of travel, East Lothian Council instructed AECOM to undertake phase 2 of the project to develop visualisations to test public acceptability and encourage engagement. It is anticipated further consultation will commence late autumn. To progress scheme development, East Lothian Council has bid into Sustrans paths for everyone and hope to receive confirmation that the bid has been successful shortly. The project plan will look

to deliver comprehensive re-allocation of street space over a 5-year period, subject to funding. Further feasibility and preliminary design work being carried out now.

Work has been undertaken through the Bus Priority rapid deployment fund in response to covid to increase patronage, reliability and speed up services. In Musselburgh the bus stops on the High Street have been split to avoid bus queuing and unnecessary delays. As advised above, additional funding has been received to investigate additional measures to improve bus journey times. These measures with the ongoing, Musselburgh active town are designed to improve pedestrian accessibility, access and active and sustainable transport. The measures are now embedded and working well.

Enforcement of idling provisions of the Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003 (Measure No 4) - East Lothian Council Road Services have had discussions with NSL Ltd, who provide the Parking Attendant Service within the County, and are exploring the technicalities of them taking on this role. To alleviate the effect of indiscriminate parking at the eastbound bus stop on the High Street during peak hour traffic, a parking attendant has been instructed to monitor and take appropriate action to keep traffic moving.

Eco Stars Fleet Recognition Scheme (Measure No 6) – East Lothian Council secured funding from the Scottish Government and, in February 2017, formally launched an Eco Stars Fleet Recognition Scheme within East Lothian. The scheme provides recognition for best operational practices and guidance for making improvements to fleet operators with the ultimate aim of reducing fuel consumption and reduced emissions. The Council's own fleet, together with Commercial Fleet Operators will be encouraged to engage with the scheme which will have a positive impact on emissions, including within the AQMA in Musselburgh High Street. East Lothian Council are members of the scheme and are proud to have been awarded a 5 Star rating. The table below shows how the scheme has grown annually since 2017 until November 2024:

YEAR	NUMBER OF MEMBERS	NUMBER OF VEHICLES
2017	114	5600
2018	141	6607
2019	170	6980

YEAR	NUMBER OF MEMBERS	NUMBER OF VEHICLES
2020	205	7524
2021	219	7806
2022	222	7919
2023	247	8836
2024	262	9208

Funding has been secured from the Scottish Government to allow the scheme to continue to operate and expand through 2023/24.

SCOOT Traffic Management System (Measure No 7) – Funding remains in place to upgrade the SCOOT system and integrate new signalised junctions into the system. A 5-year project to future proof Musselburgh infrastructure for sustainable modes is underway. East Lothian Council have applied for funding with Sustrans, a UK Sustainable Transport Charity, to develop this project. This project will examine the performance of all transport networks to accommodate significant modal shift to active travel. A review of all SCOOT arrangements will be considered in the context of this work. Therefore no material change. Further feasibility and preliminary design work being carried out now.

Application to the Bus Partnership fund has secured £3.3m over the next 2-3 year through Edinburgh South East Scotland City Region Deal to introduce bus journey time improvements. This combined with the above interventions will examine potential UTC and AVL technologies to prioritise public transport.

AQMA Signage (Measure No 9) – East Lothian Council commissioned a City Tree within the AQMA in Musselburgh during late Summer of 2018. As well as providing the locus for the Tree, the structure also contains signage and information on Air Quality. The tree had to be removed in Autumn 2019 due to problems with the irrigation system.

The East Central Scotland Vehicle Emissions Partnership (Measure No 10) – East Lothian Council works in partnership with Midlothian, West Lothian, Falkirk and, since 2019, Stirling Councils with a common aim of raising awareness of vehicle emissions and impacts on air quality amongst the general public. The partnership also investigates complaints of idling and provides an educational element to increasing awareness of air

quality impacts from road traffic. Further information on the work of the Partnership can be obtained at the following link: [Home - Switch off and Breathe](#)

Provision of Information regarding Air Quality and Travel Options (Measure No 13) –

Information on Air Quality within East Lothian, including access to annual air quality reports, can be obtained from the Council's App or website at: [Air quality | Pollution | East Lothian Council](#)

Progress on the following measures has been slower than expected due to lack of commitment from stakeholders or need for issue to be considered as part of a regional strategy.

Electrification of Lothian Buses in Musselburgh (Measure No 5) – Due to a lack of commitment from relevant stakeholders regarding funding this project may not be taken forward. Other funding avenues are being explored.

Longer Trains and platforms at Musselburgh Rail Station (Measure No 8) –Developer contributions are being collected through the planning process and individual agreements entered into with Network Rail. Longer platforms are required because longer train sets are needed to accommodate the predicted increased patronage. The platforms are only needed close to full build out of all committed and LDP allocations. It is unlikely this will be delivered until CP7. (2024-2029) Further work is being undertaken through the STAG (Scottish Transport Appraisal Group) East Lothian Access strategy working with Transport Scotland rail branch and Network rail to increase capacity on the ECML and North Berwick branch line. This intervention is being considered as part of the wider STAG appraisal working ongoing at this time.

As per the STAG appraisal above, the problems and opportunities are being re-examined as to whether the demand on services currently exists. Evidence to date intimates existing trains have sufficient capacity, as peak hour demand has not returned, however, other variables are in play which may be diminishing demand, still to return. A full analysis and recommendation of future rail requirements will be identified on completion of the appraisal. The appraisal is with Transport Scotland for feedback.

Development of Green Travel Plans (Measure No 11) and Promotion of Cycling and Walking (Measure 12)

A part-time i-bike officer has been employed through Smarter choices smarter places fund. Engagement with schools is ongoing. The Workforce Mobility Project is conducting a study of journey hubs and the outcome will feed into work carried out by our Behavioural Change officer to move travellers from private cars into sustainable and active modes of travel. Green Travel plans are being developed within the council and with other major employers in East Lothian.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
1	Improving Links with Local Transport Strategy	Transport planning and infrastructure	Ongoing	Completed	N/A	N/A	Work has been undertaken through the Bus Priority rapid deployment fund in response to Covid to increase patronage, reliability and speed up services. In Musselburgh the bus stops on the High Street have been split to avoid bus queuing and unnecessary delays. As advised above, additional funding has been received to investigate	N/A

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							additional measures to improve bus journey times. These measures with the ongoing, Musselburgh Active Toun are designed to improve pedestrian accessibility, access and active and sustainable transport. The measures are now embedded and working well.	
2	Improving Links with Local Development Plan	Policy Guidance and Development Control	Completed Sep 2018 (ongoing)	N/A	N/A	N/A	To alleviate the effect of indiscriminate parking at the eastbound bus	N/A

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							stop on the High Street during peak hour traffic, a parking attendant has been instructed to monitor and take appropriate action to keep traffic moving.	
3	Bus Stop Relocations on High Street, Musselburgh	Traffic Management	Ongoing	N/A	N/A	N/A	Due to a lack of commitment from relevant stakeholders regarding funding this project may not be taken forward. Other funding avenues are being explored.	N/A

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
4	Enforcement of idling provisions of the Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003	Traffic Management	Ongoing	N/A	N/A	N/A	East Lothian Council formally launched an Eco Stars Fleet Recognition Scheme within East Lothian in February 2017. The scheme provides recognition for best operational practices and guidance for making improvements to fleet operators with the ultimate aim of reducing fuel consumption and reduced emissions. East Lothian Council are members of the scheme and	NA/

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							are proud to have been awarded a 5-star rating. The scheme now has 247 members incorporating 8846 vehicles. Funding has been secured from the Scottish Government to allow the scheme to continue to operate and expand through 2023/24.	
5	Electrification of Lothian Buses in Musselburgh	Promoting Low Emission Transport	Unknown	N/A	N/A	N/A	Due to a lack of commitment from relevant stakeholders regarding funding this project may not be taken forward. Other funding avenues	N/A

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							are being explored.	
6	Eco Stars Fleet Recognition Scheme	Vehicle Fleet Efficiency	Established Feb 2017 (ongoing)	N/A	N/A	N/A	It is unlikely this will be delivered until CP7. (2024-2029) Further work is being undertaken through the STAG (Scottish Transport Appraisal Group) East Lothian Access strategy working with Transport Scotland rail branch and Network rail to increase capacity on the ECML and North Berwick branch line. This intervention is	N/A

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							being considered as part of the wider STAG appraisal working ongoing at this time. As per the STAG appraisal, the problems and opportunities are being re-examined as to whether the demand on services currently exists. Evidence to date intimates existing trains have sufficient capacity, as peak hour demand has not returned, however, other variables are in play which may be diminishing demand, still to	

