Annual Progress Report (APR)

2022 Air Quality Annual Progress Report (APR) for East Lothian Council

In fulfilment of Part IV of the Environment Act 1995

Local Air Quality Management

Date July 2022

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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 (NO_2) 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 exceedance's of the annual mean NO_2 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 NO_2 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 NO_2 emissions in 2013 and 2014 continued to exceed, or were very close to, the Annual Mean Air Quality Objective for NO_2 at some locations within the AQMA. The 2016 Progress Report (Ref 7) and monitoring results from 2015 indicated that all Air Quality Objectives were complied with and there were no exceedance's of any objectives, including the NO_2 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 exceedance's of the NO_2 Annual Mean AQO within the AQMA were again recorded at two locations. There were no other exceedance's 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 exceedance's of any objectives, including the NO_2 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 exceedance's of any AQO during 2019.

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

This report concludes that monitoring results from 2021 confirm there were no exceedance's of any AQO during 2021 with the last exceedance being recorded in 2016.

East Lothian Council have also carried out a Detailed Assessment of Air Quality in Musselburgh (Ref 14) which is due to be published by mid-August 2022 and the results confirm that there were no exceedance's of any AQO within the AQMA since 2016 and also concludes that future exceedances are unlikely. As such, it is the intention of East Lothian Council to revoke the AQMA in Musselburgh by the end of 2022.

A summary of all previous Review and Assessment Reports is provided in Appendix E.

Actions to Improve Air Quality

Results of monitoring for the 12-month period from 01/01/21 to 31/12/21 indicate no exceedance's of the NO_2 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 exceedance's of any AQO within the AQMA since 2016 and also concludes that future exceedances are unlikely. As such, it is the intention of East Lothian Council to revoke the AQMA in Musselburgh by the end of 2022.

In February 2022 East Lothian Council also commenced monitoring of $PM_{2.5}$ at it's automatic monitoring site in Musselburgh. This is in addition to existing automatic monitoring at the site of PM_{10} and Nitrogen dioxide.

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, 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 2021. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act 1995 (Ref 15) and the relevant Policy (Ref 16) and Technical Guidance (Ref 17) 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) is summarises the work being undertaken by East Lothian Council 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

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 an Air Quality Action Plan (AQAP) within 12 months, setting out measures it intends to put in place in pursuit of the objectives.

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

We propose to revoke High Street, Musselburgh AQMA by end of 2022. (see monitoring section).

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Pollutants and Air Quality Objectives	City / Town	Description	Action Plan
High Street, Musselburgh	NO2 annual mean	Musselburgh	High Street, Musselburgh (A199) from its junction with Newbigging 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

Cleaner Air for Scotland 2

Cleaner Air for Scotland 2 – Towards a Better Place for Everyone (CAFS2) (Ref 18) 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) (Ref19), 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.

2.1.1 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.

2.1.1.1 Climate Change and Air Quality

East Lothian Council's Climate Change Strategy 2020–2025 (Ref 20) 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 and sets out the vision and overall aims for a 'Net Zero Council' and a 'Carbon Neutral East Lothian' with specific outcomes, key priority areas and actions over the next five years towards achieving these overall aims. 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 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;

- Explore innovative technological solutions to improve urban Air Quality, including the latest version of the City Tree installation for Musselburgh;

- 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.

2.1.1.2 Planning Policy and Air Quality

The East Lothian Local Development Plan 2018 (Ref 21) was adopted on 27th 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. Recently, work has begun on the construction of a new railway station at East Linton as part of PROP T12. Work is also underway 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. Consultation on Musselburgh Active Toun proposals was largely supported by the public which, once implemented, 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. A Case Study of how East Lothian Council implemented policies within the Local Development Plan for a Segregated Active Travel Corridor (SATC) is provided in Appendix F**.**

East Lothian has one air quality management area (AQMA) which is Musselburgh High Street. 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 22), the Scottish Government prepared a draft National Planning Framework 4 (NPF4). This was published for consultation in late 2021. ELC response to the Scottish Government's NPF4 consultation was approved by elected members on the 29th of March of 2022. The council's response has broadly welcomed the draft NPF4, which provides guidance in relation to future new homes, puts an emphasis on an 'infrastructure first' approach to development, and sets an aspiration for improvements to connectivity including the potential to improve the East Coast Main Line.

Once approved the NPF4 will be part of the development plan and include 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 will be 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 will begin with research and information gathering including a review of what the LDP 2018 policies have achieved in relation to air quality. East Lothian has grown quite significantly in the last 5-10 years, and it is important to establish a baseline in terms of the social, economic and environmental position to look to the future and what changes could be introduced to further improve the area.

For the Evidence Report, the Council will look at areas that may be constrained in terms of air quality, what could be done to improve areas that are not performing as well, and how to continue to protect areas that are. 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. LDP2 will contain the policies and proposals required to deliver and achieve the strategy set out in the Evidence Report. There will be extensive consultation carried out during the preparation of LDP2. This will include workshops with various stakeholders and the general public. We will use tools such as the Place Standard 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 will 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 south east region, and jointly contributed towards the RSS with other authorities (Edinburgh, Midlothian, West Lothian and Fife).

The Regional Spatial Strategy will provide a long-term strategic approach to planning across south east Scotland. It will focus on environmental and climate issues primarily and how to continue to support south east 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.

2.1.2 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 LEZs structure.

The Local Transport Strategy (LTS) and associated action plans were adopted by Council on 30th October 2018. Through Smarter Choices Smarter Places, the Council intended to employ a Behavioural Change Officer to encourage alternative transport modes in particular active travel. Unfortunately this was not progressed under Covid.

A draft ELC Travel Plan was prepared summer 2020 but due to the impacts of covid, in particular potential employer home working policy changes and the uncertainty of demand, reasonable target setting and mitigations are difficult to calculate. The original draft Travel Plan set targets to encourage sustainable transport options driving down single occupancy car use, which now is significant different from what was previously

forecast. Confidence in public transport has significantly deteriorated and with lockdown relaxing high vehicle trips are being experienced. This is a challenging situation, but more data and trend analysis is needed to fully understand the longer term implications of the pandemic and our ability to influence behaviour. This is still evolving.

2.1.3 EV Infrastructure

Over the last 4 years East Lothian Council have upgraded older Electric Vehicle (EV) charging units and increased the number of public charge points in East Lothian to over 200. 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.

Progress and Impacts of Measures to address Air Quality in East Lothian

East Lothian Council has taken forward a number of measures during the current reporting year of 2021 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. More detail on these measures can be found in the air quality Action Plan relating to each AQMA.

Key completed measures are:

- **Improving Links with Local Transport Strategy (Measure No 1)** – The development of the Local Transport Strategy (Ref 23) 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 ELC 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. Furthermore, an officer lead response to Scottish Transport Project Review 2 and 20% reduction in car km looked to endorse sustainable transport interventions to reduce car based trips nationally.

The East Lothian Access Study *Case for Change* was made February 2020, with work now concluded on *Part 1 –Initial Appraisal* in November 2021. Transport Scotland are yet to feedback and comment but these are expected late July 2022. *Part 2 - Detailed Appraisal* commenced January 2022. Discussions are ongoing with Transport Scotland for Part 1 high level interventions to be included in the Scottish Transport Project Review (STPR2) running parallel. 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 are necessary.

- **Improving Links with Local Development Plan (Measure No 2)** – Refer to Section 2.1.1.2 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 anticipate 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.

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. As part of this a bus gate is currently being trialled in Wallyford to free up space for potential electric bus services and the creation of a bigger transport interchange at this point. These measures with the ongoing Musselburgh Active Toun are designed to improve pedestrian accessibility, access and active and sustainable transport.

£60k of ELC funding this year has been spent on upgrading bus shelters in 4 of our biggest towns to raise the profile of the main bus stops as local 'Journey Hubs' – transport interchanges where in future people will be able to pick up buses or e-bikes or car club vehicles.

- **Enforcement of idling provisions of the Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003 (Measure No 4)** - 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:

YEAR	NUMBER OF MEMBERS	NUMBER OF VEHICLES
2017	114	5600
2018	141	6607
2019	170	6980
2020	205	7524
2021	219	7806
2022	222	7919

Funding has been secured from the Scottish Government to allow the scheme to continue to operate and expand through 2022/23.

- **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. 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.

- **Development of Green Travel Plans (Measure No 11) and Promotion of Cycling and Walking (Measure 12) –** The Smarter Choices, Smarter Places (SCSP) Programme is a Paths for All grant scheme to support behaviour change initiatives to increase active 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 reverse the trend towards sedentary lifestyles and will tackle health inequalities. ELC 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 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 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.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Refer to	Estimated Completion Date	Comments
1	Improving Links with Local Transport Strategy	Transport planning and infrastructure	To reduce unnecessary vehicular traffic, tackle climate change, contribute to improvements to health and well-being and maintain road traffic associated pollution below Air Quality objective levels by as much as possible.	ELC Road Services					The East Lothian Access Study *Case for Change* was made February 2020, with work now concluded on *Part 1 –Initial Appraisal* in November 2021. Transport Scotland are yet to feedback and comment but these are expected late July 2022. *Part 2 - Detailed Appraisal* commenced January 2022. Discussions are ongoing with Transport Scotland for Part 1 high level interventions to be included in the Scottish Transport Project Review (STPR2) running parallel. 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 are necessary	Ongoing	

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Refer to	Estimated Completion Date	Comments
2	Improving Links with Local Development Plan	Policy Guidance and Development Control	The proposed LDP contains transport mitigation measures that are intended to manage through traffic within Musselburgh town centre, including within the AQMA. The proposed transport mitigation measures set out in the LDP are anticipated to help improve Air Quality within the Musselburgh AQMA.	ELC Planning Service					Refer to Paragraph 2.1.1.2 above	Completed Sep 2018	Ongoing
3	Bus Stop Relocations on High Street, Musselburgh	Traffic Management	To improve the flow of traffic within the AQMA and reduce congestion.	ELC Road Services					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 Toun are designed to improve pedestrian accessibility, access and active and sustainable transport.	Ongoing	

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Refer to	Estimated Completion Date	Comments
4	Enforcement of idling provisions of the Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003	Traffic Management	Prevention of unnecessary pollution from stationary vehicles within the AQMA.	ELC Road Services					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.	Ongoing	
5	Electrification of Lothian Buses in Musselburgh	Promoting Low Emission Transport	Minimisation of pollution within AQMA by providing electric charging facility to allow buses to switch to electric operation.	ELC Transport Services, Lothian Buses					Due to a lack of commitment from relevant stakeholders regarding funding this project may not be taken forward. Other funding avenues are being explored.	Unknown	

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Refer to	Estimated Completion Date	Comments
6	Eco Stars Fleet Recognition Scheme	Vehicle Fleet Efficiency	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.	ELC Env Health					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 are proud to have been awarded a 5 star rating. The scheme had 114 members in 2017, 141 members in 2018, 170 members in 2019,205 members in 2020, 219 members in 2021 and, as of June 2022 now has 222 members incorporating 7919 vehicles. Funding has been secured from the Scottish Government to allow the scheme to continue to operate and expand through 2022/23.	Established Feb 2017	Ongoing

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Refer to	Estimated Completion Date	Comments
7	SCOOT Traffic Management System	Traffic Management	SCOOT is a system of Urban Traffic Control and monitors queue lengths at all junctions on the main arterial routes and alters signal timing to suit. This is monitored every 120 seconds and although monitored by East Lothian Council is controlled by the City of Edinburgh Council through their Traffic Control Room	ELC Road Services					A review of all SCOOT arrangements will be considered in the context of this work. 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.	Ongoing	
8	Longer Trains and platforms at Musselburgh Rail Station	Transport planning and infrastructure	Provision of infrastructure to provide alternative mode of transport	ELC Road Services						It is unlikely this will be delivered until CP7. (2024-2029)	

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Refer to	Estimated Completion Date	Comments
9	AQMA Signage	Public Information	Increase awareness of Air Quality	ELC Env Health					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.	Completed Sep 2018	Ongoing
10	The East Central Scotland Vehicle Emissions Partnership	Public Information	East Lothian Council work in partnership with Midlothian, West Lothian and Falkirk Councils aimed at 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.	Vehicle Emissions Officer, East Central Scotland Vehicle Emissions Partnership at West Lothian Council		2003			The partnership has secured funding to continue through 2022/23 and was expanded further when Stirling Council became a partner authority in 2019.	Completed 2003	Ongoing

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Refer to	Estimated Completion Date	Comments
11	Development of Green Travel Plans	Promoting Travel Alternatives	The Smarter Choices, Smarter Places (SCSP) Programme is a Paths for All grant scheme to support behaviour change initiatives to increase active 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 reverse the trend towards sedentary lifestyles and will tackle health inequalities.	ELC Road Services					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 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.	Ongoing	

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Refer to	Estimated Completion Date	Comments
12	Promotion of cycling and walking	Promoting Travel Alternatives	The Smarter Choices, Smarter Places (SCSP) Programme is a Paths for All grant scheme to support behaviour change initiatives to increase active 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 reverse the trend towards sedentary lifestyles and will tackle health inequalities.	ELC Road Services					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 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.	Ongoing	
13	Provision of Information regarding Air Quality and Travel Options	Public Information	Increase awareness of Air Quality and alternative modes of transport and travel options	ELC Env Health ELC Road Services					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	Completed 2008	Ongoing

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives

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 2 sites during 2021. 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 NO_2 at 25 sites during 2020. 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 have updated their particular monitoring in Musselburgh and replaced the existing BAM PM10 for a new BAM PM Coarse System consisting of ET BAM1020 Beta-attenuation PM10 particulate analyser and ET BAM1020 Beta-attenuation PM2.5 particulate analyser. The new analysers were installed at the end of February 2022 and meet equivalence criteria of the reference method for Particulates. Unfortunately, the existing Romon enclosure is overheating due to the presence of increased analysers within the unit and this has resulted in the loss of some data. However, funding has been

received from the Scottish Government for a replacement and larger PR5 Enclosure that should address the overheating issue. Data from the new analysers will be reported in the APR 2023.

