Annual Progress Report (APR)

2019 Air Quality Annual Progress Report (APR) for East Lothian Council

In fulfilment of Part IV of the Environment Act 1995

Local Air Quality Management

Version 2.0, September 2019

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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) if monitoring results obtained from new monitoring locations, in addition to existing monitoring locations, confirmed that the NO_2 annual mean AQO had been exceeded in Musselburgh High Street. In November 2013, following completion of the 2013 Progress Report (Ref 1), 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.

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 (Ref 3) was completed in September 2014 and confirmed the findings of the previous Detailed Assessment in 2012 (Ref 4), namely that there are likely to be continued exceedences of the annual mean NO_2 objective where relevant exposure exists.

The Further Assessment (Ref 3) 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 (Ref 3) 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 exceedences 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 exceedences of the NO_2 Annual Mean AQO within the AQMA were again recorded at two locations. There were no other exceedences 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 exceedences of any objectives, including the NO_2 Annual Mean AQO.

This Progress Report and monitoring results from 2018 again confirmed no exceedence of any Air Quality Objectives, including within the AQMA. If continued monitoring in future years confirm no exceedences of Air Quality Objectives, with the last exceedence being recorded in 2016, East Lothian Council will consider revoking the AQMA in 2021/22.

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 01/01/18 to 31/12/18 indicate no exceedences of the NO_2 Annual Mean AQO. East Lothian Council published the Musselburgh Air Quality Action Plan (Ref 8) 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. In addition to the continuation of the Eco Stars Fleet Recognition, launched in February 2017, East Lothian Council provided a City Tree, which is specifically designed to combat traffic pollution, within the Musselburgh AQMA. The tree was commissioned in September 2018, fully funded by the Scottish Government through the East Central Scotland Vehicle Emissions Partnership. An image of a City Tree is shown below:

Unfortunately, there have been issues with the irrigation and operating systems of not only our CityTree but those installed across Europe. Green City Solutions (GCS), who developed and manufactured the CityTree, have taken the decision to stop selling the current model and are developing a new version which will be more resilient. As with all new technologies, issues have arisen whilst the CityTree has been operating in the field and these issues need to be addressed. Version 2.0 City Tree is expected to be launched at the end of 2019.

Consequently, Evergen Systems, who supply the CityTree in the UK, have committed to support East Lothian Council and will modify/replace our CityTree when fully working and tested systems become available.

In the interim, East Lothian Council have been assessing an alternative air cleaning device. In brief, a mechanical device that is significantly more discreet than the CityTree is currently being developed in India by Evergen themselves. East Lothian Council have negotiated with Evergen to have this device scoped for installation in Musselburgh, where we would be the first authority in the UK to have it installed. On presentation of a report to Scottish Government, we have been supported financially for this project.

As for our CityTree in the short term, Evergen will either remove it or replant it. Replanting will cost Evergen in the region of £8k so they will be guided by a business risk case given the back systems issues currently being experience

Local Priorities and Challenges

Some of the mitigation measures outlined in the AQAP continue to be very challenging (both financially and technically) to implement. 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.

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:

https://www.eastlothian.gov.uk/info/210568/environmental_health/12172/pollution/4

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:

http://www.scottishairquality.co.uk/

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1. Local Air Quality Management

This report provides an overview of air quality in East Lothian during 2018. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) (Ref 11) and the relevant Policy and Technical Guidance documents (Ref's 12 and 13).

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		Date to be achieved by
	Concentration	Measured as	
Nitrogen dioxide (NO_2)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	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
	18 µg/m^3	Annual mean	31.12.2010
Particulate Matter ($PM_{2.5}$)	10 µg/m^3	Annual mean	31.12.2020
Sulphur dioxide (SO_2)	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	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
Lead	0.25 µg/m^3	Annual Mean	31.12.2008

2. Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority must prepare 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 https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=368

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Pollutants and Air Quality Objectives	City / Town	Description	Action Plan
High Street, Musselburgh	NO_2 annual mean	Musselburgh	High Street, Musselburgh (A199) from its junction with 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

2.2 Progress and Impact 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 2018 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 14) 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. The Active Travel Improvement Plan (ATIP) for East Lothian, an associated plan of the LTS, will be reviewed and recommended to Council later this year.