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							return. A full analysis and recommendation of future rail requirements will be identified on completion of the appraisal.	
7	SCOOT Traffic Management System	Traffic Management	Ongoing	N/A	N/A	N/A	East Lothian Council commissioned a City Tree within the AQMA in Musselburgh during late Summer of 2018. As well as providing the locus for the Tree, the structure also contains signage and information on Air Quality. The tree had to be	N/A

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							removed in Autumn 2019 due to problems with the irrigation system.	
8	Longer Trains and platforms at Musselburgh Rail Station	Transport planning and infrastructure		N/A	N/A	N/A	The partnership has secured funding to continue through 2023/24 and was expanded further when Stirling Council became a partner authority in 2019.	N/A
9	AQMA Signage	Public Information	Completed Sep 2018 (ongoing)	N/A	N/A	N/A	The Smarter Choices, Smarter Places (SCSP) Programme is a Paths for All grant scheme to support behaviour change initiatives to increase active	N/A

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							and sustainable travel. The programme is funded through Transport Scotland (Sustainable Transport team) and aims to make walking and cycling a mode of choice for short local journeys in our towns, cities and villages. It also encourages other forms of sustainable choices such as public transport use and car share. This will help to cut Scotland's carbon emissions and improve our air quality. It will help	

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							reverse the trend towards sedentary lifestyles and will tackle health inequalities. East Lothian Council receives funding through the scheme and in 2019/20 will engage a behavioural change officer to work with communities, groups and organisations to encourage greener, more active travel options. The Council also bid to run a 'beat the streets' game to foster greater	

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							<p>belief in walking and cycling through community participation interacting in a socially interactive game. The beat the streets project has concluded. A final report is being prepared to inform readers of the level of success achieved and legacy projects. Due to the impact of covid, the report was not formally registered or recognised as a successful trial. Further consideration will be given to continuation of the</p>	

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							programme in other Area partnerships at a later date. A i-bike officer and improved messaging on active sustainable travel options is being prepared. A part-time i-bike officer has been employed through Smarter choices smarter places fund. Engagement with schools is ongoing. The Workforce Mobility Project is conducting a study of journey hubs and the outcome will feed into work carried out by our	

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							Behavioural Change officer to move travellers from private cars into sustainable and active modes of travel. Green Travel plans are being developed within the council and with other major employers in East Lothian.	
10	The East Central Scotland Vehicle Emissions Partnership	Public Information	Completed 2003 (ongoing)	N/A	N/A	N/A	Refer to Measure 11 above	N/A
11	Development of Green Travel Plans	Promoting Travel Alternatives	Ongoing	N/A	N/A	N/A	Information on Air Quality within East Lothian, including access to annual air quality reports, can be obtained	N/A

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							from the Council's App or website at: Air quality Pollution East Lothian Council	
12	Promotion of cycling and walking	Promoting Travel Alternatives	Ongoing	N/A	N/A	N/A	Work has been undertaken through the Bus Priority rapid deployment fund in response to Covid to increase patronage, reliability and speed up services. In Musselburgh the bus stops on the High Street have been split to avoid bus queuing and unnecessary delays. As advised above, additional funding has been	N/A

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
							received to investigate additional measures to improve bus journey times. These measures with the ongoing, Musselburgh Active Toun are designed to improve pedestrian accessibility, access and active and sustainable transport. The measures are now embedded and working well.	
13	Provision of Information regarding Air	Public Information	Completed 2008 (ongoing)	N/A	N/A	N/A	To alleviate the effect of indiscriminate	N/A

Measure No.	Measure	Category	Expected/Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
	Quality and Travel Options						parking at the eastbound bus stop on the High Street during peak hour traffic, a parking attendant has been instructed to monitor and take appropriate action to keep traffic moving.	

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

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

East Lothian Council undertook automatic (continuous) monitoring at 1 site during 2023. Table A.1 in Appendix A shows the details of the sites. National monitoring results are available at [Home page | Scottish Air Quality](#).

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

3.1.2 Non-Automatic Monitoring Sites

East Lothian Council undertook non- automatic (passive) monitoring of NO₂ at 25 sites during 2023. Table A.2 in Appendix A shows the details of the sites.

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

3.1.3 Other Monitoring Activities

East Lothian Council were advised by Ricardo on 12th January 2024 that NO₂ data collected by the automatic monitor after 20th June 2023 onwards had to be nullified. This was a result of LSO calibrations not being carried out due to lack of gas from the supplier BOC and a replacement PMT being required for the analyser. Going forward, LSO calibrations will be performed wherever possible to avoid further data losses.

East Lothian Council were informed by Ricardo on 7th October 2022 of a potential zero scaling issue with the ET BAM 1020 Beta-attenuation PM_{2.5} particulate analyser. Further

testing revealed an issue with the HEPA filter. This was not resolved until early 2023, therefor resulting in an absence of monitoring data prior to 27th February 2023.

3.2 Individual Pollutants

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

3.2.1 Nitrogen Dioxide (NO₂)

Table A.3 in Appendix A compares the ratified monitored NO₂ annual mean concentrations for the past five years with the air quality objective of 40 µg/m³ at automatic monitoring sites.

Table A.4 in Appendix A compares the adjusted monitored NO₂ annual mean concentrations for the past five years with the air quality objective of 40 µg/m³ at non automatic monitoring sites.

For diffusion tubes, the full 2023 dataset of monthly mean values is provided in Appendix B.

Figures 1, 2 and 3 below show the trends for diffusion tubes located within the AQMA on Musselburgh High Street, for tubes located elsewhere in Musselburgh and also throughout the local authority between 2019-2023.

There have been no exceedances of the Annual Mean NO₂ Objective recorded at any locations, including those locations within the AQMA, since 2016. The highest annual mean concentration recorded in 2023 was 32.7 µg/m³ at T31-69 High Street, Musselburgh. Details of ratified data for the automatic monitor for 2023 are provided in Appendix C.

There was a slight increase in NO₂ concentration between 2022 and 2023 at 15 of the 28 monitoring sites operated by East Lothian Council. However, there has been a general downward trend in annual mean NO₂ concentrations from 2019 to 2023 with 27 sites showing an improvement. This includes all sites located within Musselburgh High St AQMA.

Table A.5 in Appendix A compares the ratified continuous monitored NO₂ hourly mean concentrations for the past five years with the air quality objective of 200 µg/m³, not to be exceeded more than 18 times per year.