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.

3.1.4 Nitrogen Dioxide (NO_2)

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

For diffusion tubes, the full 2021 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 county between 2017-2021.

There have been no exceedances of the Annual Mean NO_2 Objective recorded at any locations, including those locations within the AQMA since 2016. Details of ratified data for the automatic monitor for 2021 are provided in Appendix C.

It can be seen that although there has been an increase in pollutant concentrations in 2021 since the easing of travel restrictions imposed from March 2020 during the Covid 19 Pandemic there has been a general downward trend in annual mean NO_2 concentrations from 2017 - 2021 throughout the County.

Table A.4 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past five years with the air quality objective of 200µg/m^3, not to be exceeded more than 18 times per year. There were no exceedences of the hourly mean air quality objective in 2020.

Figure 1: Diffusion Tubes in Musselburgh within AQMA 2017-2021

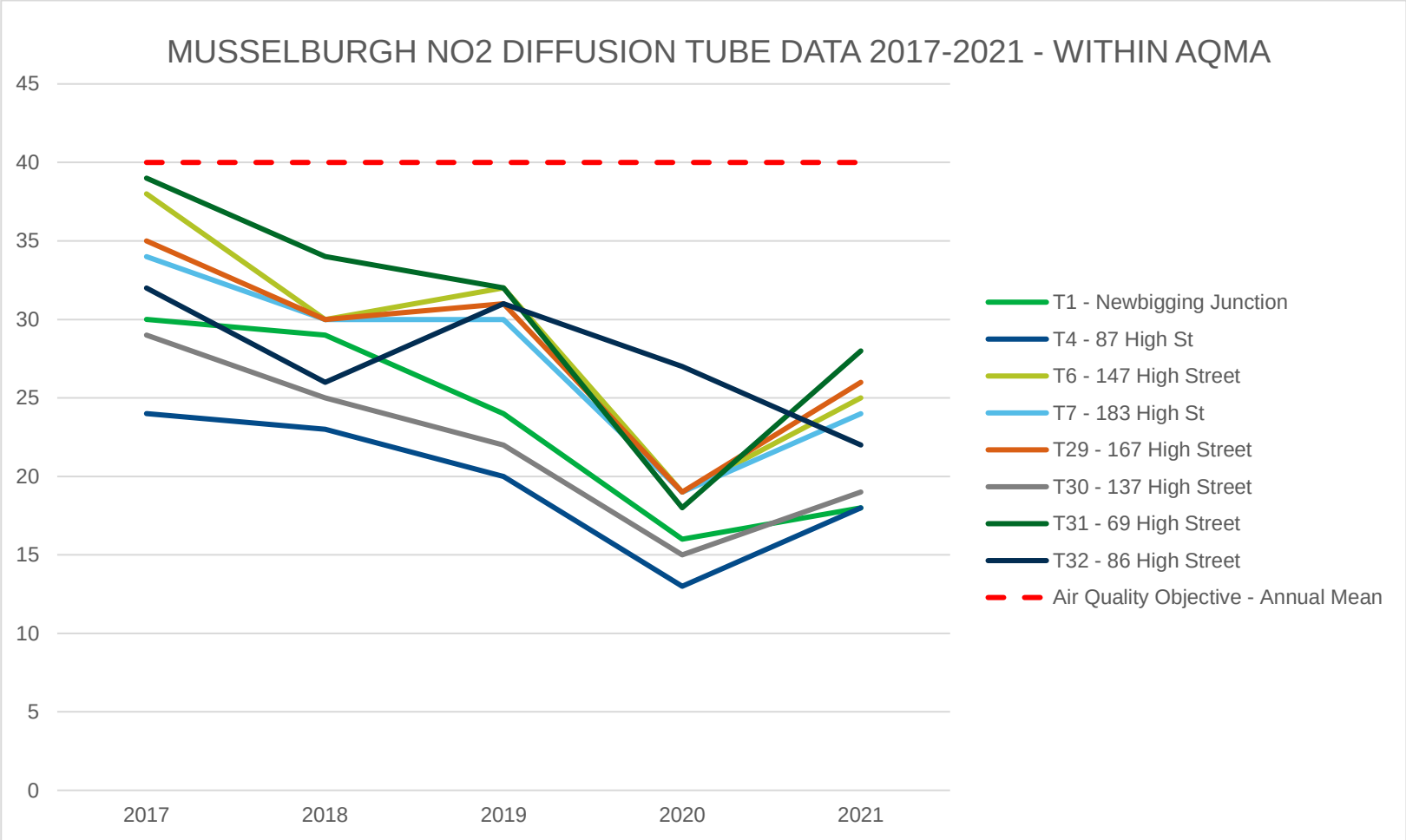


Figure 2: Diffusion Tubes in Musselburgh outside AQMA 2017-2021

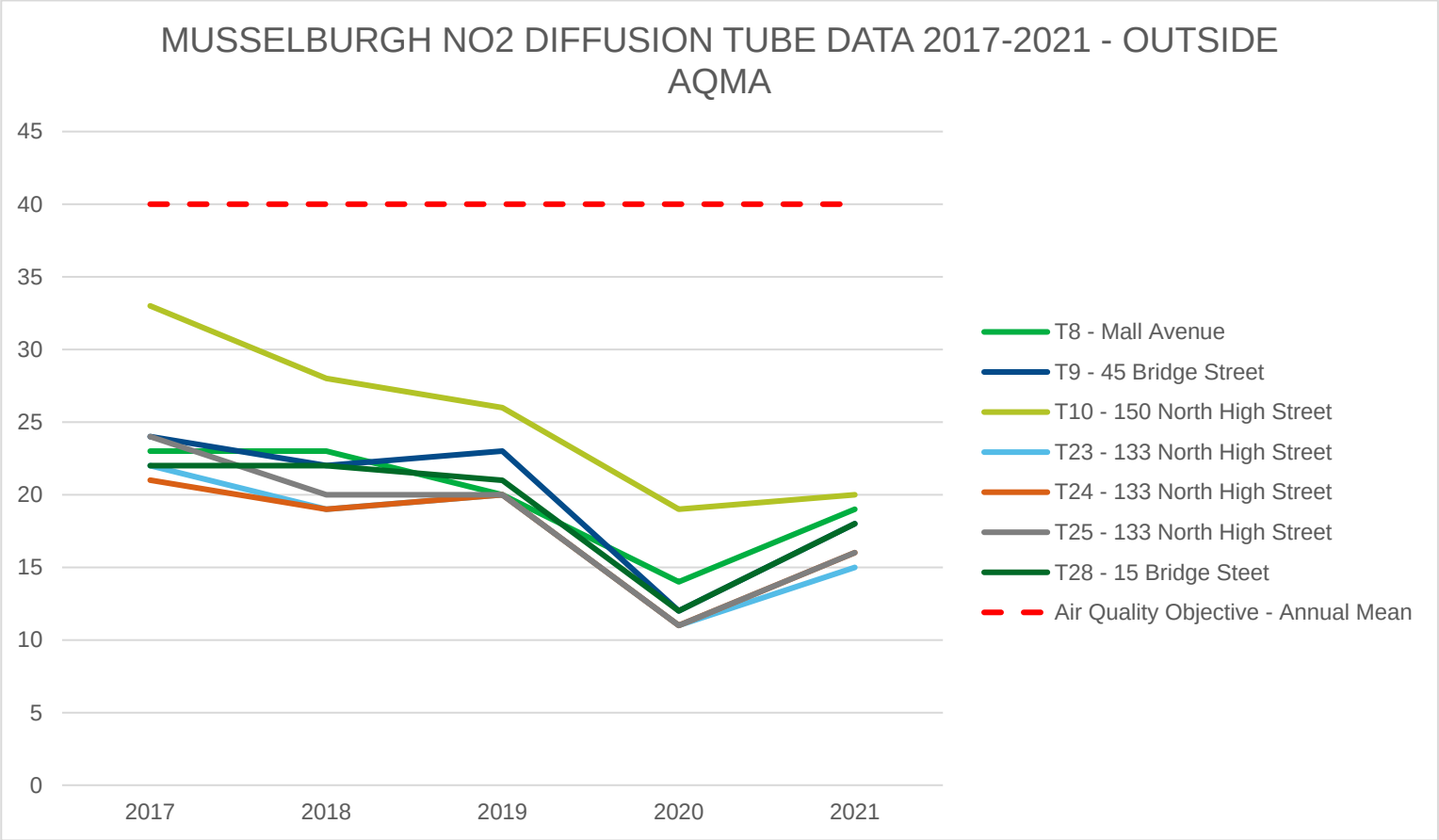
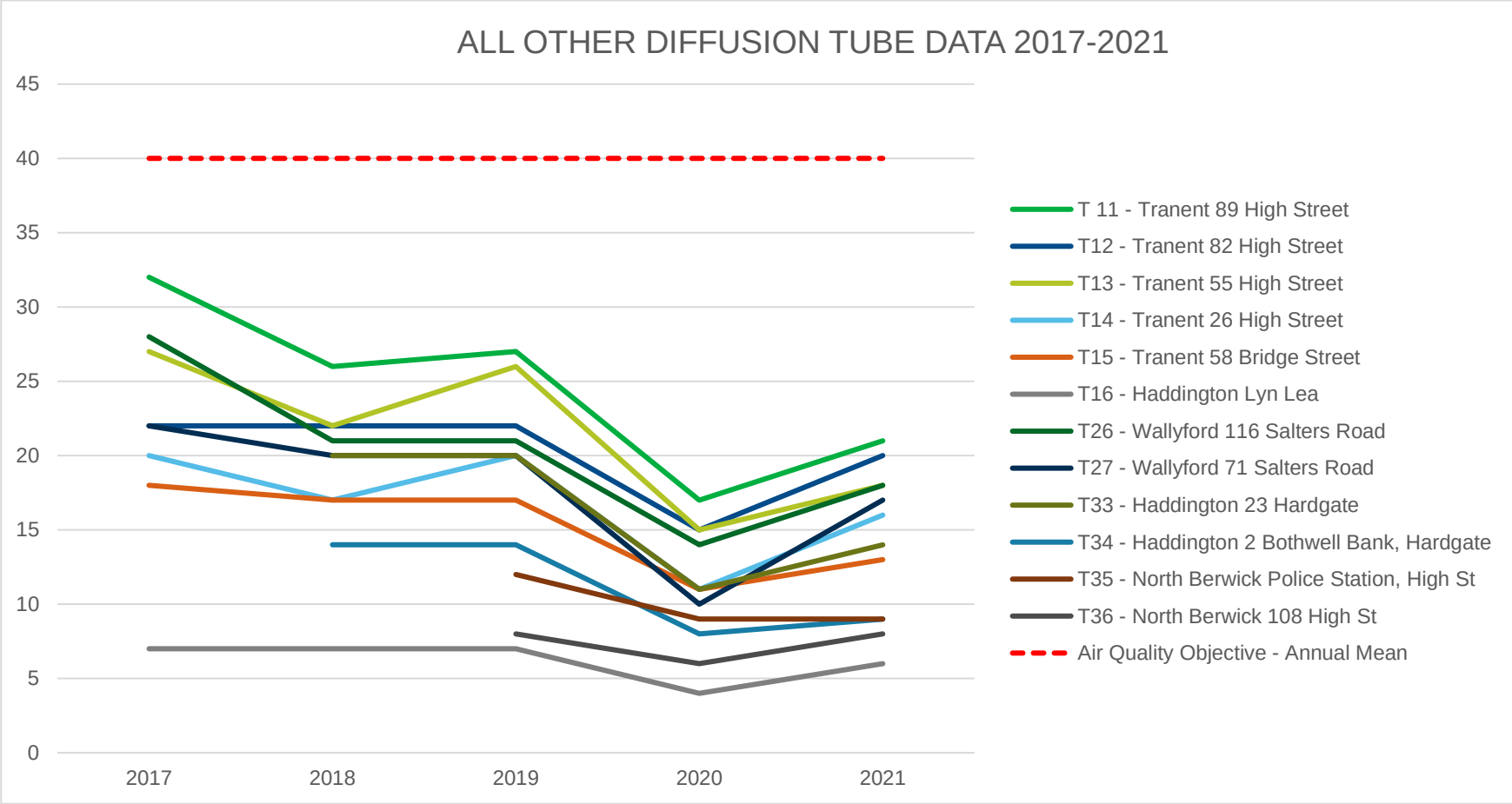


Figure 3: All other diffusion tubes 2017-2021



3.1.5 Particulate Matter (PM_{10})

Table A.5 in Appendix A compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past five years with the air quality objective of 18µg/m^3.