East Lothian Council engaged Consultants to look at the 'case for change' to review current transport problems and opportunities and look to identify appropriate solutions to improve transport systems. This is a wide ranging review and will consider the existing and proposed transport interventions identified within the current Local development plan, evaluate the growth agenda and external considerations, which may re-determine some transport mitigation.

- **Improving Links with Local Development Plan (Measure No 2)** - The East Lothian Local Development Plan 2018 (Ref 15) was adopted on 27th September 2018. The adopted LDP 2018 sets out the strategy for change and growth in the area over the next 10 years. The Council is committed to environmental improvements including air quality, and the adopted LDP 2018 includes various interventions, strategies and policies to manage change and growth in a sustainable manner and where it is necessary to mitigate any resultant environmental effects.

  The LDP 2018 identifies how air quality issues arising as a result of development related activity and increases in traffic will be managed across the plan area. This will be through the implementation of specific policies at the planning application stage and other project level decisions.
  As part of delivering the interventions identified in the LDP 2018, the Council has recently adopted its Developer Contributions Framework Supplementary Guidance. This provides more detailed guidance on how much (and in what locations) new developments will be required to contribute towards addressing air quality issues that arise through development related impacts.
  The Council has also recently adopted its Town Centre Strategies Supplementary Guidance. This Supplementary Guidance provides an agreed

strategic approach to the issues faced by each town centre, and will inform future decision making to help achieve their sustained long-term improvement. Improving air quality is one of the actions for improvements to Musselburgh Town Centre which is designated as an Air Quality Management Area. These improvements will be delivered through Transport related interventions as set out in the adopted LDP 2018, specifically Policy T19, PROP T20: Transport related Air Quality Measures and PROP T21: Urban Traffic Control System. For Tranent, there is no designated Air Quality Management Area, however maintaining and improving air quality forms part of proposed improvements (Policy T26: Transport Improvements at Tranent Town Centre) in the LDP 2018.

The LDP 2018 is currently under review in preparation for the next Local Development Plan. As part of this, results from ongoing monitoring of air quality will be used to identify whether there have been any changes that would need to be considered as part of future strategies for the forthcoming LDP.

- **Enforcement of idling provisions of the Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003 (Measure No 4)** – East Lothian Council Road Services are in discussions with NSL Ltd, who provide the Parking Attendant Service within the County, and are exploring the technicalities of them taking on this role. To alleviate the effect of indiscriminate parking at the eastbound bus stop on the High Street during peak hour traffic, a parking attendant has been instructed to monitor and take appropriate action to keep traffic moving.
- **Eco Stars Fleet Recognition Scheme (Measure No 6)** – East Lothian Council secured funding from the Scottish Government and, in February 2017, formally launched an Eco Stars Fleet Recognition Scheme within East Lothian. The scheme provides recognition for best operational practices and guidance for making improvements to fleet operators with the ultimate aim of reducing fuel consumption and reduced emissions. The Council's own fleet, together with Commercial Fleet Operators will be encouraged to engage with the scheme which will have a positive impact on emissions, including within

the AQMA in Musselburgh High Street. East Lothian Council are members of the scheme and are proud to have recently been awarded a 5 Star rating. The scheme had 59 members in 2017, 100 members in 2018 and now has 136 members. Funding has been secured from the Scottish Government to allow the scheme to continue to operate and expand through 2019/20.

- **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.
- **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 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: http://switchoffandbreathe.org/about/
- **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: https://www.eastlothian.gov.uk/info/210568/environmental_health/12172/pollution/4

East Lothian Council expects the following measures to be completed over the course of the next reporting year:

- **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.

- **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.

No Progress on the following measures has been made:

- **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)

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	Progress to Date	Estimated Completion Date	Comments
1	Improving Links with Local Transport Strategy	Transport planning and infrastructure		ELC Road Services					The Local Transport Strategy (LTS) and associated action plans were adopted by Council on 30th October 2018. The Active Travel Improvement Plan (ATIP) for East Lothian, an associated plan of the LTS will be reviewed and recommended to Council later this year.	Oct 2018	