Figure 1- Diffusion Tubes in Musselburgh within AQMA 2019-2023

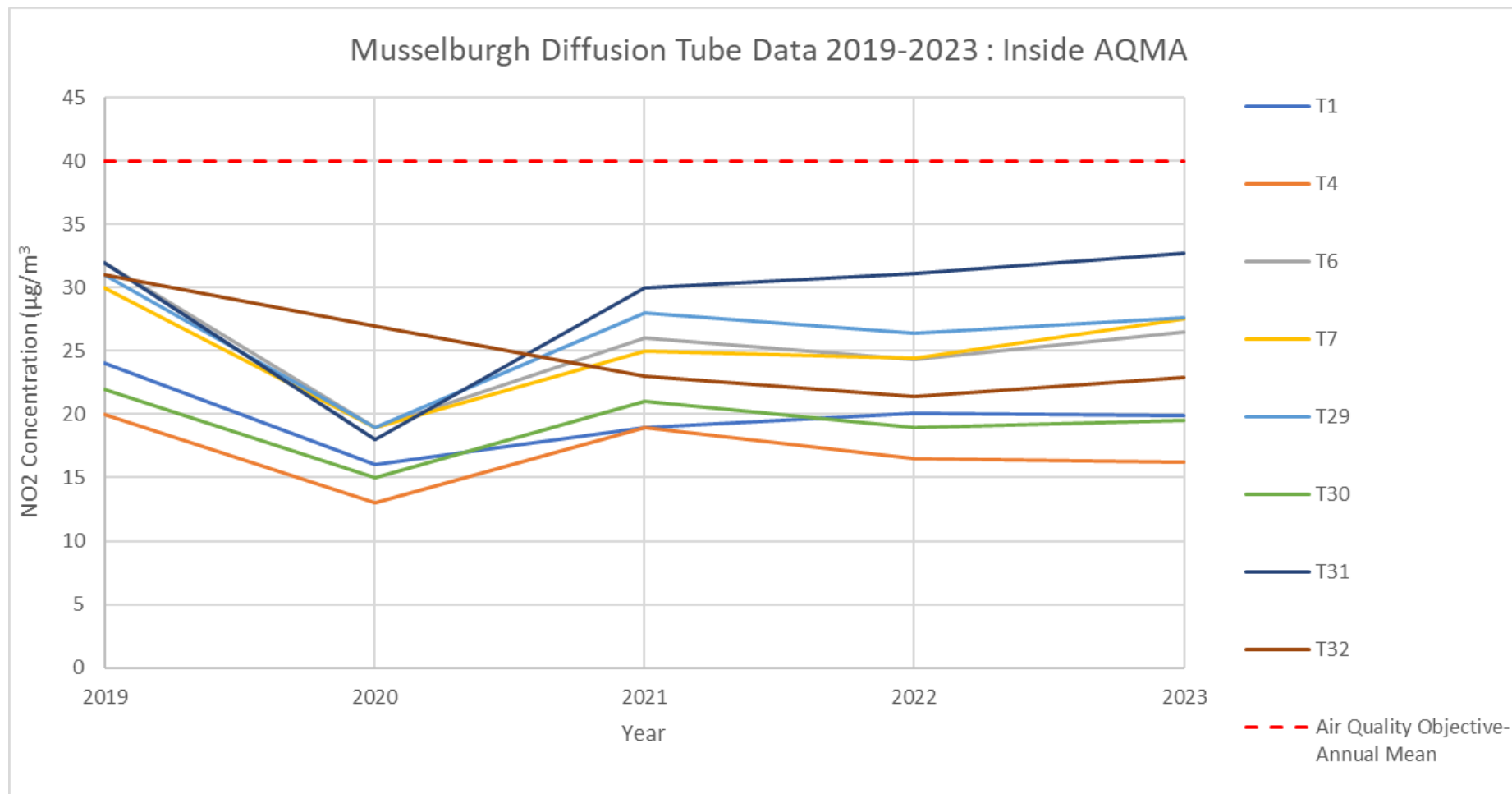


Figure 2- Diffusion Tubes in Musselburgh outside AQMA 2019-2023

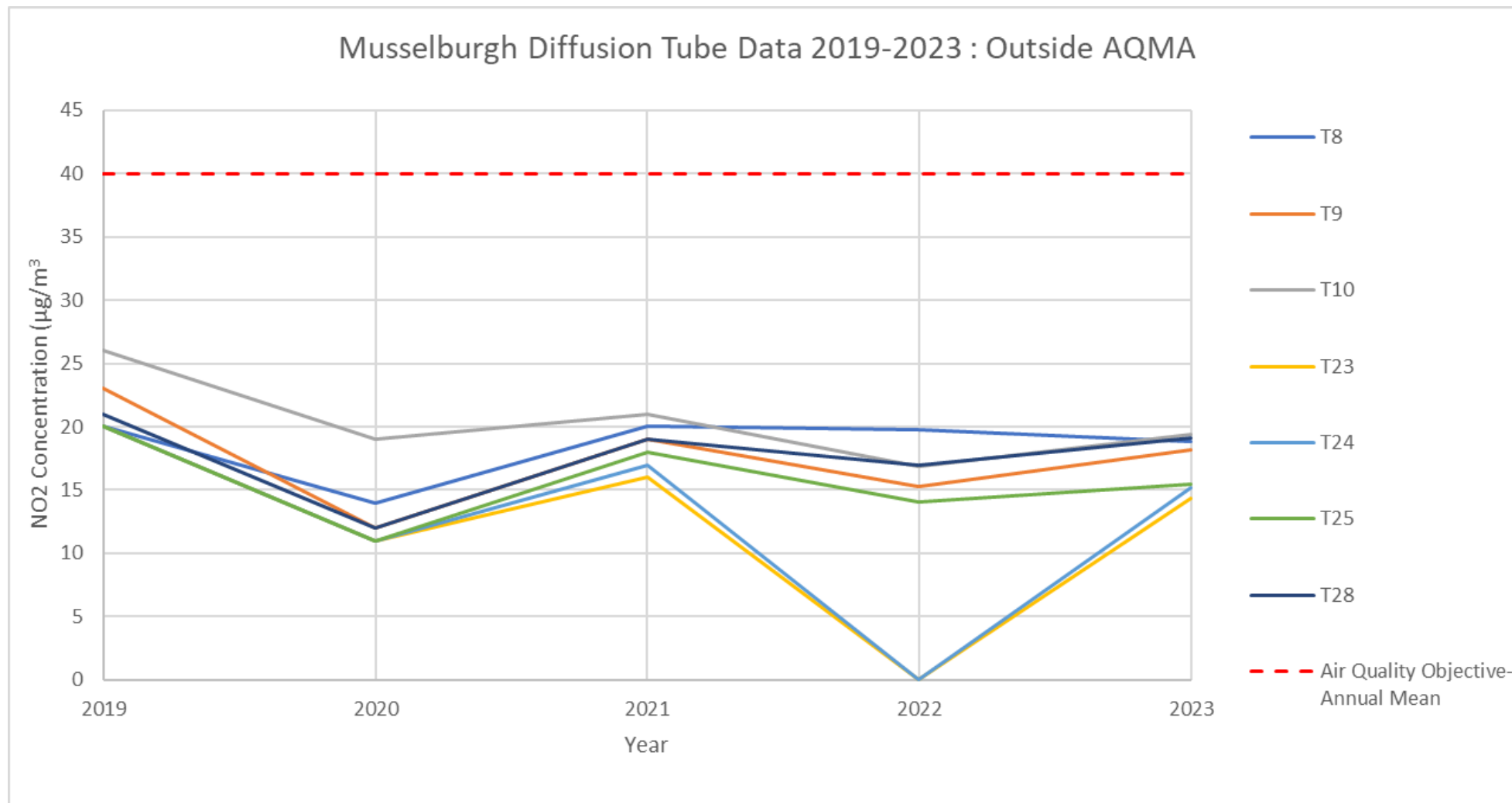
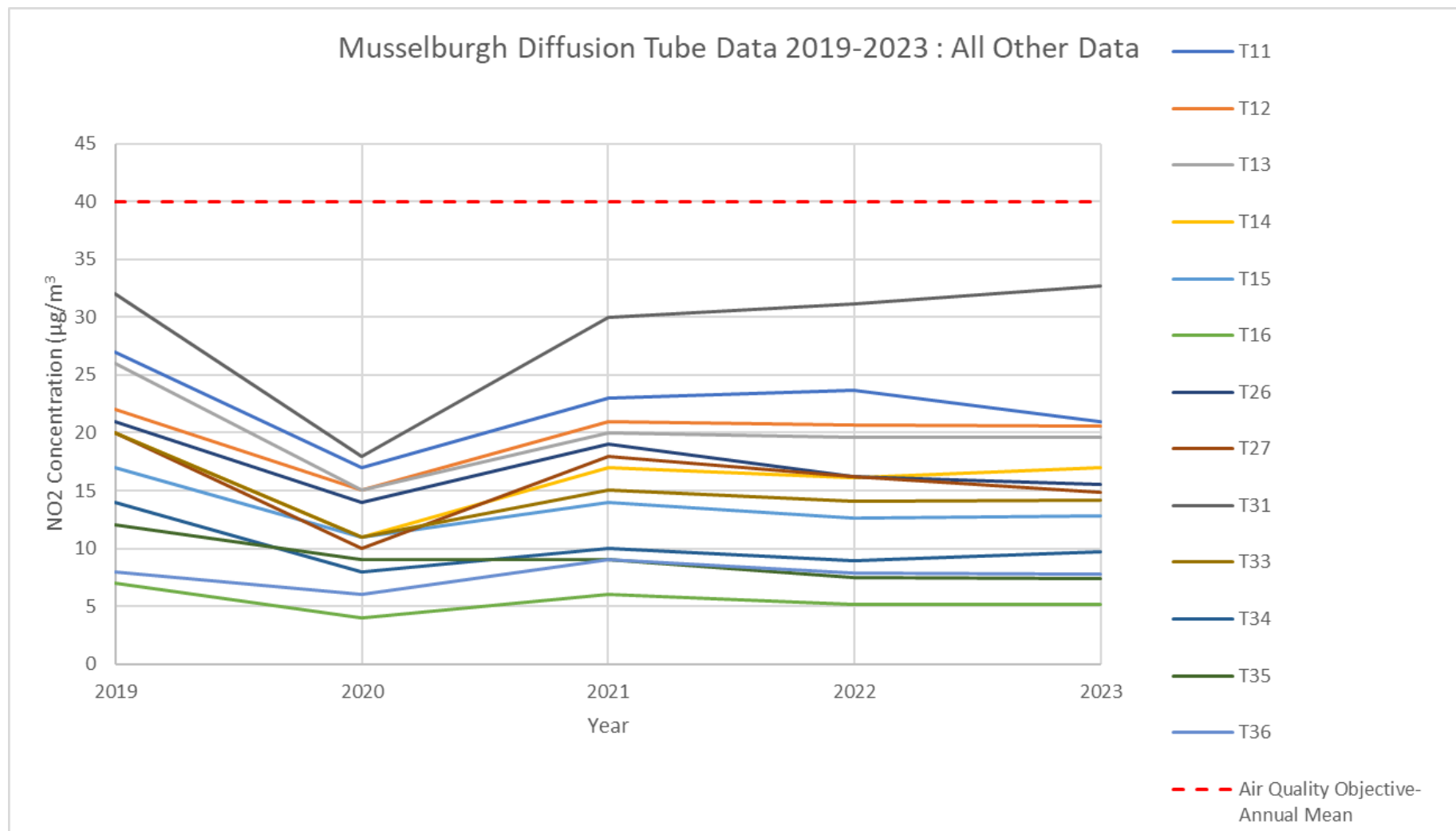


Figure 3- All other diffusion tube data 2019- 2023



3.2.2 Particulate Matter (PM₁₀)

Table A.6 in Appendix A compares the ratified and adjusted monitored PM₁₀ annual mean concentrations for the past five years with the air quality objective of 18 µg/m³.