Figure 4 below shows the trend for PM_{10} concentrations on Musselburgh North High Street 2017-2021. It can be seen that there has been no increase in annual mean PM_{10} concentrations since 2017 and there have been no exceedances of the Air Quality Objective.

Figure 4: PM_{10} concentrations on Musselburgh North High Street 2017-2021

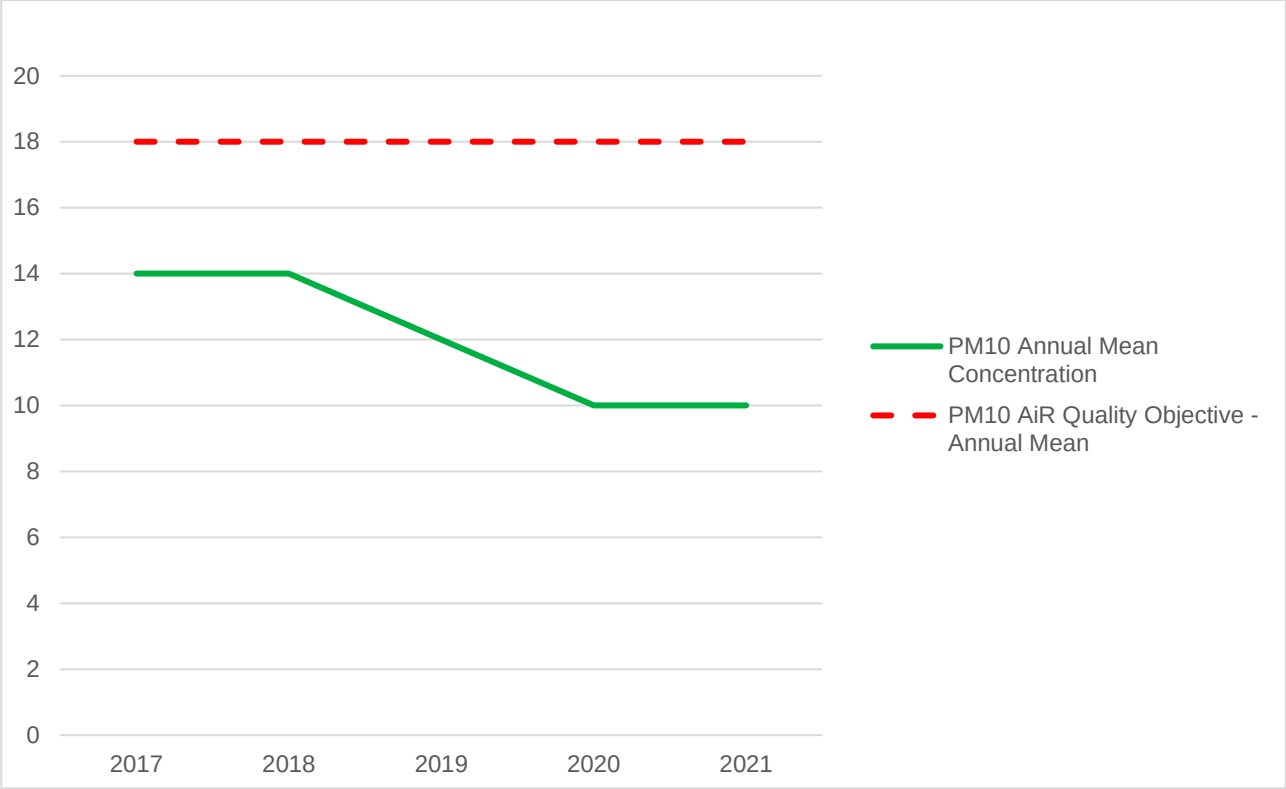


Table A.6 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the air quality objective of 50µg/m^3, not to be exceeded more than seven times per year.

There have been no exceedances of the PM_{10} Daily Mean AQO during 2021.

3.1.6 Particulate Matter ($PM_{2.5}$)

East Lothian Council did not monitor $PM_{2.5}$ during 2021. However, East Lothian Council have updated their particular monitoring in Musselburgh and replaced the existing BAM PM10 for a new BAM PM Coarse System consisting of ET BAM1020 Beta-attenuation PM10 particulate analyser and ET BAM1020 Beta-attenuation PM2.5 particulate analyser. The new analysers were installed at the end of February 2022 and meet equivalence criteria of the reference method for Particulates. Unfortunately, the existing Romon enclosure is overheating due to the presence of increased analysers within the unit and this has resulted in the loss of some data. However, funding has been received from the Scottish Government for a replacement and larger PR5 Enclosure that should address the overheating issue. Data from the new analysers will be reported in the APR 2023.

3.1.7 Sulphur Dioxide (SO_2)

East Lothian Council do not currently monitor Sulphur dioxide (SO_2

3.1.8 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

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.
- Bus or coach stations.

since the 2021 Annual Progress Report.

Other Transport Sources

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 of movements of diesel locomotives, and potential long-term relevant exposure within 30m.
- Ports for shipping.

since the 2021 Annual Progress Report.

Industrial Sources

East Lothian Council can confirm that there are no new:

- **Industrial installations:** new or proposed installations for which an air quality assessment has been carried out.
- **Industrial installations:** new or significantly changed installations with no previous air quality assessment.
- Major fuel storage depots storing petrol.
- Petrol stations.
- Poultry farms.

since the 2021 Annual Progress Report.

Commercial and Domestic Sources

East Lothian Council can confirm that there are no new:

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

since the 2021 Annual Progress Report.

New Developments with Fugitive or Uncontrolled Sources

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.

since the 2021 Annual Progress Report.

5 Planning Applications

In October 2019 Planning Permission 18/00485/PPM was granted for a proposed mixed use development at Old Craighall including 1500 homes. This development is now under construction and some homes in the Persimmon Homes site on eastern part of the development are now occupied.

An Air Quality Assessment by Resource and Environmental Consultants (REC) (Ref 24) was submitted in support of the application. It was concluded that the development, including in conjunction with other committed developments in the Musselburgh cluster, would not have a significant impact upon local air quality, in particular on the Musselburgh High Street Air Quality Management Area. No exceedances of Air Quality Objectives are predicted to arise when the development becomes operational in 2024.

6 Conclusions and Proposed Actions

Conclusions from New Monitoring Data

Monitoring for the 12-month period from 01/01/21 to 31/12/21 indicates that there were no exceedances of any AQO's in East Lothian during 2021. Concentrations of Nitrogen dioxide within the AQMA are significantly below the Annual Mean Air Quality Objective of 40ug/m^3, with a maximum annual mean level of 30ug/m^3 recorded at T31 - 69 High Street, Musselburgh.

As there have been no exceedances of the Nitrogen dioxide Annual Mean AQO since 2016, East Lothian Council have carried out a Detailed Assessment of Air Quality in Musselburgh (Ref 14) and the results confirm that there were no exceedance's of any AQO within the AQMA since 2016. The Detailed Assessment also concludes that future exceedances are unlikely. As such, it is the intention of East Lothian Council to submit this Detailed Assessment to SEPA and the Scottish Government by the end of July 2022 to seek their approval for the revocation of the AQMA in Musselburgh.

Conclusions relating to New Local Developments

No new local developments are Anticipated to have significant impact in local air quality that could result in any future breach of AQO's.

Proposed Actions

This Report and monitoring results from 2021 confirms there were no exceedance's of any AQO during 2021 with the last exceedance being recorded in 2016.

Furthermore, the Detailed Assessment (Ref 14) confirms future exceedances of the Nitrogen Dioxide annual mean AQO are unlikely. The Detailed Assessment is due to be submitted to statutory consultees by the end of July 2022 with a view to seeking their approval to commence proceedings to revoke the Musselburgh AQMA.

East Lothian Council have also updated their particular monitoring in Musselburgh and replaced the existing BAM PM10 for a new BAM PM Coarse System consisting of ET BAM1020 Beta-attenuation PM10 particulate analyser and ET BAM1020 Beta-attenuation

PM2.5 particulate analyser. The new analysers were installed at the end of February 2022 and meet equivalence criteria of the reference method for Particulates.

East Lothian Council shall continue to implement measures outlined within the AQAP and also develop and publish policies that supplement CAFS2 throughout 2022 and beyond and will report progress, including monitoring of $PM_{2.5}$, in the Annual Progress Report due in June 2023.

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?	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
PM_{10}	Musselburgh North High Street - BAM	Roadside	333 941	672837	PM_{10}	N	BAM	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 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
T11	Tranent – 89 High St	Roadside	340686	672692	NO_2	N	Y (3m)	3m	N
T12	Tranent – 82 High St	Roadside	340738	672687	NO_2	N	Y (4m)	3m	N
T13	Tranent – 55 High Street	Roadside	340608	672738	NO_2	N	Y (4m)	3m	N
T14	Tranent – 26 High St	Roadside	340570	672780	NO_2	N	Y (2m)	2m	N
T15	Tranent – 58 Bridge St	Roadside	340112	672905	NO_2	N	Y (5m)	2m	N
T16	Haddington - Lyn Lea	Urban	352249	673631	NO_2	N	Y 8m)	3m	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
T26	Wallyford - 116 Salters Rd	Roadside	336691	672055	NO_2	N	Y (5m)	2m	N
T27	Wallyford - 71 Salters Rd	Roadside	336769	672127	NO_2	N	Y (5m)	2m	N
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
T33	Haddington – 23 Hardgate	Roadside	351693	673998	NO_2	N	Y (5m)	2m	N
T34	Haddington – 2 Bothwell Bank, Hardgate	Roadside	351702	674034	NO_2	N	Y (5m)	2m	N
T35	North Berwick – Police Station High St	Roadside	355339	685307	NO_2	N	Y (5m)	2m	N
T36	North Berwick – 108 High Street	Roadside	355186	685277	NO_2	N	Y (5m)	2m	N

Notes:

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

(2) N/A if not applicable.