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	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. Future traffic growth is anticipated to arise as a result of growth from existing users of the transport network and form committed developments (i.e. development that already has planning permission) as well as from new planned and uncommitted development across East Lothian. The proposed transport mitigation measures set out in the LDP are anticipated to help improve Air Quality within the Musselburgh AQMA.	ELC Planning Service					The East Lothian Local Development Plan 2018 was adopted on 27th September 2018. The LDP 2018 is currently under review in preparation for the next Local Development Plan. As part of this, results from ongoing monitoring of air quality will be used to identify whether there have been any changes that would need to be considered as part of future strategies for the forthcoming LDP.	Completed Sep 2018	Ongoing

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
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					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.	Ongoing	

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	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.	Autumn 2018	
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	

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. 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 scheme had 59 members in August 2017, 100 members by 2018 and now has 136 members. The scheme will be continued through 2019/20 when it is anticipated membership numbers will increase further	Established Feb 2017	Ongoing

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	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					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.	Ongoing	

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
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					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)	
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.	Completed Sep 2018	Ongoing

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
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 2019/20 and was expanded further when Stirling Council became a partner authority in 2019.	Completed 2003	Ongoing
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					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.	Ongoing	

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	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					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.	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 Councils website at: https://www.eastlothian.gov.uk/info/210568/environmental_health/12172/pollution/4	Completed 2008	Ongoing

2.3 Cleaner Air for Scotland

Cleaner Air for Scotland – The Road to a Healthier Future (CAFS) (Ref 16) is a national cross-government strategy that sets out how the Scottish Government and its partner organisations propose to reduce air pollution further to protect human health and fulfil Scotland's legal responsibilities as soon as possible. A series of actions across a range of policy areas are outlined, a summary of which is available at https://www.gov.scot/Publications/2015/11/5671/17. Progress by East Lothian Council against relevant actions within this strategy is demonstrated below.

2.3.1 Transport – Avoiding travel – T1

All local authorities should ensure that they have a corporate travel plan (perhaps within a carbon management plan) which is consistent with any local air quality action plan. The Local Transport Strategy (LTS) and associated action plans were adopted by Council on 30th October 2018. The Active Travel Improvement Plan (ATIP) for East Lothian, an associated plan of the LTS will be reviewed and recommended to Council later this year. Through Smarter Choices Smarter Places, the Council will also employ a Behavioural Change Officer to encourage alternative transport modes in particular active travel. An initiative 'Beat the Streets' to encourage greater walking and cycling with also run over the next 12 months through intelligent health with Musselburgh Area Partnership.

2.3.2 Climate Change – Effective co-ordination of climate change and air quality policies to deliver co-benefits – CC2

Scottish Government expects any Scottish local authority which has or is currently developing a Sustainable Energy Action Plan to ensure that air quality considerations are covered. During 2018/19 the Council has developed a Draft East Lothian Climate Change Strategy 2019–2024 (Ref 17). This sets out how East Lothian Council, and the wider East Lothian community, will tackle climate change. The Draft Strategy was developed with 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 from the public during a public consultation in September–October 2018 to inform the development of the strategy. The public consultation events 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 priority Outcomes set out in the Draft Climate Change Strategy is "Active Travel and Sustainable Transport are used for Everyday Journeys". Included within this is the link to Improving Air Quality, particularly for the centre of Musselburgh where the Air Quality Management Area is located. The Draft Strategy promotes active travel (walking/cycling) and sustainable transport (e.g. taking the bus or train) rather than driving, particularly for shorter journeys. The strategy aims to encourage behaviour change towards active and sustainable travel, which will help to reduce traffic-related air pollution (as well as wider benefits including contributing to reducing the carbon emissions that cause global warming, and improving health, wellbeing and physical activity levels).

As well as encouraging behaviour change, the strategy also promotes innovative infrastructure improvements underway in Musselburgh to tackle air pollution and traffic congestion:

- The CityTree, installed on Musselburgh High Street, is a technological solution to improve local air quality through the use of special mosses which can remove harmful road traffic associated air pollutants, while absorbing as much carbon dioxide from the air as up to 275 urban trees. The CityTree was installed during 'Scotland's Climate Week 2018' and the associated promotion helped to raise awareness of this issue and of more sustainable travel choices.

- Musselburgh's proximity to Edinburgh has enabled East Lothian Council to work with City of Edinburgh Council to pursue opportunities for electric bike hire and cycle hire hubs in Musselburgh, to capitalise on projects already underway in Edinburgh and Portobello. These options are currently being investigated to encourage the move towards active travel choices, with consequent benefits to improving local air quality.