Table A.7 in Appendix A compares the ratified continuous monitored PM₁₀ daily mean concentrations for the past five years with the air quality objective of 50 µg/m³, not to be exceeded more than seven times per year.

There has been a decrease in the average PM₁₀ concentration since 2022 with 2023 concentrations equivalent to those recorded during the Covid 19 Pandemic. There is an overall downward trend in concentrations from 2019 to 2023. The annual mean concentration did not exceed 18 µg/m³. Furthermore, there were no daily concentrations above 50 µg/m³ recorded meaning the short term objective for PM₁₀ concentration was met.

3.2.3 Particulate Matter (PM_{2.5})

Table A.8 in Appendix A compares the ratified and adjusted monitored PM_{2.5} annual mean concentrations for the past five years with the air quality objective of 10 µg/m³. This indicates that the annual average measured PM_{2.5} concentration of 6.9 µg/m³ is below the annual mean objective and has decreased slightly since 2022.

3.2.4 Sulphur Dioxide (SO₂)

East Lothian Council do not currently monitor Sulphur Dioxide (SO₂).

3.2.5 Carbon Monoxide, Lead and 1,3-Butadiene

East Lothian Council do not currently monitor Carbon Monoxide, Lead or 1,3-Butadiene.

4 New Local Developments

4.1 Road Traffic Sources

East Lothian Council can confirm that there are no new:

- Narrow, congested streets with residential properties close to the kerb
- Busy streets where people may spend one hour or more close to traffic
- Roads with a high flow of buses and/or HGVs
- Junctions
- New roads constructed or proposed
- Roads with significantly changed traffic flows
- Roads with new/ changed layout
- Bus or coach stations

since the 2023 Annual Progress Report.

4.2 Other Transport Sources

Since the 2023 Annual Progress Report East Lothian Council can confirm that there are no new:

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

4.3 Industrial Sources

Since the 2023 Annual Progress Report East Lothian Council can confirm that there are no new:

- **Industrial installations:** new or proposed installations for which an air quality impact assessment has been carried out

- **Industrial installations:** existing installations where emissions have increased substantially, or new relevant exposure has been introduced
- **Industrial installations:** new or significantly changed installations with no previous air quality impact assessment
- Major fuel storage depots storing petrol
- Petrol stations
- Poultry farms

4.4 Commercial and Domestic Sources

Since the 2023 Annual Progress Report East Lothian Council can confirm that there are no new:

- Biomass combustion plant -individual installations
- Areas where the combine impact of several biomass combustion sources may be relevant
- Areas where domestic solid fuel burning may be relevant
- Combined Heat and Power (CHP) plant

4.5 New Developments with Fugitive or Uncontrolled Sources

Since the 2023 Annual Progress Report East Lothian Council can confirm that there are no new:

- Landfill sites
- Quarries
- Unmade haulage roads on industrial sites
- Waste transfer stations etc
- Other potential sources of fugitive particulate emissions

5 Planning Applications

East Lothian Council can confirm that there have been no new consented major developments that would require an Air Quality Assessment since the 2023 Annual Progress Report.

6 Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

The monitoring data for the period 1/01/2023 to 31/12/2023 indicates there were no exceedances of any AQO's in East Lothian during 2023. Concentrations of Nitrogen Dioxide (NO₂) within the AQMA are significantly below the Annual Mean Air Quality Objective of 40µg/m³, with a maximum annual mean level of 32.7 µg/m³ recorded at T31 – 69 High Street, Musselburgh. This is in line with the findings of the the Detailed Assessment of Air Quality in Musselburgh (Ref 14) completed in September 2022.

Furthermore, there have been no recorded exceedances of any AQOs relating to PM₁₀ or PM_{2.5} concentrations in East Lothian during 2023.

6.2 Conclusions relating to New Local Developments

No new local developments are anticipated to have significant impact on local air quality that could result in any future breach of AQOs.

6.3 Proposed Actions

This report and monitoring results from 2023 confirm there are no exceedances of any AQOs for any pollutant during 2023 with the last exceedance recorded in 2016.

Furthermore, the Detailed Assessment (Ref 14) confirms that future exceedances of the NO₂ annual mean AQO are unlikely.

As such, East Lothian Council sought permission from the Scottish Government to revoke the Musselburgh AQMA, which was granted in December 2022. East Lothian Council are in the process of carrying out a consultation exercise with relevant stakeholders to seek their comments on the proposed revocation of the AQMA. A draft Revocation Report will be available to consultees as part of the revocation process. It is anticipated that the revocation of the AQMA will be completed by Spring 2025.

East Lothian Council shall continue to implement the measured outlines within the AQAP and also develop and publish policies which support CAFS2 throughout 2024 and beyond

and will report progress, including monitoring of PM_{2.5}, in the Annual Progress Report due in June 2025.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA? Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Inlet Height (m)
NO _x	Musselburgh North High Street - NO _x	Roadside	333941	672837	NO ₂	N	Gas Phase Chemiluminescent detection	5	3	1.5
PM ₁₀	Musselburgh North High Street – BAM	Roadside	333941	672837	PM ₁₀	N	ET BAM1020 Beta-attenuation PM ₁₀ particulate analyser	5	3	1.5
PM _{2.5}	Musselburgh North High Street – PM _{2.5}	Roadside	333941	672837	PM _{2.5}	N	ET BAM1020 Beta attenuation PM _{2.5} particulate analyser	5	3	1.5

Notes:

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

(2) N/A if not applicable.

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

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube co-located with a Continuous Analyser?
T1	Musselburgh - Newbigging/High Street Junction	Roadside	334659	672720	NO ₂	Y	15.0	2.0	No
T4	Musselburgh - 87 High Street	Roadside	334526	672700	NO ₂	Y	15.0	4.0	No
T6	Musselburgh - 147 High Street	Roadside	334392	672652	NO ₂	Y	15.0	2.0	No
T7	Musselburgh - 183 High Street (Day Centre)	Roadside	334301	672632	NO ₂	Y	15.0	4.0	No
T8	Musselburgh - Mall Avenue (Opposite Tesco)	Roadside	334172	672524	NO ₂	N	20.0	3.0	No
T9	Musselburgh - 45 Bridge Street	Roadside	334105	672750	NO ₂	N	20.0	3.0	No
T10	Musselburgh - 150 North High Street	Roadside	333800	672822	NO ₂	N	25.0	4.0	No
T11	Tranent - 89 High Street	Roadside	340686	672692	NO ₂	N	3.0	4.0	No
T12	Tranent - 82 High Street (Opposite chip shop)	Roadside	340738	672687	NO ₂	N	3.0	4.0	No
T13	Tranent - 55 High Street	Roadside	340608	672738	NO ₂	N	3.0	3.0	No
T14	Tranent - 26 High Street - opposite Post office	Roadside	340570	672780	NO ₂	N	4.0	3.0	No
T15	Tranent - 58 Bridge Street	Roadside	340112	672905	NO ₂	N	4.0	3.0	No
T16	Haddington - Lynlea	Urban	352249	673631	NO ₂	N	2.0	2.0	No
T23	Musselburgh 133 N. High Street -Co-located	Roadside	333941	672837	NO ₂	N	2.0	2.0	Yes
T24	Musselburgh 133 N. High Street -Co-located	Roadside	333941	672837	NO ₂	N	8.0	3.0	Yes
T25	Musselburgh 133 N. High Street -Co-located	Roadside	333941	672837	NO ₂	N	5.0	3.0	Yes
T26	Wallyford - 116 Salters Road	Roadside	336691	672055	NO ₂	N	5.0	3.0	No
T27	Wallyford - 71 Salters Road	Roadside	336769	672127	NO ₂	Y	5.0	3.0	No
T28	Musselburgh - 15 Bridge Street	Roadside	334164	672708	NO ₂	Y	5.0	2.0	No
T29	Musselburgh - 167 High Street	Roadside	334354	672643	NO ₂	Y	5.0	2.0	No
T30	Musselburgh - 137 High Street	Roadside	334427	672664	NO ₂	Y	5.0	3.0	No
T31	Musselburgh - 69 High Street	Roadside	334580	672713	NO ₂	N	5.0	3.0	No
T32	Musselburgh - 86 High Street	Roadside	334578	672695	NO ₂	N	5.0	3.0	No
T33	Haddington - 23 Hardgate	Roadside	351693	673998	NO ₂	N	5.0	3.0	No
T34	Haddington - 2 Bothwell Bank, Hardgate	Roadside	351702	674034	NO ₂	N	5.0	3.0	No
T35	North Berwick - Police Station, High St	Roadside	355339	685307	NO ₂	N	5.0	2.0	No
T36	North Berwick, 108 High St	Roadside	355186	685277	NO ₂	N	5.0	2.0	No