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

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2021 (%)	NO_2 Annual Mean Concentration (µg/m^3)				
					2017	2018	2019	2020	2021
NO_x	Roadside	Automatic	99.6	99.6	23	20	20	15	16
T1	Roadside	Passive Diffusion Tube	100	100	30	29	24	16	19
T4	Roadside	Passive Diffusion Tube	83	83	24	23	20	13	19
T6	Roadside	Passive Diffusion Tube	100	100	38	30	32	19	26
T7	Roadside	Passive Diffusion Tube	92	92	34	30	30	19	25
T8	Roadside	Passive Diffusion Tube	100	100	23	23	20	14	20
T9	Roadside	Passive Diffusion Tube	100	100	24	22	23	12	19
T10	Roadside	Passive Diffusion Tube	92	92	33	28	26	19	21
T11	Roadside	Passive Diffusion Tube	100	100	32	26	27	17	23
T12	Roadside	Passive Diffusion Tube	92	92	22	22	22	15	21
T13	Roadside	Passive Diffusion Tube	100	100	27	22	26	15	20
T14	Roadside	Passive Diffusion Tube	92	92	20	17	20	11	17
T15	Roadside	Passive Diffusion Tube	100	100	18	17	17	11	14
T16	Urban	Passive Diffusion Tube	83	83	7	7	7	4	6
T23	Roadside	Passive Diffusion Tube	92	92	22	19	20	11	16
T24	Roadside	Passive Diffusion Tube	100	100	21	19	20	11	17
T25	Roadside	Passive Diffusion Tube	100	100	24	20	20	11	18
T26	Roadside	Passive Diffusion Tube	100	100	28	21	21	14	19
T27	Roadside	Passive Diffusion Tube	100	100	22	20	20	10	18
T28	Roadside	Passive Diffusion Tube	100	100	22	22	21	12	19
T29	Roadside	Passive Diffusion Tube	92	92	35	30	31	19	28
T30	Roadside	Passive Diffusion Tube	100	100	29	25	22	15	21
T31	Roadside	Passive Diffusion Tube	92	92	39	34	32	18	30
T32	Roadside	Passive Diffusion Tube	100	100	32	26	31	27	23
T33	Roadside	Passive Diffusion Tube	92	92	-	20[(4)]	20	11	15
T34	Roadside	Passive Diffusion Tube	92	92	-	14[(4)]	14	8	10
T35	Roadside	Passive Diffusion Tube	100	100	-	-	12[(4)]	9	9
T36	Roadside	Passive Diffusion Tube	100	100	-	-	8[(4)]	6	9

Notes:

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

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

Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG(16) 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 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2021 (%) (2)	NO_2 1-Hour Means > 200µg/m^3 (3)				
					2017	2018	2019	2020	2021
NO_X	Roadside	Automatic	99.6	99.6	0	0	0	0	0

Notes:

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

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

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

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

Table A.5 – Annual Mean PM_{10} Monitoring Results ($\mu g/m^3$)

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2021 (%) (2)	PM_{10} Annual Mean Concentration ($\mu g/m^3$)				
				2017	2018	2019	2020	2021
PM_{10}	Roadside	85	85	14	14	12	10	10

Notes:

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

All means have been "annualised" as per LAQM.TG(16), 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.6 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m^3

Site ID	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2021 (%)	PM_{10} 24-Hour Means > 50µg/m^3 (3)				
				2017	2018	2019	2020(2)	2021
PM_{10}	Roadside	85	85	0	0	1	0 (23.2)	0

Notes:

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

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

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

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

Appendix B: Full Monthly Diffusion Tube Results for 2021

Table B.1 – NO_2 2021 Monthly Diffusion Tube Results (µg/m^3)

Site ID	Location	01/01/21 - 31/12/21												AVERAGE	Data Capture %	BIAS ADJUSTED (1.0 local)
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Musselburgh – Newbigging Junction	32	20	20	13	18	12	15	2	19	23	29	25	19	100	19
4	Musselburgh - 87 High St	30	21	21	11	12	M	12	13	M	20	24	26	19	83	19
6	Musselburgh – 147 High Street	25	24	20	33	25	26	27	22	28	26	29	31	26	100	26
7	Musselburgh – 183 High St	2	27	21	M	32	25	32	27	28	30	28	28	25	92	25
8	Musselburgh - Mall Av	30	25	18	18	18	13	12	15	19	24	23	27	20	100	20
9	Musselburgh – 45 Bridge Street	34	20	16	16	18	11	16	18	22	19	17	18	19	100	19
10	Musselburgh – 150 North High St	33	21	18	17	22	13	M	20	21	20	23	24	21	92	21
11	Tranent – 89 High St	27	23	18	17	27	20	21	20	25	22	28	22	23	100	23
12	Tranent – 82 High St	M	24	18	22	23	16	24	20	21	20	23	20	21	92	21
13	Tranent – 55 High Street	25	17	14	14	23	14	20	18	25	21	20	23	20	100	20
14	Tranent – 26 High St	M	20	14	15	20	16	20	18	17	19	12	19	17	92	17
15	Tranent – 58 Bridge St	22	17	10	12	13	10	14	14	14	15	14	16	14	100	14
16	Haddington - Lyn Lea	M	6	7	6	5	6	3	5	6	M	9	7	6	83	6
23	Musselburgh - 133 N High St	M	12	14	19	17	14	17	15	18	17	16	22	16	92	16
24	Musselburgh - 133 N High St	26	18	16	17	16	13	16	15	18	17	16	20	17	100	17
25	Musselburgh - 133 N High St	25	14	14	19	18	12	17	17	19	16	20	19	18	100	18
26	Wallyford - 116 Salters Rd	24	15	14	21	20	16	21	18	20	18	24	17	19	100	19
27	Wallyford - 71 Salters Rd	25	19	12	16	17	11	16	16	20	18	20	22	18	100	18
*28	Musselburgh - 15 Bridge Street	22	22	15	23	21	11	18	18	22	18	16	20	19	100	19
*29	Musselburgh - 167 High Street	28	26	22	35	33	24	28	27	28	27	30	M	28	92	28
*30	Musselburgh - 137 High Street	29	18	19	25	18	18	18	16	21	22	19	23	21	100	21
*31	Musselburgh - 69 High Street	M	26	28	27	35	28	35	29	33	32	29	28	30	92	30
*32	Musselburgh - 86 High Street	37	29	17	18	24	19	16	14	24	26	24	30	23	100	23
33	Haddington - 23 Hardgate	M	17	11	11	14	11	12	13	20	15	22	18	15	92	15
34	Haddington - 2 Bothwell Bank, Hardgate	M	13	8	8	12	7	10	4	10	11	11	14	10	92	10
35	North Berwick - Police Station High Street	15	9	8	10	9	6	8	8	10	8	12	9	9	100	9
36	North Berwick - 108 High Street	8	1	9	11	10	8	10	9	10	8	10	10	9	100	9

Notes:

(1) See Appendix C for details on bias adjustment

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

New or Changed Sources Identified Within East Lothian During 2021

East Lothian Council has not identified any new sources relating to air quality within the reporting year of 2021.

Additional Air Quality Works Undertaken by East Lothian Council During 2021

East Lothian Council commissioned SWECO Consultants to carry out a Detailed Assessment of current and future Air Quality within the Musselburgh AQMA (Ref 22) to determine whether or not future exceedances of the NO_2 Annual Mean AQO would be likely to occur. The study assessed the likely impacts of the introduction of the Edinburgh LEZ and also future build-out of development sites included within the East Lothian Local Development Plan (Ref 22). The Report is now in draft form and will be submitted to the Scottish Government and SEPA for approval prior to being published. It is anticipated that the Report will be submitted by the end of July 2022.

The Report concluded that future exceedances of the NO_2 Annual Mean AQO will be unlikely and recommends that East Lothian Council commence proceedings to revoke the AQMA.

QA/QC of Diffusion Tube Monitoring

Diffusion Tubes for East Lothian Council were analysed during 2021 by Edinburgh Scientific Services. The method of preparation is 50% TEA in acetone.

The monitoring has been completed in adherence with the 2021 Diffusion Tube Monitoring Calendar.

An example test report is shown below.

·EDINBVRGH·
THE CITY OF EDINBURGH COUNCIL

Public Health & Protection
East Lothian Council
Council Offices
Haddington
EH41 3HA

For the attention of: Lynn Crothers

Date of Issue: 26 August 2021

The sampling tubes were not exposed by this laboratory and the concentration in air was calculated using exposure times stated by the sampling officer.

REPORT OF NITROGEN DIOXIDE ANALYSIS OF PASSIVE DIFFUSION TUBES

Received from East Lothian Council on 05/08/2021 Submitted by LA

Laboratory Reference	Client's Reference	Sampling point	Exposure start date	Exposure end date	Nitrogen dioxide in tube (mg/L)	* Nitrogen dioxide in air(µg/m3)
50552093	1	Muss - Newbigging	30/06/2021	04/08/2021	0.944	15.8
50552094	4	Muss - 87 High St	30/06/2021	04/08/2021	0.728	12.2
50552095	6	Muss - 147 High St	30/06/2021	04/08/2021	1.617	27.0
50552096	7	Muss - 183 High St	30/06/2021	04/08/2021	1.917	32.0
50552097	8	Muss - Mall Av	30/06/2021	04/08/2021	0.766	12.8
50552098	9	Muss - 45 Bridge St	30/06/2021	04/08/2021	1.008	16.9
50552099	10	Missing/removed shop alterations Muss - 150 North High St	30/06/2021	04/08/2021	-	-
50552100	11	Tranent - 89 High St	30/06/2021	04/08/2021	1.290	21.6
50552101	12	Tranent - 82 High St (Crolla's)	30/06/2021	04/08/2021	1.463	24.5
50552102	13	Tranent - 55 High St	30/06/2021	04/08/2021	1.222	20.4
50552103	14	Tranent - 26 High St (P.O)	30/06/2021	04/08/2021	1.248	20.9
50552104	15	Tranent - 58 Bridge St	30/06/2021	04/08/2021	0.882	14.8
50552105	16	Haddington - Lynn Lea	30/06/2021	04/08/2021	0.187	3.1
50552106	23	Muss - Co-located 133 N High St	30/06/2021	04/08/2021	1.058	17.7
50552107	24	Muss - Co-located 133 N High St	30/06/2021	04/08/2021	0.999	16.7
50552108	25	Muss - Co-located 133 N High St	30/06/2021	04/08/2021	1.071	17.9
50552109	26	Wallyford - 116 Salters Rd	30/06/2021	04/08/2021	1.291	21.6

ROBERT C BEATTIE
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Email: scientific.services @edinburgh.gov.uk

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REPORT OF NITROGEN DIOXIDE ANALYSIS OF PASSIVE DIFFUSION TUBES

Received from East Lothian Council on 05/08/2021 Submitted by LA

Laboratory Reference	Client's Reference	Sampling point	Exposure start date	Exposure end date	Nitrogen dioxide in tube (mg/L)	* Nitrogen dioxide in air (µg/m3)
50552110	27	Wallyford - 71 Salters Rd	30/06/2021	04/08/2021	0.997	16.7
50552111	28	Muss - 15 Bridge Strreet	30/06/2021	04/08/2021	1.110	18.6
50552112	29	Muss - 167 High Street	30/06/2021	04/08/2021	1.757	29.4
50552113	30	Muss - 137 High Street	30/06/2021	04/08/2021	1.088	18.2
50552114	31	Muss - 69 High Street	30/06/2021	04/08/2021	2.145	35.9
50552115	32	Muss - 86 High Street	30/06/2021	04/08/2021	1.012	16.9
50552116	33	Haddington - 23 Hardgate	30/06/2021	04/08/2021	0.772	12.9
50552117	34	Haddington - 2 Bothwell Bank, Hardgate	30/06/2021	04/08/2021	0.602	10.1
50552118	35	North Berwick - Police Station, High St	30/06/2021	04/08/2021	0.503	8.4
50552119	36	North Berwick - 108 High Street	30/06/2021	04/08/2021	0.634	10.6

Signed:

Simon Wood: Team Leader/ Technical Manager

The sample was examined under my direction, according to documented standard and in-house methods (Note 2) , details of which are available on request.

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF communiqué dated April 2017).

Notes:
1. No liability can be accepted for information given by customer
2. Non-accrediatied tests are indicated by "*"
3. Subcontracted tests are indicated by "#"
4. This report must not be reproduced except in full without written approval of the laboratory

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4 Marine Esplanade, Edinburgh EH6 7LU Tel 0131 555 7980, Fax: 0131 555 7987
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Diffusion Tube Annualisation

All diffusion tube monitoring locations within East Lothian recorded data capture 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 1.0 to the 2021 monitoring data using co-located tubes at 133 North High Street, Musselburgh.

.A summary of bias adjustment factors used by East Lothian Council over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2021	Local	-	1.0
2020	National	09/19	0.88
2019	Local	-	0.9
2018	National	09/19	0.9
2017	Local	-	1.0

No diffusion tube NO_2 monitoring locations within East Lothian required distance correction during 2021.

QA/QC of Automatic Monitoring

Data Management of the automatic monitoring sites 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.

- LSO Calibrations are carried out in line with the 2021 Diffusion Tube Monitoring Calendar.
- 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 2021 is provided below.
- Live data is available at Home page | Scottish Air Quality

Air Pollution Report 1st January to 31st December 2021

East Lothian Musselburgh N High St (Site ID: MUSS) These data have been fully ratified.

Only relevant statistics for LAQM are presented in the table. Cells with "-" indicate no data available or calculated:

Pollutant	NO µg/m³	NO_2 µg/ m³	NO_x as NO_2 µg/m³	PM_{10} µg/m³
Number Days Low	-	365	-	305
Number Days Moderate	-	0	-	0
Number Days High	-	0	-	0
Number Days Very High	-	0	-	0
Hourly Max	228.1	106.4	456.2	143.3
Daily Max	59.8	54	137.8	35.9
Annual Mean	7.6	16	27.5	10
98th Percentile of daily mean	33.4	-	-	20.4
90th Percentile of daily mean	-	-		15.3
99.8th Percentile of hourly mean	-	74.5	101.1	-
98th Percentile of hourly mean	33.4	53.7		25.8
95th Percentile of hourly mean	24.2	41.8	73.5	21.7
50th Percentile of hourly mean	4.3	12.8	20.1	9.2
% Annual data capture	99.9%	99.6	99.6%	85%

No automatic NO_2 monitoring locations within East Lothian required distance correction during 2021

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

The type of PM_{10}monitor utilised within East Lothian do not required the application of a correction factor.