A consultation on the Draft East Lothian Climate Change Strategy will commence on 27th May 2019 for 8 weeks until 22nd July 2019. It is anticipated that the final Climate Change Strategy will be completed later in 2019.

2.3.3 Additional Actions, EV Infrastructure and the National Low Emissions Framework (NLEF)

One of six main objectives of CAFS to be achieved across Scotland is Place making: air quality not to be compromised by new or existing developments. Section 2.3.1 of the AQAP (Ref 8) refers. Furthermore, the National Transport Strategy for Scotland (Ref 18) was updated in January 2016 and introduced 3 key strategic outcomes, one of which was to reduce emissions to tackle climate change. Another key outcome aims to improve journey times and connections by reducing congestion. Section 2.3.2 of the AQAP (Ref 8) refers. Other relevant regional and National strategies that impact on air quality are discussed in the AQAP (Ref 8). These include South East of Scotland Transport Partnership – SEStrans (in Section 2.3.3), East Lothian Council Local Transport Strategy (Ref 14) (in Section 2.3.4), Strategic Development Plan for South East Scotland – SESplan (in Section 2.3.5), East Lothian Council Local Development Plan (Ref 15) (in Section 2.3.6) and Climate Change Declaration (in Section 2.3.7).

Over the last two years East Lothian Council have upgraded older Electric Vehicle (EV) charging units and increased the number of charge points in East Lothian to over 40, concentrating on creating hubs in town centres and ensuring that we have a strategic network of sites. Our programme for this year is to add a further 20 charge points in residential areas where people do not have driveways (and therefore no option for charging at home) and in long-stay car parks in Haddington, Longniddry and Wallyford.

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.

The National Low Emission Framework (NLEF) (Ref 19) is an air quality focussed, evidence based appraisal process developed to help local authorities consider transport related actions to improve local air quality, where transport is identified as the key contributor to local air quality problems. The NLEF supports and builds on the work already being done through the LAQM system. The NLEF appraisal process is a two-stage process: Stage One appraisal is a screening exercise to be undertaken by all Local Authorities using existing data, compiled as part of existing LAQM and

AQAP duties and incorporating consideration of wider land use and transport planning work; Stage Two, the assessment process, will be carried out by local authorities, supported by SEPA, through the National Modelling Framework (NMF). Stage Two assessments will only be carried out by those authorities with transport related AQMA's where the Stage One screening process justifies consideration of an introduction of a Low Emission Zone (LEZ). It was anticipated that local authorities would report the outcome of their first Stage One Screening exercise with their LAQM Annual Progress Report due by 30 June 2019 but this will be deferred until 30 June 2020.

3. Air Quality Monitoring Data and Comparison with Air Quality Objectives

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

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

East Lothian Council undertook automatic (continuous) monitoring at 2 sites during 2018. Table A.1 in Appendix A shows the details of the sites. National monitoring results are available at http://www.scottishairquality.co.uk/

Maps showing the location of the monitoring sites are provided in Appendix D.

3.1.2 Non-Automatic Monitoring Sites

East Lothian Council undertook non- automatic (passive) monitoring of NO_2 at 25 sites during 2018, although 2 of these (T34 and T35) were only established in July. Table A.2 in Appendix A shows the details of the sites.

Further details on bias adjustment for the diffusion tubes are included in Appendix B.

Maps showing the location of the monitoring sites are provided in Appendix D.

3.2 Individual pollutants

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

3.2.1 Nitrogen Dioxide (NO_2)

Table A.3 in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past 5 years with the air quality objective of 40µg/m^3.

For diffusion tubes, the full 2018 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 2014-2018. It can be seen that there has been a general downward trend in annual mean NO_2 concentrations between 2014-2018 throughout the County:

Figure 1: Diffusion Tubes in Musselburgh within AQMA 2014-2018

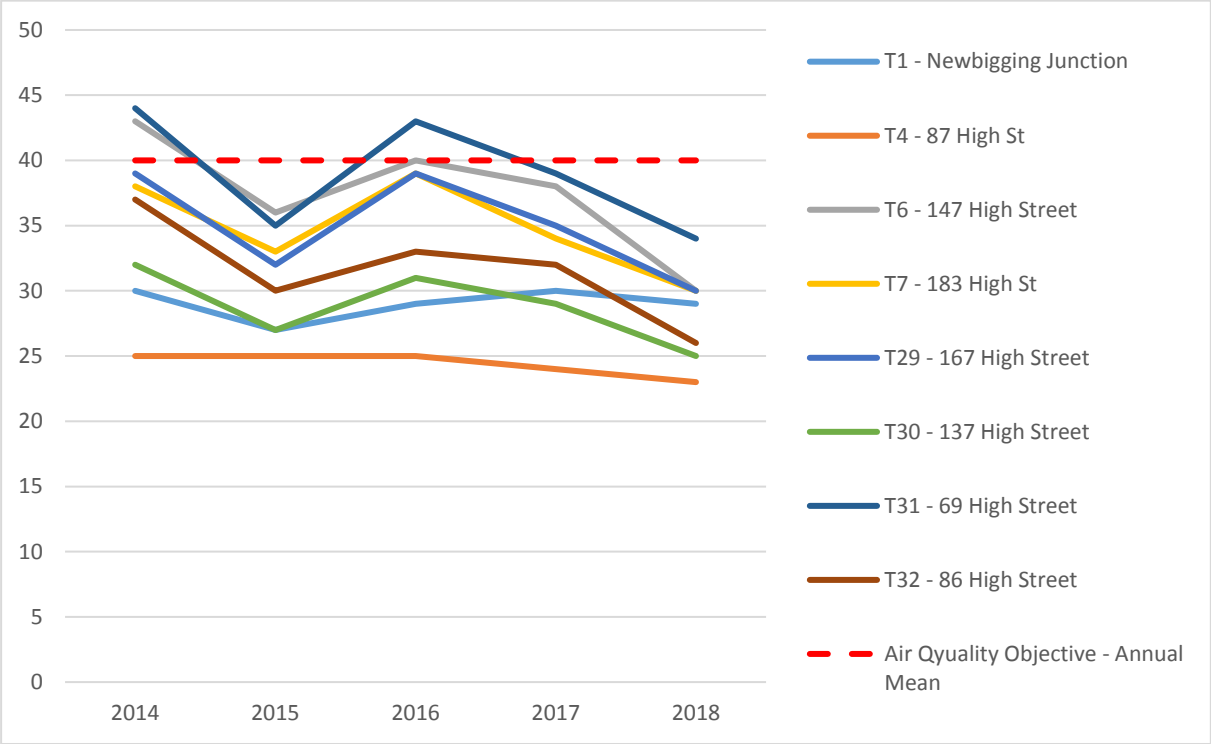


Figure 2: Diffusion Tubes in