Table A.3 – Annual Mean NO₂ Monitoring Results: Automatic Monitoring (µg/m³)

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
NO _x	Musselburgh North High Street - NO _x	Roadside	99.8	46.8	20	15	16	14.5	17.1

Notes:

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in bold.

NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

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

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

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

Table A.4 – Annual Mean NO₂ Monitoring Results: Non-Automatic Monitoring (µg/m³)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2022 (%) ⁽²⁾	2019	2020	2021	2022	2023
T1	334659	672720	Roadside	100	100.0	24	16	19	20.1	19.9
T4	334526	672700	Roadside	100	100.0	20	13	19	16.5	16.2
T6	334392	672652	Roadside	92.3	92.3	32	19	26	24.3	26.5
T7	334301	672632	Roadside	100	100.0	30	19	25	24.4	27.5
T8	334172	672524	Roadside	100	100.0	20	14	20	19.8	18.8
T9	334105	672750	Roadside	100	100.0	23	12	19	15.3	18.2
T10	333800	672822	Roadside	100	100.0	26	19	21	16.9	19.4
T11	340686	672692	Roadside	100	100.0	27	17	23	23.7	21.0
T12	340738	672687	Roadside	100	100.0	22	15	21	20.7	20.6
T13	340608	672738	Roadside	100	100.0	26	15	20	19.6	19.6
T14	340570	672780	Roadside	100	100.0	20	11	17	16.1	17.0
T15	340112	672905	Roadside	90.4	90.4	17	11	14	12.6	12.8
T16	352249	673631	Urban	90.4	90.4	7	4	6	5.2	5.2
T23	333941	672837	Roadside	90.4	90.4	20	11	16	-	14.3
T24	333941	672837	Roadside	90.4	90.4	20	11	17	-	15.2
T25	333941	672837	Roadside	90.4	90.4	20	11	18	14.1	15.5
T26	336691	672055	Roadside	90.4	90.4	21	14	19	16.2	15.5
T27	336769	672127	Roadside	90.4	90.4	20	10	18	16.2	14.9
T28	334164	672708	Roadside	100	100.0	21	12	19	17	19.1
T29	334354	672643	Roadside	100	100.0	31	19	28	26.4	27.6
T30	334427	672664	Roadside	92.3	92.3	22	15	21	19	19.5
T31	334580	672713	Roadside	92.3	92.3	32	18	30	31.1	32.7
T32	334578	672695	Roadside	100	100.0	31	27	23	21.4	22.9
T33	351693	673998	Roadside	100	100.0	20	11	15	14.1	14.2
T34	351702	674034	Roadside	100	100.0	14	8	10	8.9	9.7
T35	355339	685307	Roadside	90.4	90.4	12	9	9	7.5	7.4
T36	355186	685277	Roadside	100	100.0	8	6	9	7.9	7.8

Table A.5 – 1-Hour Mean NO₂ Monitoring Results, Number of 1-Hour Means > 200µg/m³

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
NO _x	Musselburgh North High Street - NO _x	Roadside	99.8	46.8	0	0	0	0	0

Notes:

Exceedances of the NO₂ 1-hour mean objective (200 µg/m³ not to be exceeded more than 18 times/year) are shown in bold.

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

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

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

Table A.6 – Annual Mean PM₁₀ Monitoring Results (µg/m³)

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
PM ₁₀	Roadside	91.7	91.7	12	10	10	13	10

Notes:

Exceedances of the PM₁₀ annual mean objective of 18 µg/m³ are shown in bold.

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

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

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

Table A.7 – 24-Hour Mean PM₁₀ Monitoring Results, Number of PM₁₀ 24-Hour Means > 50µg/m³

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
PM ₁₀	Roadside	91.7	91.7	1	0(23.2)	0	1(29.4)	0

Notes:

Exceedances of the PM₁₀ 24-hour mean objective (50 µg/m³ not to be exceeded more than seven times/year) are shown in bold.

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

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

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

Table A.8 – Annual Mean PM_{2.5} Monitoring Results (µg/m³)

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
PM _{2.5}	Roadside	95.5	80.5	N/A	N/A	N/A	7.2	6.9

Notes:

Exceedances of the PM_{2.5} annual mean objective of 10 µg/m³ are shown in bold.

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

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

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

Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO₂ 2023 Monthly Diffusion Tube Results (µg/m³)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted 0.99	Comment
T1	334659	672720	30	30	11	17	21	19	16	18	21	19	22	17	20.1	19.9	
T4	334526	672700	21	24	17	14	15	15	12	11	17	7	21	22	16.3	16.2	
T6	334392	672652	26	31	30	30	30	27	25	24	21	25	25	23	26.4	26.2	
T7	334301	672632	37	33	35	34	32	27	23	24	21	22	24	21	27.8	27.5	
T8	334172	672524	26	23	26	25	18	14	14	13	18	20	13	18	19.0	18.8	
T9	334105	672750	16	19	20	23	20	19	16	16	13	21	19	19	18.4	18.2	
T10	333800	672822	21	19	23	19	16	14	18	16	20	21	22	26	19.6	19.4	
T11	340686	672692	25	24	21	25	27	20	14	19	19	17	23	21	21.3	21.0	
T12	340738	672687	19	23	17	26	23	27	16	19	16	20	23	21	20.8	20.6	
T13	340608	672738	23	22	24	23	21	19	13	18	14	13	28	20	19.8	19.6	
T14	340570	672780	15	15	21	26	20	20	7	15	12	21	16	18	17.2	17.0	
T15	340112	672905	15	17	16	14	14	12	9	11	10	13		11	12.9	12.8	
T16	352249	673631	9	8	5	8	6	2	3	3	4	3		7	5.3	5.2	
T23	333941	672837	17	17	17	18	16	12	6	13	13	14		16	14.5	14.3	
T24	333941	672837	18	19	15	22	17	14	11	13	12	14		14	15.4	15.2	
T25	333941	672837	17	20	15	19	17	17	10	13	13	14		17	15.6	15.5	
T26	336691	672055	21	21	17	20	21	14	11	8	10	15		14	15.6	15.5	
T27	336769	672127	18	18	19	19	15	12	10	12	11	14		18	15.1	14.9	
T28	334164	672708	21	19	24	22	21	18	14	28	10	13	23	18	19.3	19.1	
T29	334354	672643	28	34	33	32	34	29	24	15	21	25	37	23	27.9	27.6	
T30	334427	672664	20	24	20	22	22	22		15	14	16	22	20	19.7	19.5	
T31	334580	672713	35	39	33	32	40	35	26	31		28	36	28	33.0	32.7	
T32	334578	672695	32	26	19	28	19	25	19	29	22	19	31	8	23.1	22.9	
T33	351693	673998	21	16	9	16	14	12	9	11	11	14	21	18	14.3	14.2	
T34	351702	674034	12	11	12	11	10	9	7	7	7	8	12	11	9.8	9.7	
T35	355339	685307	8	10	9	10	4	7	5	6	5	7		11	7.5	7.4	
T36	355186	685277	9	10	7	9	10	8	7	6	7	7	7	8	7.9	7.8	

Notes:

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within East Lothian During 2023

East Lothian Council has not identified any new sources relating to air quality within the reporting year of 2023.