All automatic monitoring locations within East Lothian recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data.

Table C.2 – Local Bias Adjustment Calculations

Checking Precision and Accuracy of Triplicate Tubes

AEA Energy & Environment
From the AEA group

Diffusion Tubes Measurements										Automatic Method		Data Quality Check	
Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 μgm^{-3}	Tube 2 μgm^{-3}	Tube 3 μgm^{-3}	Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of mean	Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data
1	06/01/2021	03/02/2021	25.0	26.0	25.0	25	0.6	2	1.4	25	100	Good	Good
2	03/02/2021	03/03/2021	12.0	18.0	14.0	15	3.1	21	7.6	15	100	Poor Precision	Good
3	03/03/2021	01/04/2021	14.0	16.0	14.0	15	1.2	8	2.9	14	100	Good	Good
4	01/04/2021	05/05/2021	19.0	17.0	19.0	18	1.2	6	2.9	18	100	Good	Good
5	05/05/2021	02/06/2021	17.0	16.0	18.0	17	1.0	6	2.5	16	100	Good	Good
6	02/06/2021	30/06/2021	14.0	13.0	12.0	13	1.0	8	2.5	10	100	Good	Good
7	30/06/2021	04/08/2021	17.0	16.0	17.0	17	0.6	3	1.4	13	100	Good	Good
8	04/08/2021	01/09/2021	15.0	15.0	17.0	16	1.2	7	2.9	13	100	Good	Good
9	01/09/2021	29/09/2021	18.0	18.0	19.0	18	0.6	3	1.4	16	98	Good	Good
10	29/09/2021	03/11/2021	17.0	17.0	16.0	17	0.6	3	1.4	15	100	Good	Good
11	03/11/2021	01/12/2021	16.0	16.0	20.0	17	2.3	13	5.7	15	100	Good	Good
12	01/12/2021	10/01/2022	22.0	20.0	19.0	20	1.5	8	3.8	22	100	Good	Good
13													
											Overall survey -->	Good precision	Good Overall DC

It is necessary to have results for at least two tubes in order to calculate the precision of the measurements

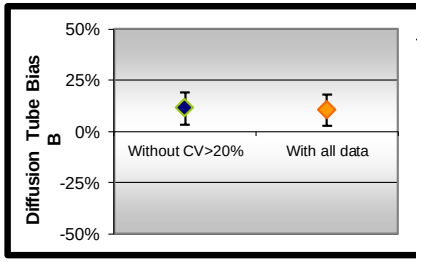
(Check average CV & DC from Accuracy calculations)

Site Name/ ID:	Musselburgh North High Street

Precision: 11 out of 12 periods have a CV smaller than 20%

Accuracy (with 95% confidence interval) without periods with CV larger than 20%	
Bias calculated using 11 periods of data	
Bias factor A	0.92 (0.85 - 0.99)
Bias B	9% (1% - 17%)
Diffusion Tubes Mean:	18 μgm^{-3}
Mean CV (Precision):	6
Automatic Mean:	16 μgm^{-3}
Data Capture for periods used:	100%
Adjusted Tubes Mean:	16 (15 - 17) μgm^{-3}

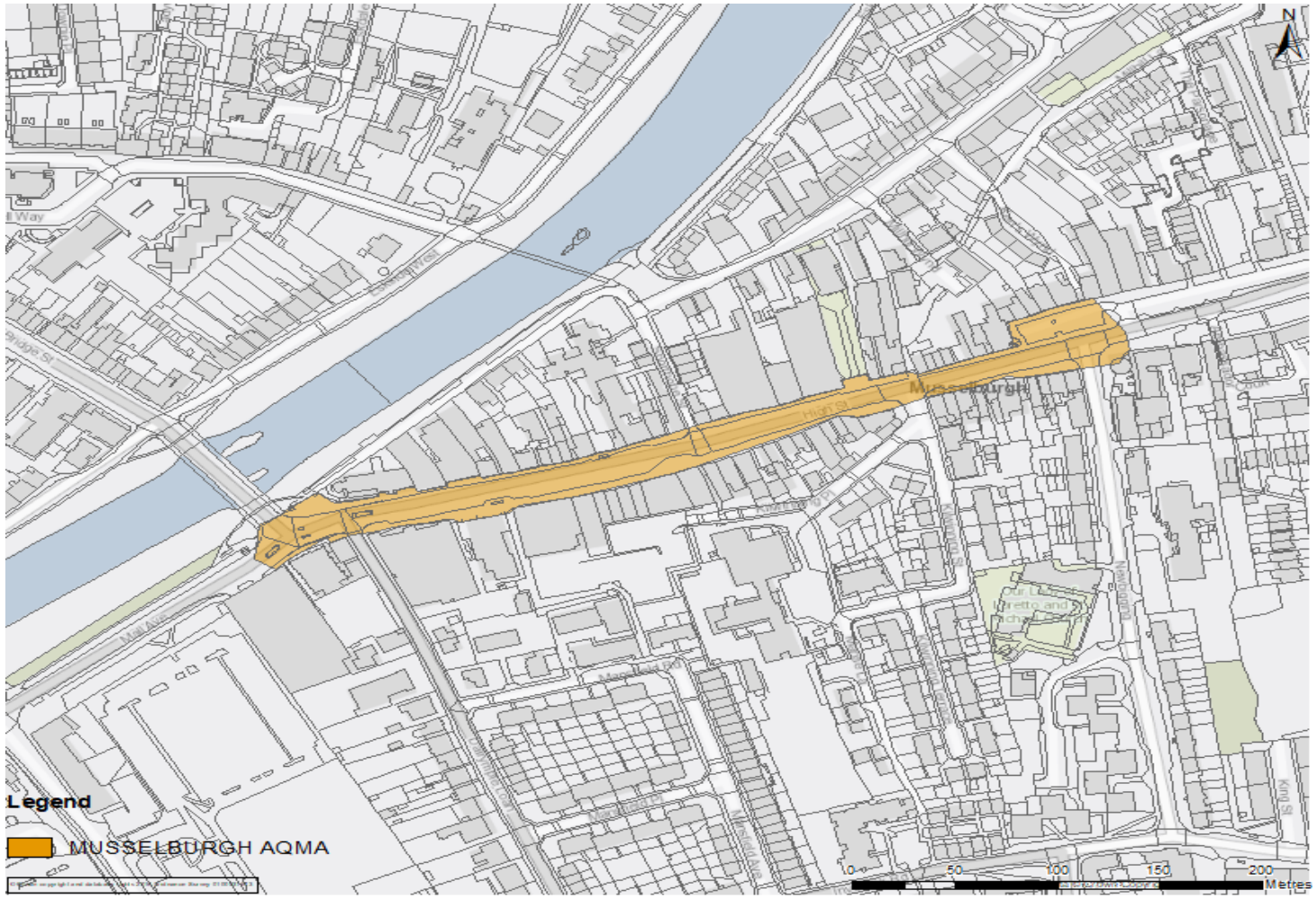
Accuracy (with 95% confidence interval) WITH ALL DATA	
Bias calculated using 12 periods of data	
Bias factor A	0.92 (0.86 - 0.99)
Bias B	8% (1% - 16%)
Diffusion Tubes Mean:	17 μgm^{-3}
Mean CV (Precision):	7
Automatic Mean:	16 μgm^{-3}
Data Capture for periods used:	100%
Adjusted Tubes Mean:	16 (15 - 17) μgm^{-3}



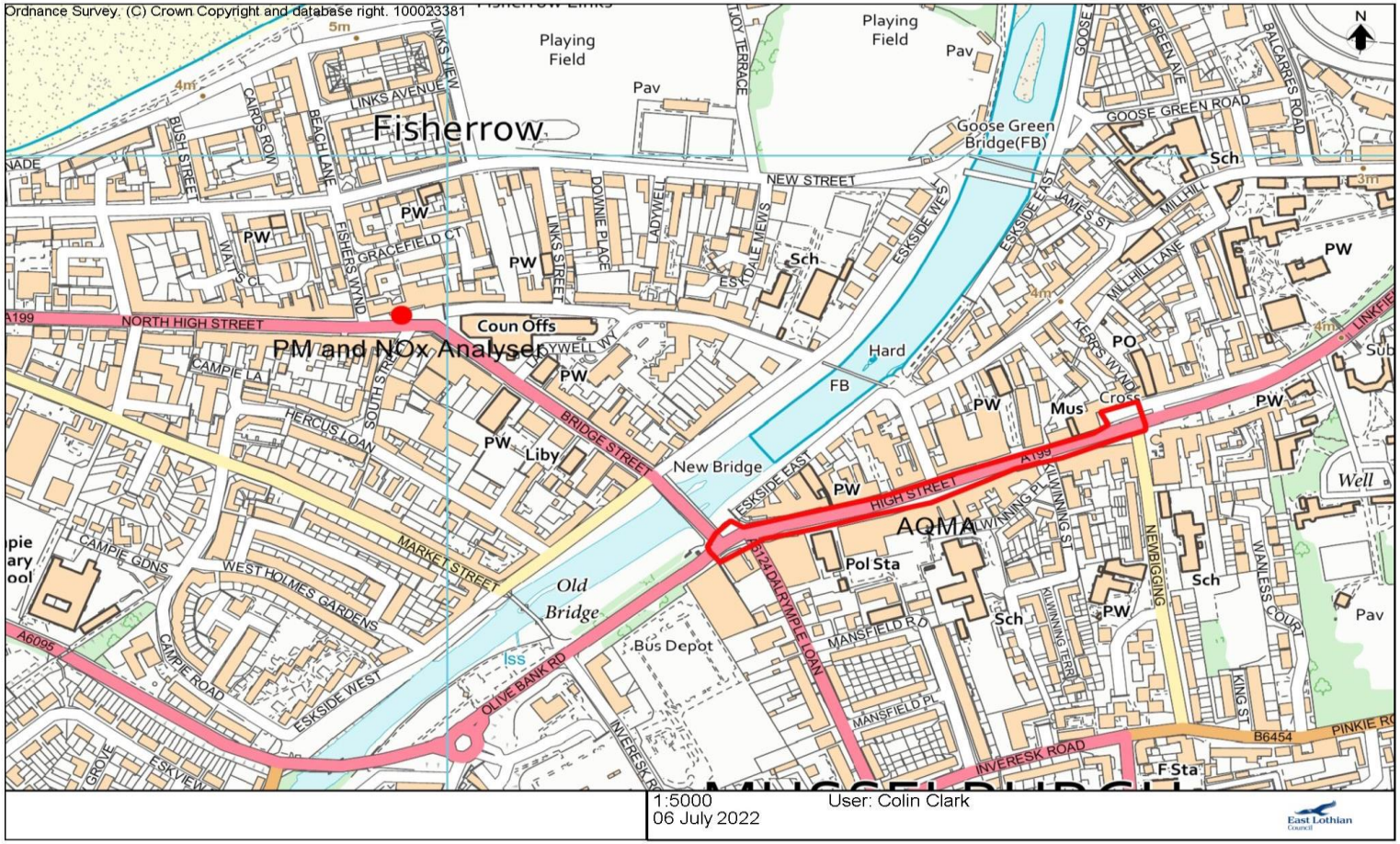
Jaume Targa, for AEA
Version 04 - February 2011

Appendix D: Maps

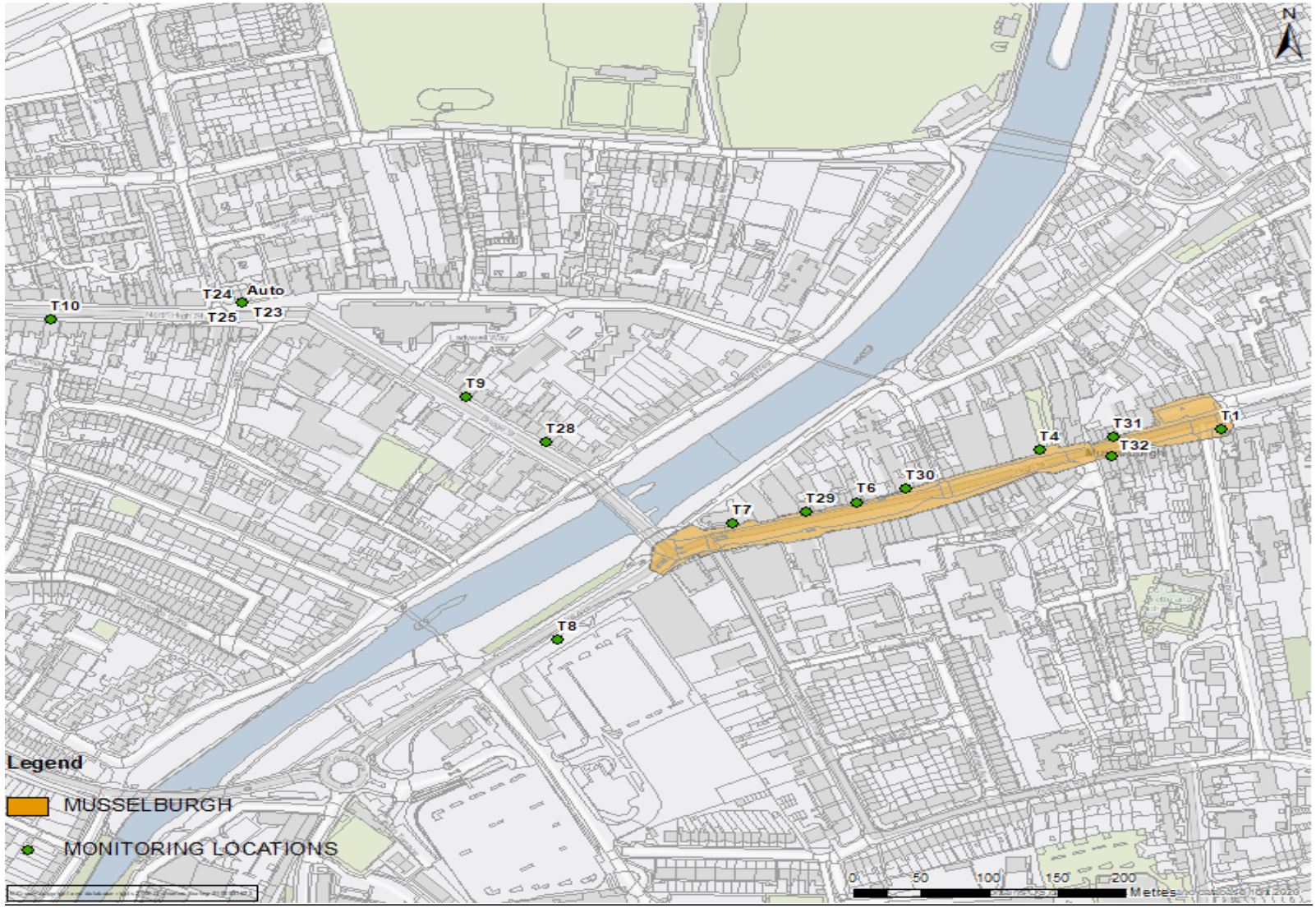
Map of AQMA in Musselburgh



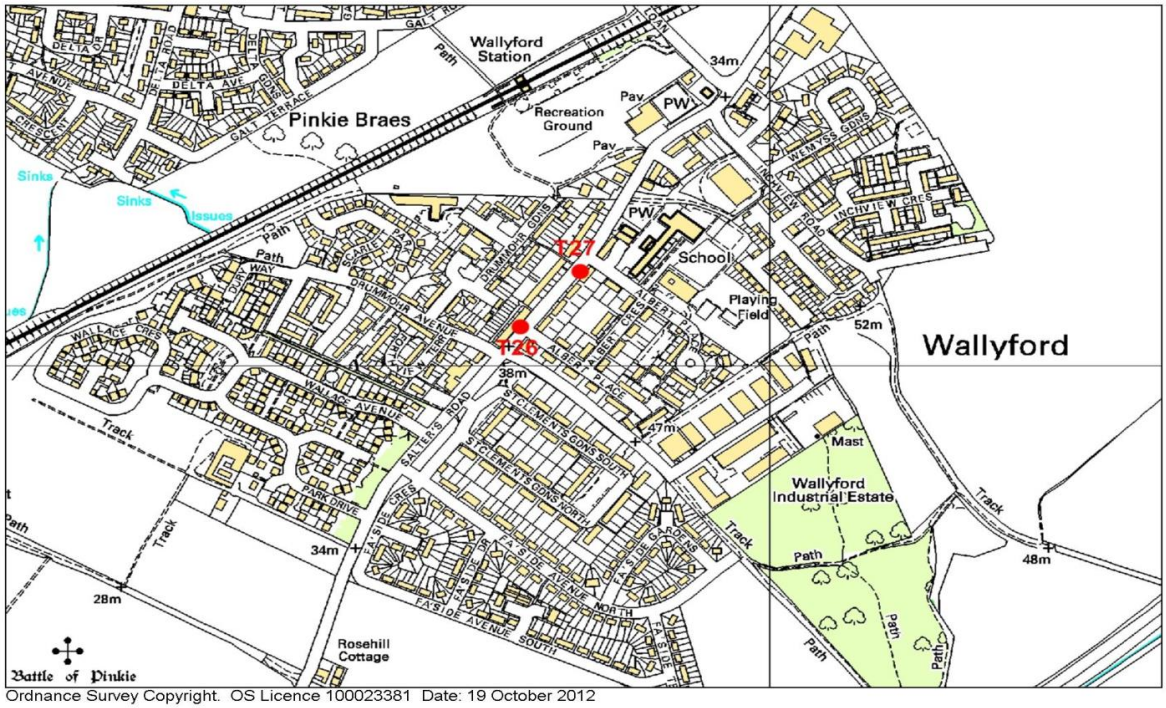
Map of Automatic Monitoring Site in Musselburgh