Additional Air Quality Works Undertaken by East Lothian Council During 2023

East Lothian Council are in the process of carrying out a consultation exercise with relevant stakeholders to seek their comments on the proposed revocation of the AQMA. A draft Revocation Report will be available to consultees as part of the revocation process. It is anticipated that the revocation of the AQMA will be completed by Spring 2025.

QA/QC of Diffusion Tube Monitoring

- Diffusion tubes for East Lothian Council were analysed during 2023 by Edinburgh Scientific Services. The method of preparation is 50% TEA in acetone.
- AIR-PT combines two long running PT schemes: LGC Standards STACKS PT scheme and HSL Workplace Analysis Scheme for Proficiency (WASP) PT scheme.
- The AIR PT scheme uses laboratory spiked Palmes type diffusion tubes to test each participating laboratory's analytical performance on a quarterly basis and continues the format used in the preceding WASP PT scheme.
- The summary of Laboratory Performance in AIR NO₂ Proficiency Testing Scheme (AIR PTAR063 April– June 2024) reported that 100% of results submitted by Edinburgh Scientific Services were **satisfactory**.
- The monitoring has been completed in adherence with the 2023 Diffusion Tube Monitoring Calendar.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within East Lothian recorded data capture in excess of 75% therefore it was not required to annualise any monitoring data.

Diffusion Tube Bias Adjustment Factors


East Lothian Council have applied a local bias adjustment factor of 0.99 to the 2023 monitoring data. A summary of bias adjustment factors used by East Lothian Council over the past five years is presented in Table C. 1.

East Lothian Council applied a local bias adjustment factor as calculated using the Diffusion Tube Data Processing Tool v4.2.xlsb on the DEFRA website. The triplicate tubes T23, T24 and T25 are co-located with the automatic analyser at the Musselburgh monitoring site. Data used in the calculation of the bias adjustment factor are shown in Figure C.1 and Figure C.2.

Table C. 1- Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	Local	-	0.99
2022	Local	-	0.91
2021	Local	-	1.0
2020	National	09/19	0.88
2019	Local	-	0.9

Figure C. 1- Local BIAS Adjustment Inputs



Local Bias Adjustment 1

Enter data into the pink cells

i) Enter co-located diffusion tube period means

Period	NO ₂ Period Mean (µg/m ³)			Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of Mean	Data Quality Check
	Tube 1	Tube 2	Tube 3					
1	17.0	18.0	17.0	17.3	0.6	3%	1.4	Good
2	17.0	19.0	20.0	18.7	1.5	8%	3.8	Good
3	17.0	15.0	15.0	15.7	1.2	7%	2.9	Good
4	18.0	22.0	19.0	19.7	2.1	11%	5.2	Good
5	16.0	17.0	17.0	16.7	0.6	3%	1.4	Good
6	12.0	14.0	17.0	14.3	2.5	18%	6.3	Good
7	6.0	11.0	10.0	9.0	2.6	29%	6.6	Poor Precision
8	13.0	13.0	13.0	13.0	0.0	0%	0.0	Good
9	13.0	12.0	13.0	12.7	0.6	5%	1.4	Good
10	14.0	14.0	14.0	14.0	0.0	0%	0.0	Good
11								
12	16.0	14.0	17.0	15.7	1.5	10%	3.8	Good

Good Overall Precision

ii) Enter co-located continuous monitor hourly monitoring data


Start Date	04/01/2023
Start Time	01:00

Date & Time	NO ₂ Hourly Concentrations (µg/m ³)
04/01/23 01:00	4.8
04/01/23 02:00	0.6
04/01/23 03:00	0.6
04/01/23 04:00	0.4
04/01/23 05:00	0.9
04/01/23 06:00	2.4
04/01/23 07:00	3.5
04/01/23 08:00	4.4
04/01/23 09:00	6.8
04/01/23 10:00	0.7

Period	Period Mean	Data Capture (%)	Data Quality Check
1	17.7	100.0%	Good
2	15.6	100.0%	Good
3	19.8	100.0%	Good
4	17.6	100.0%	Good
5	15.5	100.0%	Good
6	15.4	100.0%	Good
7		100.0%	
8		100.0%	
9		100.0%	
10		100.0%	
11		100.0%	
12		100.0%	

Good Overall Data Capture

Figure C. 2- Local BIAS Adjustment Outputs

 Local Bias Adjustment Outputs - Information Only							
Go back to STEP 3 - Bias Adjustment to define factor							
	STEP 3a Local Bias Adjustment Input 1	STEP 3b Local Bias Adjustment Input 2	STEP 3c Local Bias Adjustment Input 3	STEP 3d Local Bias Adjustment Input 4	STEP 3e Local Bias Adjustment Input 5	STEP 3f Local Bias Adjustment Input 6	STEP 3g Local Bias Adjustment Input 7
Periods used to calculate bias	6						
Bias Adjustment Factor A	0.99 (0.87 - 1.16)						
Diffusion Tube Bias B	1% (-14% - 15%)						
Diffusion Tube Mean ($\mu\text{g}/\text{m}^3$)	17.1						
Mean CV (Precision)	8.4%						
Automatic Mean ($\mu\text{g}/\text{m}^3$)	16.9						
Data Capture	100%						
Adjusted Tube Mean ($\mu\text{g}/\text{m}^3$)	17 (15 - 20)						
Overall Diffusion Tube Precision	Good Overall Precision						
Overall Continuous Monitor Data Capture	Good Overall Data Capture						
Local Bias Adjustment Factor	0.99						

Notes:

A single local bias adjustment factor has been used to bias adjust the 2023 diffusion tube results.

NO₂ Fall-off with Distance from the Road

No NO₂ diffusion tube monitoring locations within East Lothian required distance correction during 2023.

QA/QC of Automatic Monitoring

Data management of the automatic monitoring site is carried out by Ricardo Energy and Environment on behalf of the Scottish Government. Local Site Operator (LSO) duties are carried out by East Lothian Council.

Data is ratified by Ricardo Energy and Environment on behalf of the Scottish Government. All data provided in this report has been ratified and a summary of all ratified data for 2023 is available here [Scottish Air Quality Database Annual Report](#).

Live data is available at [Home page | Scottish Air Quality](#).

PM₁₀ and PM_{2.5} Monitoring Adjustment

The type of PM₁₀ and PM_{2.5} monitors utilised within East Lothian Council do not require the application of a correction factor.

Automatic Monitoring Annualisation

The monitoring at Musselburgh North High Street recorded data capture of 46.8% for NO₂ during 2023. Therefore, annualisation was required as per Box 7-9 of LAQM Technical Guidance (TG22). A summary of the annualisation is presented in **Table C. 2**.

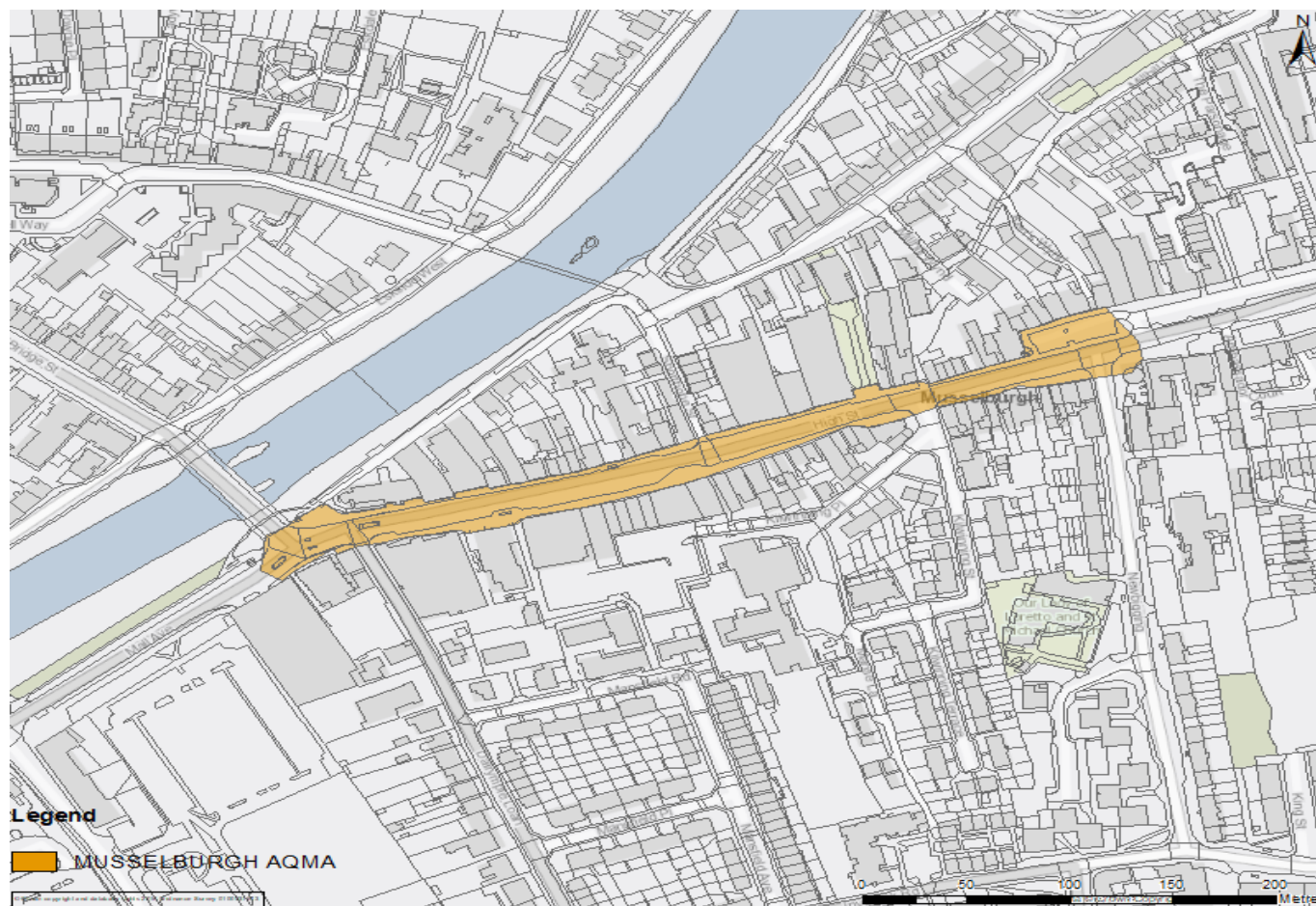
Annualisation is required for any site with data capture less than 75% but greater than 25%.