Map of Non-Automatic Monitoring Sites in Musselburgh

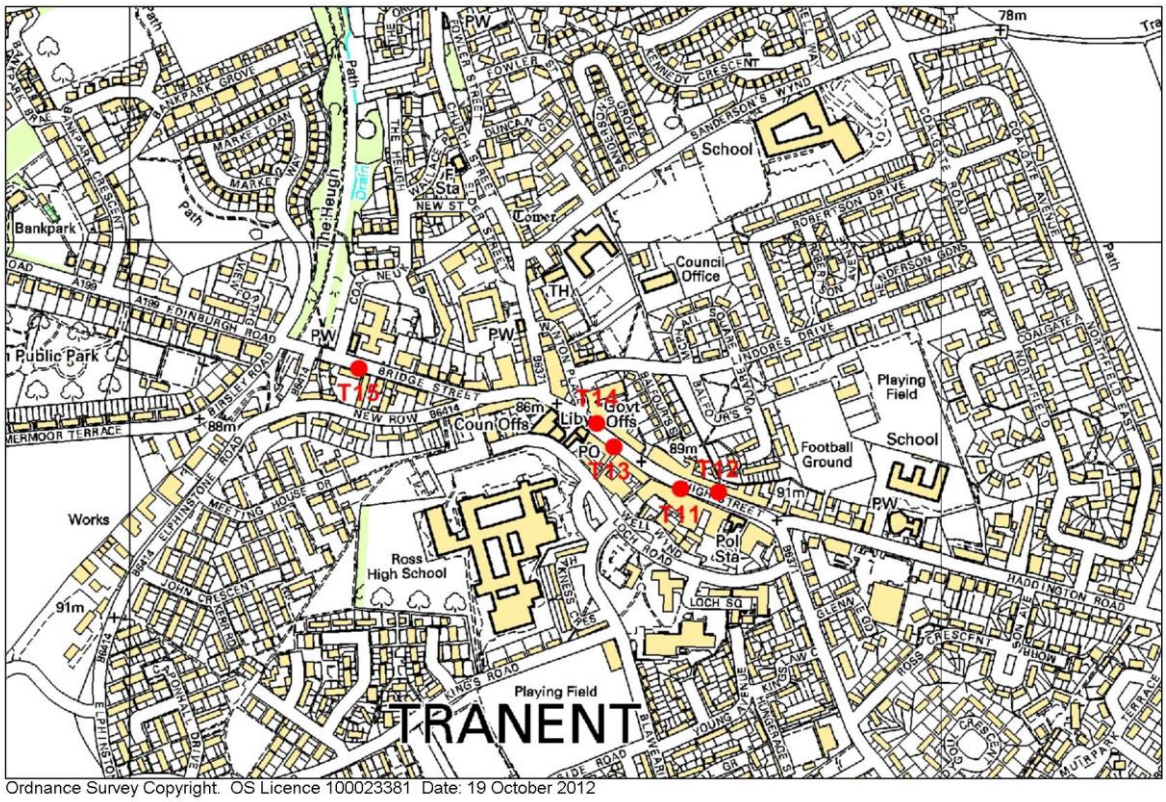


Map of Non-Automatic Monitoring Sites in Wallyford



Ordnance Survey Copyright. OS Licence 100023381 Date: 19 October 2012

Map of Non-Automatic Monitoring Sites in Tranent



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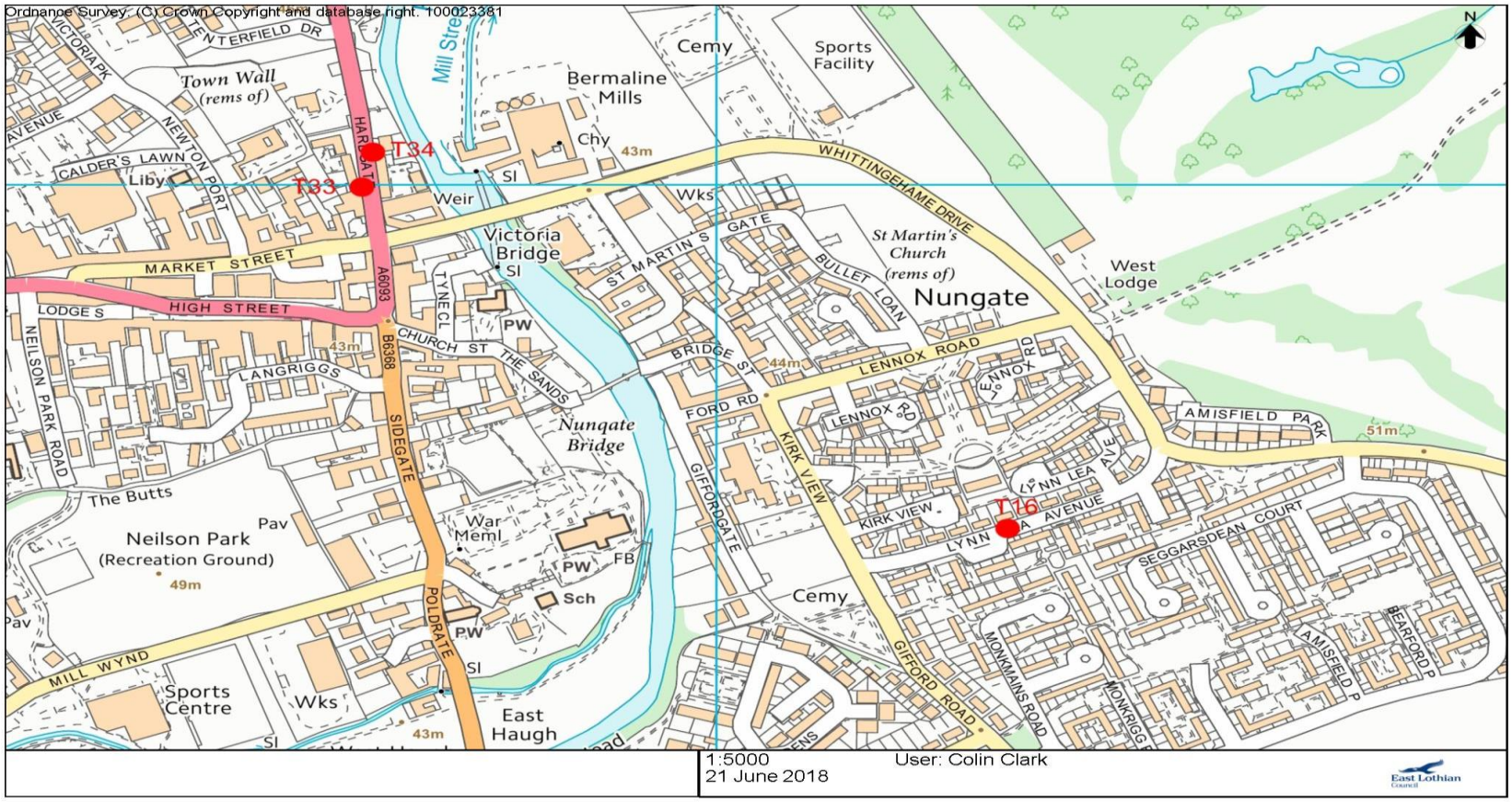
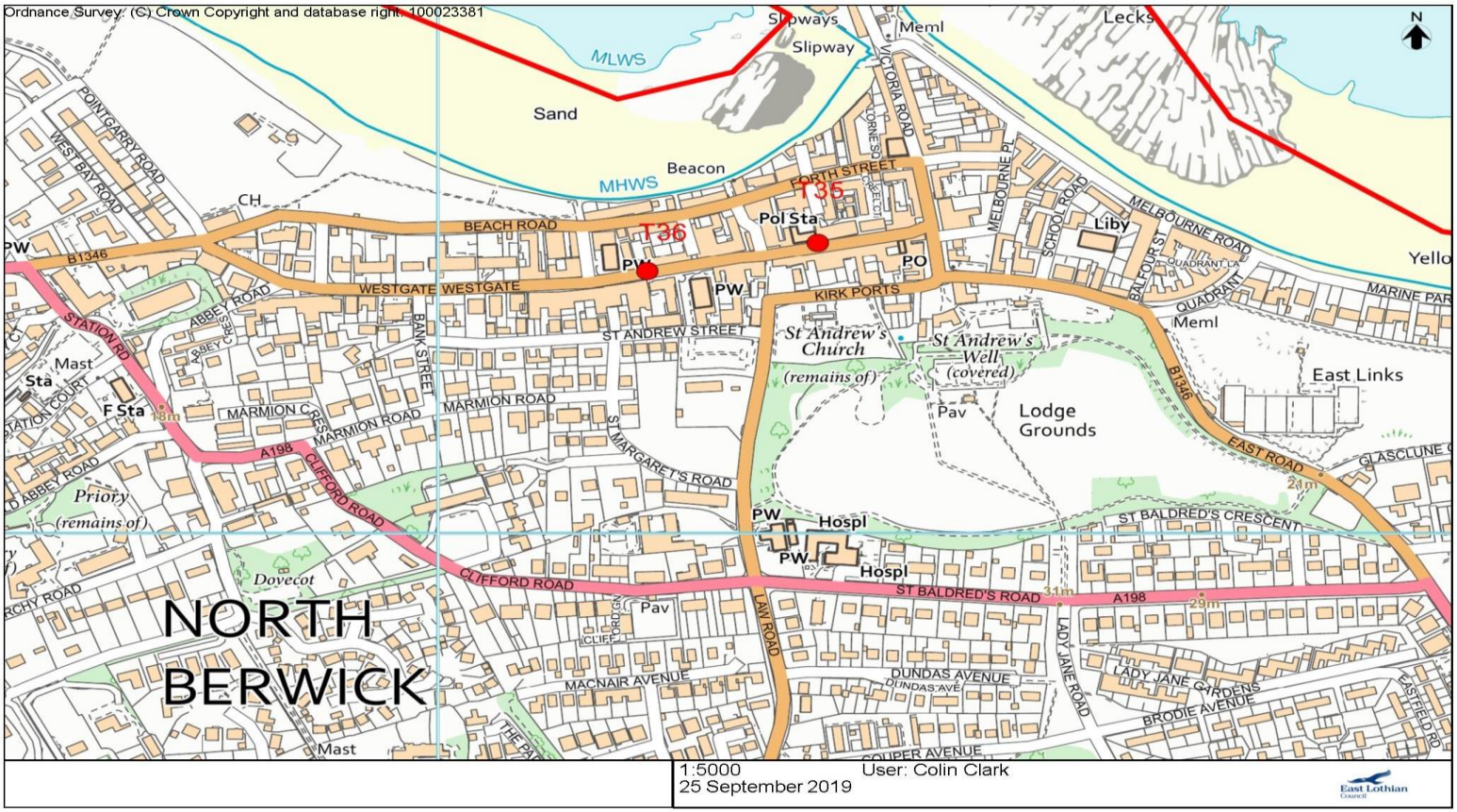
Map of Non-Automatic Monitoring Sites in Haddington



Map of Non-Automatic Monitoring Sites in North Berwick



Appendix E: Summary of Previous Rounds of Review and Assessment

Summary of Previous Review and Assessment Reports				
ROUND	**REPORT TYPE**	**REPORT DUE DATE**	**REPORT COMPLETION DATE**	**CONCLUSIONS**
2	**Updating & Screening Assessment**	**April 2003**	March 2004	No further assessments required for **Carbon Monoxide, Benzene, Lead and 1,3-Butadiene**. Detailed Assessments required for: **Nitrogen Dioxide** due to road traffic sources in Musselburgh High St **Sulphur Dioxide** due to industrial sources (Cockenzie Power Station and Lafarge Cement Works) **PM10** due to road traffic sources in Musselburgh High St and North High St and also due to industrial source (Cockenzie Power Station)
2-1	**Detailed Assessment**	**April 2004**	**April 2005**	**Nitrogen Dioxide** due to road traffic in Musselburgh High St expected to meet Objectives by target year of 2005. No Further Assessment required at this time. **Sulphur Dioxide** in vicinity of Cockenzie Power Station was not forecast to exceed Objectives. 15-minute mean Objective forecast to be slightly exceeded in vicinity of Lafarge Cement Works, although abatement equipment to be installed should ensure that Objective will be met. No further assessments required at this time. PM10 **Annual Mean Objective forecast to be exceeded in Musselburgh High St due to roadwork's and Cockenzie due to emissions from Coal Plant at Cockenzie Power Station. However, results were based on Osiris monitoring system and use of correction factors. Further Assessments to be carried out by East Lothian Council using TEOM Analyser for road traffic sources in Musselburgh and by SEPA using Gravimetric Sampler for industrial source in Cockenzie.**
2-2	**Progress Report**	**April 2005**	**August 2005**	**Nitrogen Dioxide** levels due to road traffic sources continue to comply with Objectives within Musselburgh and throughout East Lothian. PM10 **Further Assessments due to road traffic sources in Musselburgh and industrial source in Cockenzie still to be completed and results to be incorporated in Updating and Screening Assessment Report due in April 2006.**
3	**Updating & Screening Assessment**	**April 2006**	**August 2006**	No exceedences of any Objectives forecast. No Further Assessments required
3-1	**Progress Report**	**April 2007**	**July 2007**	**Nitrogen Dioxide** levels due to road traffic sources in Musselburgh and proposed expansions of Musselburgh Racecourse and Wallyford Village continue, and are forecast, to comply with Objectives. **PM10** levels due to road traffic in Musselburgh complied with using local correction factor but exceeded using national correction factor. TEOM unit to be replaced with a BAM unit following results of Equivalence Study carried out by DEFRA.
3-2	**Progress Report**	**April 2008**	**February 2009**	**Nitrogen Dioxide** levels due to road traffic sources in Musselburgh and proposed expansions of Musselburgh Racecourse and Wallyford Village continue, and are forecast, to comply with Objectives. Passive monitoring to be introduced in Wallyford.

Summary of Previous Review and Assessment Reports				
Round	**Report Type**	**Report Due Date**	**Report Completion Date**	**Conclusions**
4	**Updating & Screening Assessment**	**April 2009**	**November 2009**	**PM10 and Nitrogen Dioxide** levels in Musselburgh will require to be subject of a Detailed Assessment due to the Biomass Unit located at Queen Margaret University. The results of the Updating and Screening Assessment carried out for all other pollutants indicates that current Air Quality Objectives are being complied with.
4-1.1	**Detailed Assessment of Nitrogen Dioxide and PM10 due to QMU Biomass Unit**	**2010**	**October 2010**	**PM10 and Nitrogen Dioxide** levels continue to be met
4-1	**Progress Report**	**April 2010**	**October 2010**	All AQO's being complied with
4-2	**Progress Report**	**April 2011**	**June 2011**	Detailed Assessment of **Nitrogen Dioxide** required for Musselburgh High Street. All other AQO's being complied with.
4-2.1	**Detailed Assessment of Nitrogen Dioxide in Musselburgh due to Road Traffic**	**2012**	**May 2012**	AQMA required for Bridge Street and High Street due to forecast exceedence of Annual Mean AQO if additional monitoring confirms predicted exceedences.
5	**Updating &Screening Assessment**	**April 2012**		AQMA required for Bridge Street and High Street due to forecast exceedence of Annual Mean AQO ***if additional monitoring confirms predicted exceedences in 2012.***
5-1	**Progress Report**	**April 2013**	**August 2013**	AQMA to be declared in Musselburgh in relation to exceedences of NO2 Annual Mean Objective. Further Assessment to be commissioned.
5-1.1	**Further assessment**	**November 2014**	**June 2014**	It is estimated that ambient NOx reductions in the AQMA of between 0% and 27% are required in order to achieve compliance with the annual mean NO2 objective. The source apportionment exercise indicates that emissions from buses form the largest contribution at all locations along the High St AQMA. Modelling of the mitigation scenarios agreed with the Council indicates that an integrated package of interventions would provide the best NOx reductions. Measures that reduce overall traffic, reduce queuing and reduce bus numbers, where appropriate, will reduce road NOx significantly.
5-2	**Progress Report**	**April 2014**	**August 2014**	Monitoring results for 2013, indicate that the current AQMA boundary includes all relevant sources and does not require revocation or amendment at this time. NO_2 levels in AQMA continue to exceed or remain very close to objective.
6-1	**Updating & Screening Assessment**	**April 2015**	**September 2015**	Monitoring results for 2014, indicate that the current AQMA boundary includes all relevant sources and does not require revocation or amendment at this time. NO_2 levels in AQMA continue to exceed or remain very close to objective. Progress is being made wrt development of Action Plan with draft expected early 2016.
6-2	**Annual Progress Report**	**June 2016**	**July 2016**	No exceedances of Air Quality Objectives with downward trend noted in NO_2.Action Plan being progressed. Awaiting results of Micro-simulation traffic model to allow traffic-related mitigation measures to be identified for inclusion in Action Plan.
6-3	**Annual Progress Report**	**June 2017**	**July 2017**	Exceedances of NO2 Annual Mean recorded at T6 and T31.
6-4	**Annual Progress Report**	**June 2018**	**June 2018**	No exceedances of any Air Quality Objectives

6-5	**Annual Progress Report**	**June 2019**	**June 2019**	No-exceedances of any Air Quality Objectives
6-6	**Annual Progress Report**	**June 2020**	**June 2020**	No exceedances of any Air Quality Objectives
6-7	**Annual Progress Report**	**June 2021**	**June 2021**	No exceedances of any Air Quality Objectives. ELC to proceed to a Detailed Assessment of air quality within the AQMA. If future exceedances are deemed unlikely then AQMA to be revoked.
6-8	**Annual Progress Report**	**June 2022**	**July 2022**	No exceedances of any Air Quality Objectives
6-9	**Detailed Assessment of Air Quality within AQMA**		**July 2022**	Future exceedances unlikely. Recommend revocation of AQMA.