Table C. 2 - Annualisation Summary (concentrations presented in µg/m³)

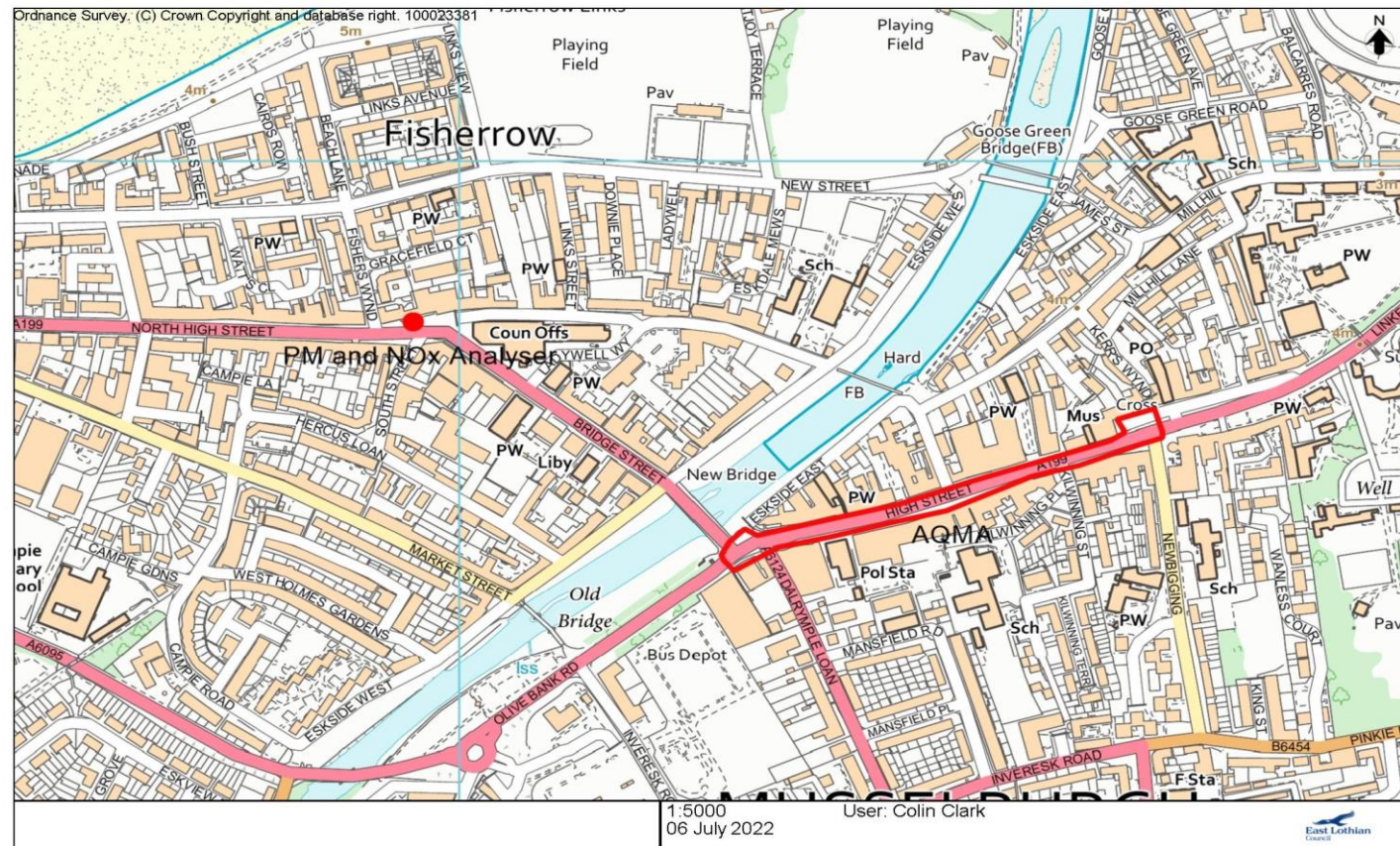
Site ID	Annualisation Factor Edinburgh St Leonards	Annualisation Factor Bush Estate	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
NO _x	1.01	0.98	0.99	17.2	17.1