Appendix F: Case Study – Implementing a Strategic Active Travel Corridor

Location and Dates: Musselburgh, Craighall (Site MH1) 2018-2021

Elements of a High Quality Planning Service this study relates to:

- Quality of outcomes
- Quality of service and engagement
- Governance

Key Markers:

- Cross-sector stakeholders, including industry, agencies and Scottish Government
- Corporate working across services to improve outputs and services for customer benefit

Key Areas of Work:

- Active Travel
- Interdisciplinary Working

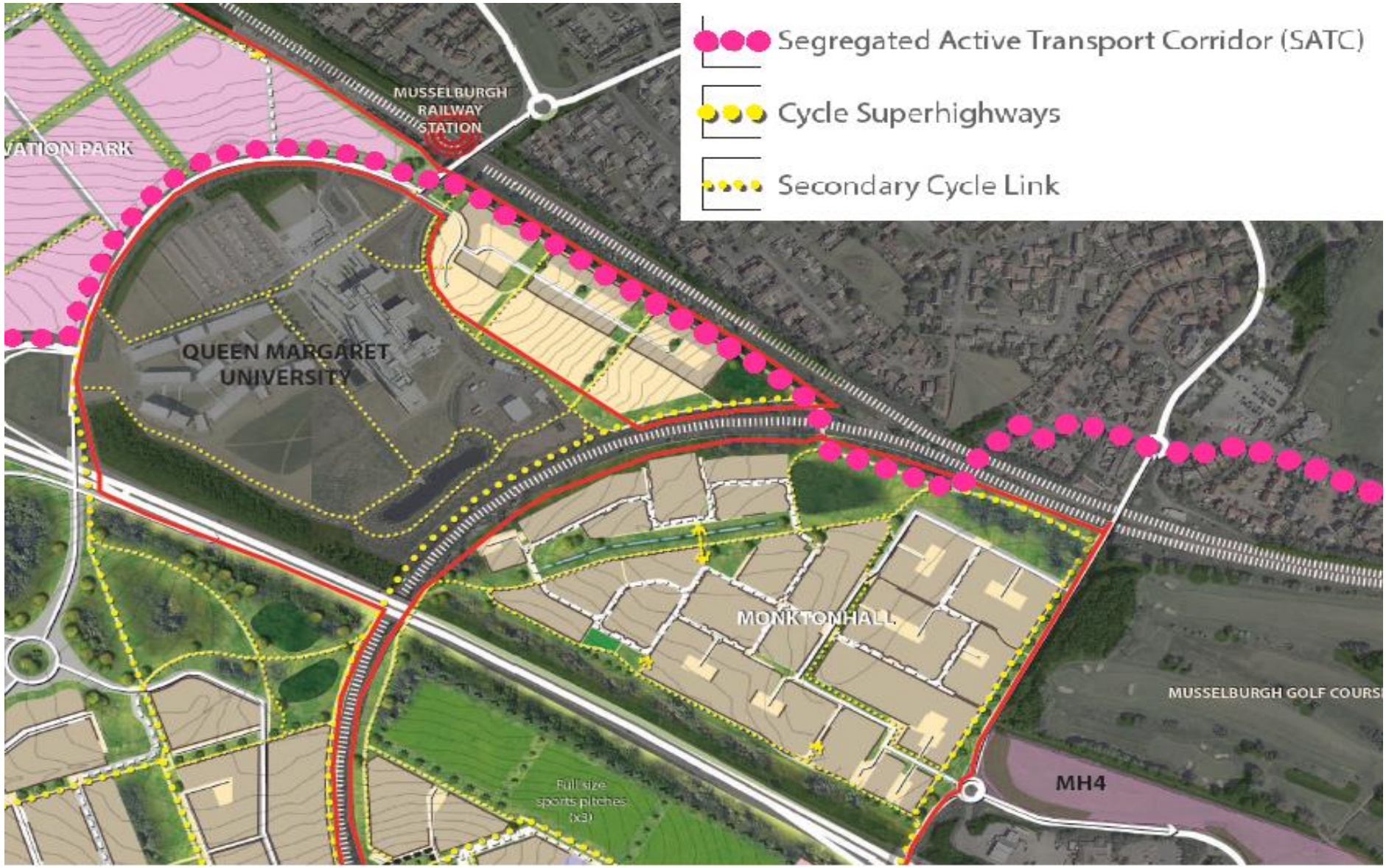
Stakeholders Involved:

- General Public
- Key Agencies

Overview:

Following the adoption of the Local Development Plan in September 2018, the Planning Service has continued to work collaboratively across the Council with developers, Key Agencies and the wider public in order to implement the LDP's policies and proposals. Both the LDP and the Local Transport Strategy (LTS) promote an enhanced active travel network that is integrated as part of the Green Network and with public transport options. As part of this approach, Proposal T3 of the LDP promotes a Segregated Active Travel Corridor (SATC) for East Lothian which aims to encourage a priority route for pedestrians and cyclists to provide a realistic alternative to the private car, including for longer journeys. The route will generally follow the A199 corridor (former A1) and will link the western boundary of East Lothian with Edinburgh through to Dunbar. Planning contributions are being secured from all housing and employment sites within a 1.2km buffer to the SATC. The section of the route from Wallyford to Edinburgh will deviate from the road and continue westwards to the East Lothian Council boundary by closely following the main East Coast rail line route. This route will provide a safer, better connected active travel route through East Lothian, and will link to other cycling and walking routes within the settlements that it passes that lead to key destinations, including town centres, transport interchanges and workplaces.

The LDP allocated land at Craighall on the outskirts of Musselburgh for a mixed use development including 1,500 homes, around 41 ha of employment land, a new local centre, a new primary school and community uses as well as infrastructure and associated works. This site is one of the most accessible in East Lothian, is well served by public transport and lies close to south east Edinburgh and Midlothian. This strategic land allocation offered significant opportunities to provide new and improved connections, including for active travel, through the site and in the wider geographical area. Both Musselburgh and Craighall are located approximately 4-6 miles from the centre of Edinburgh and therefore within easy cycling distance for commuters.


Segregated Active Transport Corridor (SATC)
Cycle Superhighways
Secondary Cycle Link
MUSSELBURGH RAILWAY STATION
QUEEN MARGARET UNIVERSITY
MONKTONHALL
MUSSELBURGH GOLF COURS
MH4
Full size sports pitches (x3)

Goals

The Council's goal was to ensure that the Craighall site (MH1 site) maximises its potential for superb walking and cycling connectivity within and beyond its red line boundary. It was important that any identified pedestrian and cycle routes around and within the site would help to deliver a permeable high quality active transport network that would incorporate part of the East Lothian Segregated Active Travel Corridor and as much as possible be part of the wider green network. Our aim was to make the best use of the existing road and rail underpasses in order to provide safe and attractive routes connecting the areas of the site with Musselburgh to the north. Our goal was to work in co-operation with developers and our key partners such as Queen Margaret University and Network Rail in order to utilise any synergistic opportunities ensuing from the ongoing Musselburgh Active Toun (MAT) project, which is the local active travel network being developed within Musselburgh, and the development of the Craighall site.

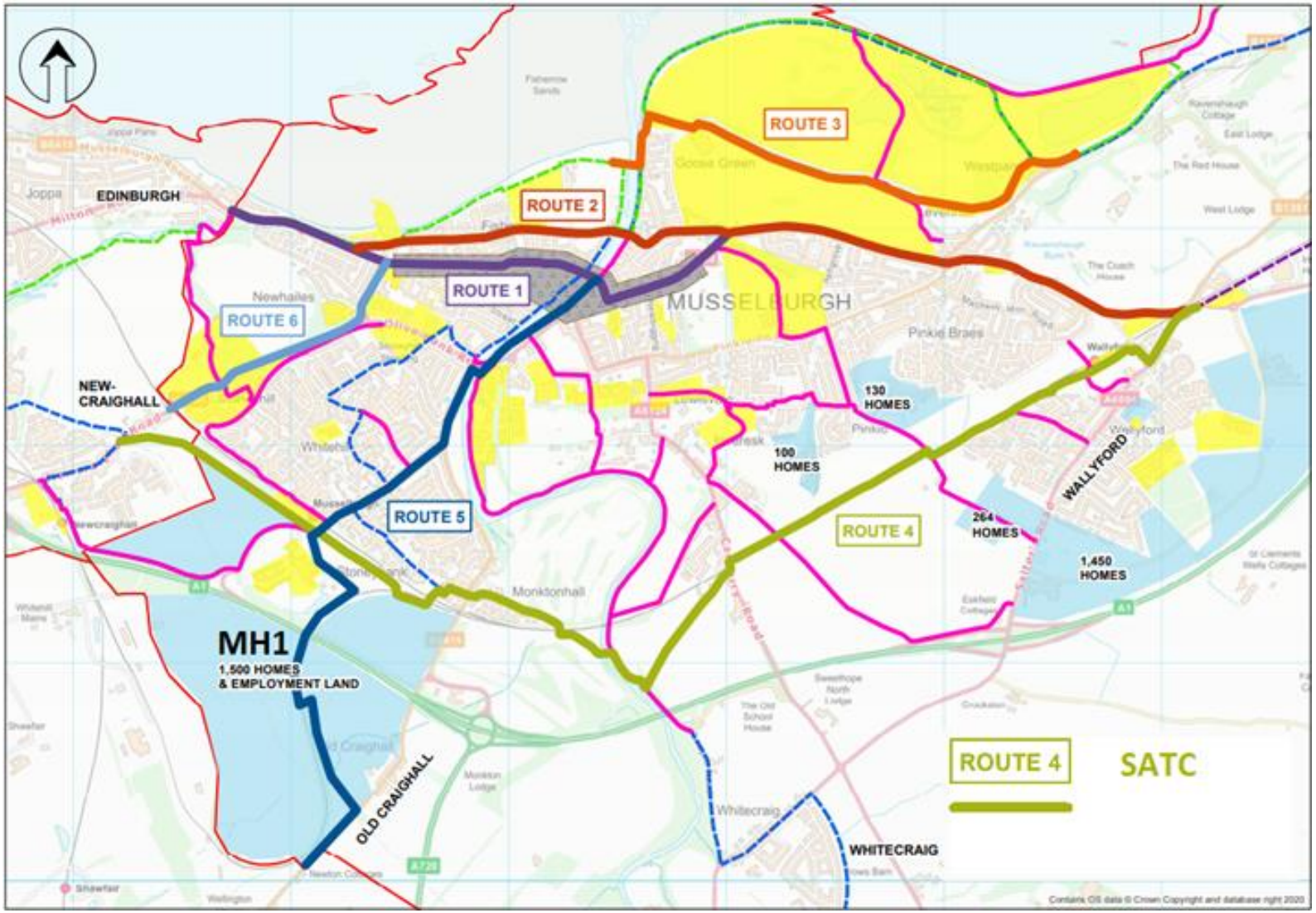
Outcomes:

The Planning Service and Road Services applied for funding from the Sustrans' Places for Everyone programme to begin to plan for the impact of an expanding Musselburgh on its transport network. The funding received was used to engage consultants AECOM who developed The Musselburgh Active Travel Network Masterplan promoting a network of paths and routes to encourage more people to walk, cycle and travel sustainably in and around Musselburgh. The Masterplan proposed a network of nine active travel routes, and the Council is currently taking three of these forward to Concept Design stage. While meeting many other objectives, the provision of sustainable infrastructure to encourage walking and cycling and reduce car trips, is also a key component of the Council's response to the recently declared climate emergency. Public consultation on two full routes (Route 2 – A199 Edinburgh Road to Wallyford Toll Roundabout and Route 5 – Old Craighall to Musselburgh town centre) and the western section of Route 1 (Milton Road East junction to New Street) began in July 2021.

Since 2019 a number of planning applications have been approved for the Craighall site and currently Persimmon Homes is developing its most easterly parts at Monktonhall. This work is progressing fast with some homes completed and occupied by first residents. The

Planning Service seeks to ensure that active travel routes are in place as early as possible to encourage new residents to make sustainable travel choices as soon as possible.

Also, in 2019 a project manager post was created within the Development Directorate to ensure that the full mixed use Craighall site can be delivered on time and with a maximum positive impact from the Council services, key partners and stakeholders. As a major development part funded by City Deal this is a complex development with potentially competing demands on each of the partners of this project (ELC, Scottish Government, UK Government, Queen Margaret University and Persimmon Homes). These competing demands need to be reconciled to deliver the employment opportunities and economic growth required by City Deal alongside the delivery of 1200 new homes, as well as excellent active travel routes.



As a result of this coordinating role of the project manager and close working practice between the Planning and Roads Services the first part of the SATC connecting QMU with Musselburgh station has recently been completed and sets the standard for the rest of the route.

This work ties in with ongoing cycling infrastructure development work at Musselburgh station and the Brunton in central Musselburgh where a sustainable and active transport hub with an e-bike sharing scheme is being established by SESTRAN with the support of East Lothian Council. It is expected that another part of the SATC that is within the Persimmon Homes site will be fully completed by Spring 2022. These pieces of cycling infrastructure within the Craighall site will be linked through the existing rail underpasses to a wider active transport network in Musselburgh being developed through the MAT project. It is important to highlight that the Council is working very closely with Network Rail to ensure that these newly created active travel routes within Craighall are being expanded into Musselburgh without any delay. The SATC route will be connected to the proposed MAT route network, but it will also connect with, Prestonpans, Wallyford and Tranent so will provide better infrastructure for cycling between towns.

Name of key officer:

For the Planning Service of East Lothian Council: Paul Zochowski, Daryth Irving

For the Roads Services of East Lothian: Peter Forsyth, Iain Reid

Project Manager Development (Craighall): Catherine Molloy

Sustrans Project Officer: Daniel Prince

Quotes

"The creation of an active travel corridor across East Lothian will be a significant boost to encourage more people to walk, wheel or cycle across the local authority area. We are very pleased to be part of the creation of this corridor through supporting Musselburgh Active Toun and a section of the SATC which runs parallel to the railway line eastwards from Musselburgh railway station."

Daniel Prince, Sustrans Project Officer

"East Lothian Council planning officers have proactively collaborated with Persimmon Homes and other key stakeholders in the local area to ensure that the SATC which runs through our residential development at Craighall (MH1) was complete in advance of our first housing occupation. Early delivery of the active travel infrastructure in this location will provide both our future residents and the wider population of Musselburgh with a genuine opportunity to opt for more sustainable methods of travel."

Neil Parry, Managing Director Persimmon Homes East Scotland Ltd

Glossary of Terms

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

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