Appendix D: Maps

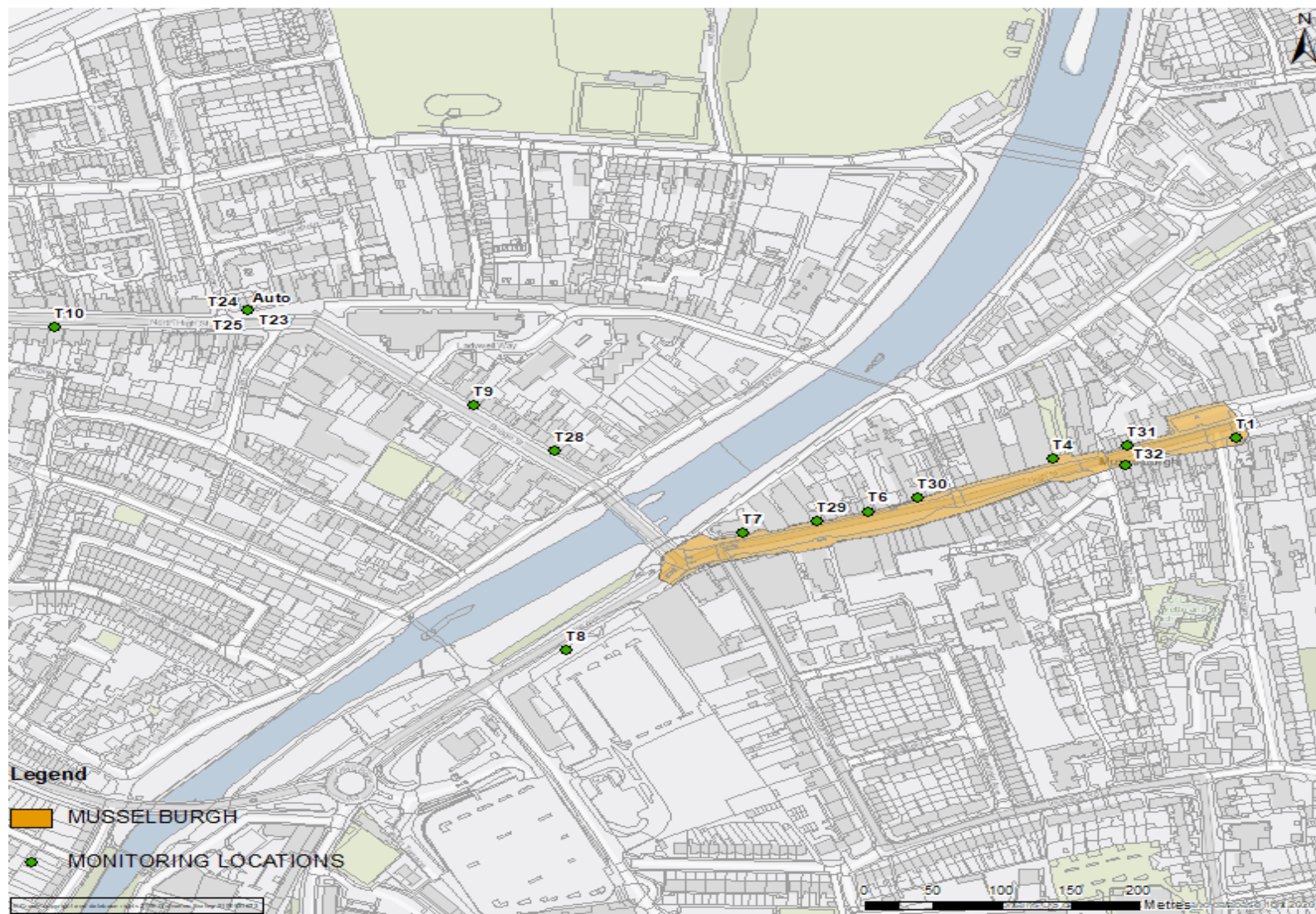
Map of AQMA in Musselburgh



Map of Automatic Monitoring Site in Musselburgh



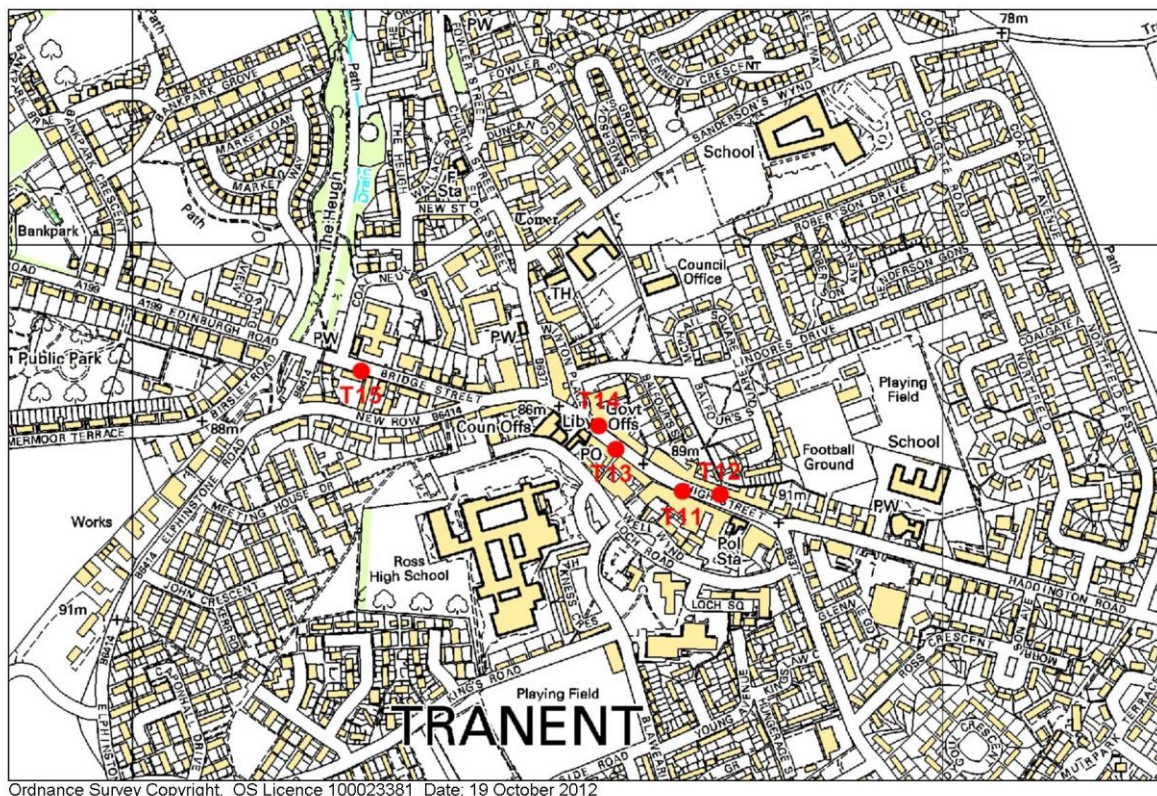
Map of Non-Automatic Monitoring Sites in Musselburgh



Map of Non-Automatic Monitoring Sites in Wallyford



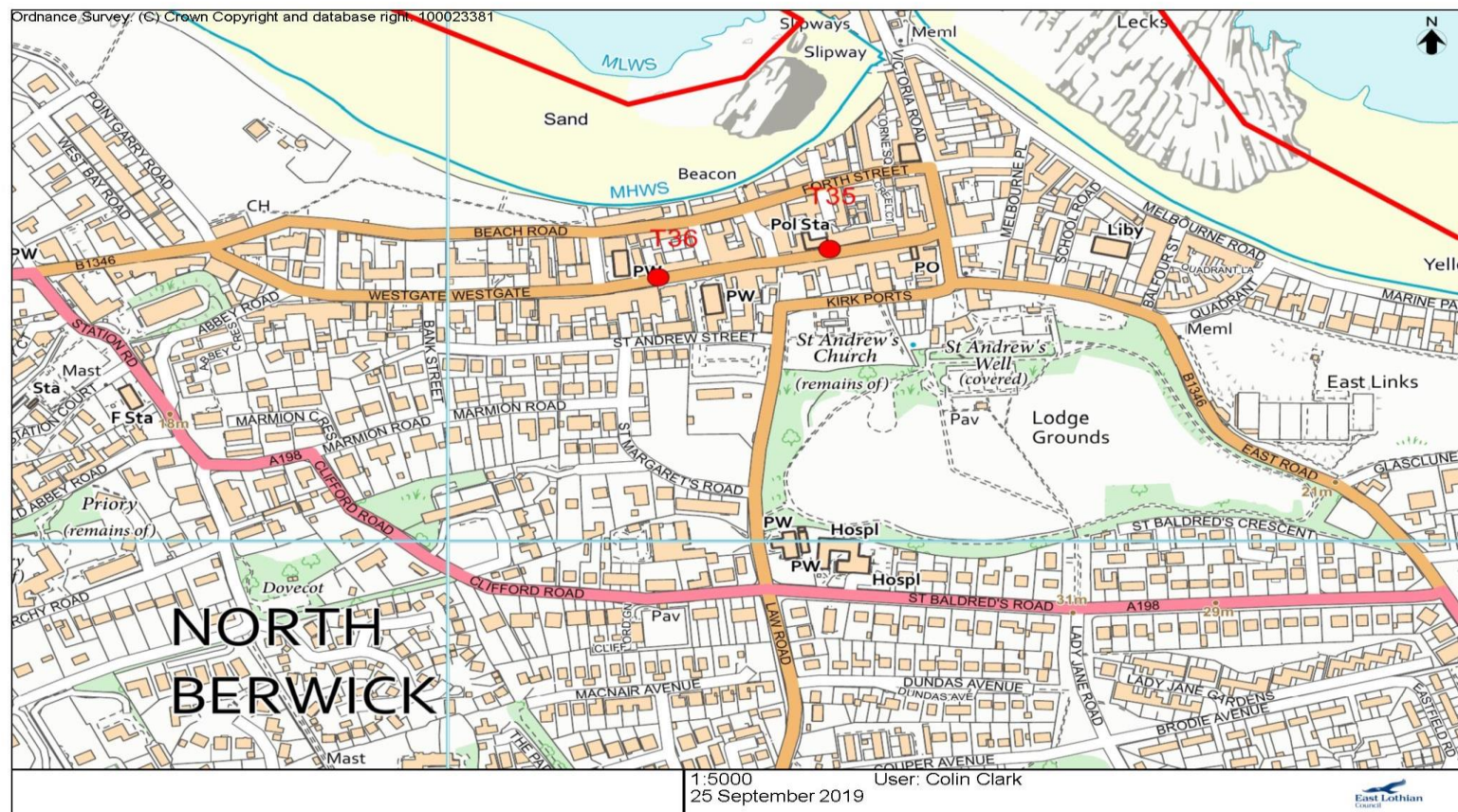
Map of Non-Automatic Monitoring Sites in Tranent



Map of Non-Automatic Monitoring Sites in Haddington



Map of Non-Automatic Monitoring Sites in North Berwick



Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the LA intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
APR	Annual Progress Report
AURN	Automatic Urban and Rural Network (UK air quality monitoring network)
CAFS2	Cleaner Air For Scotland 2
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
DT	Diffusion Tube
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO ₂	Sulphur Dioxide

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