Musselburgh outside AQMA 2014-2018

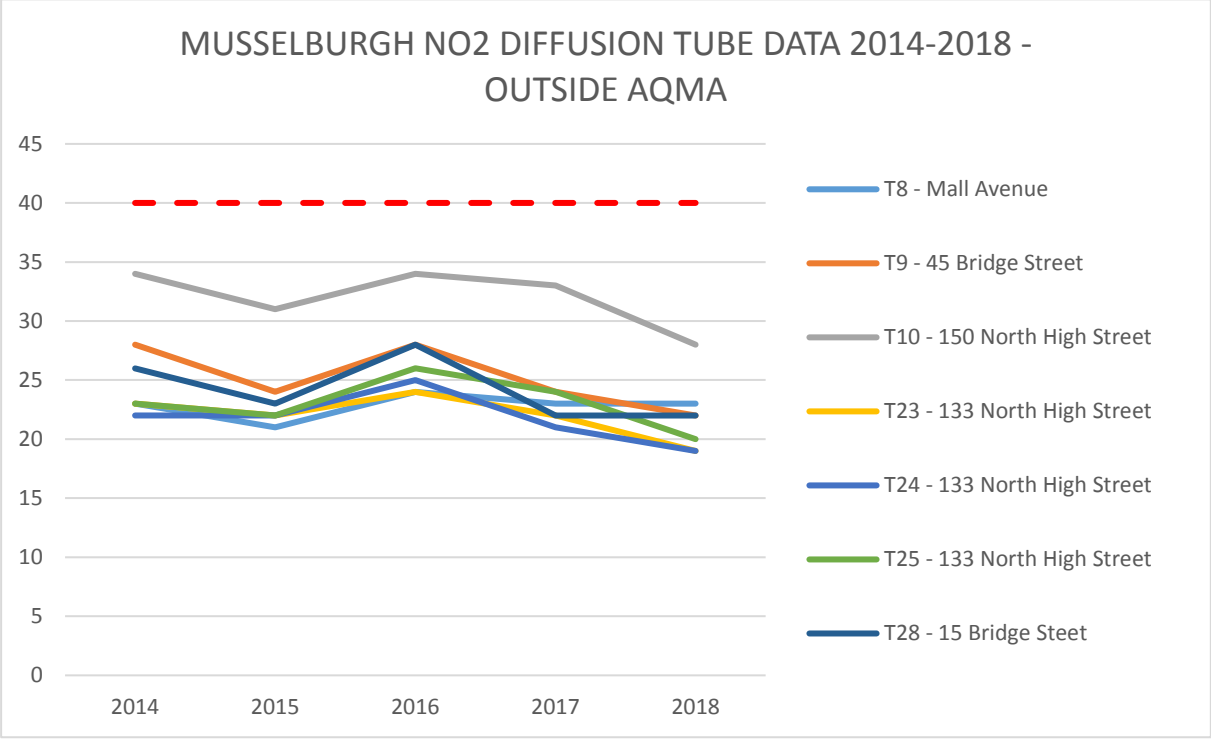
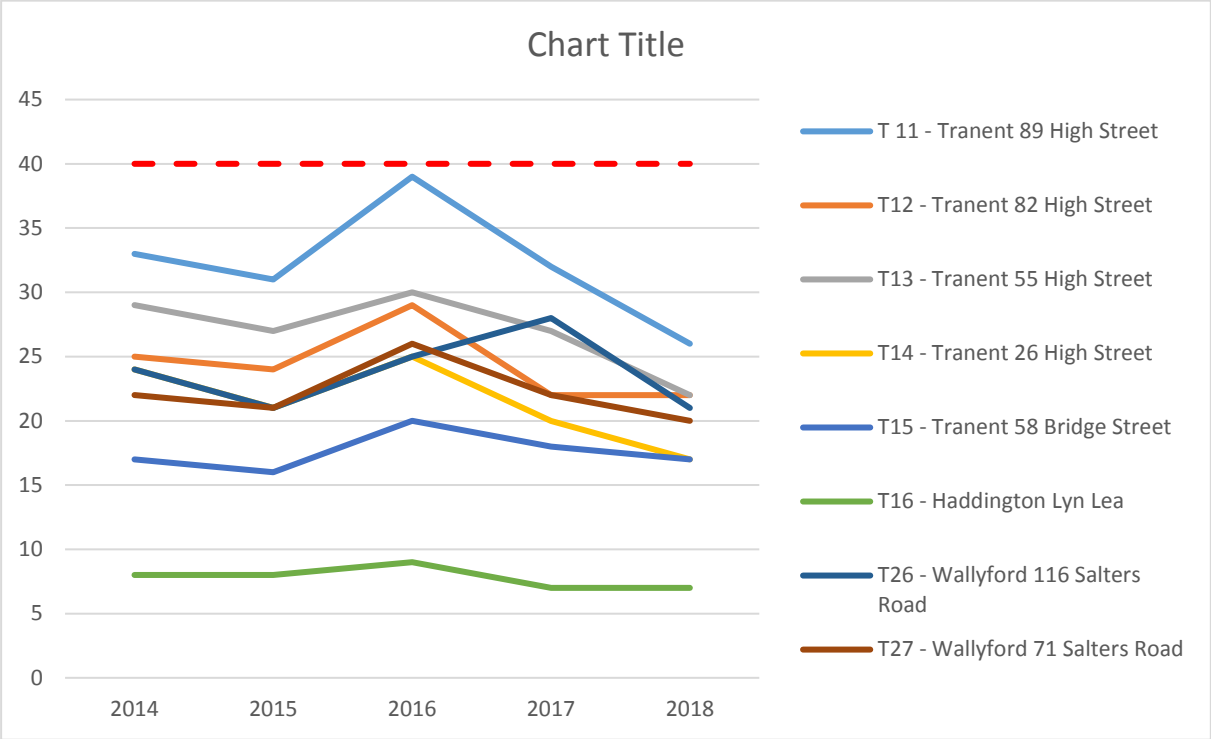


Figure 3: All other diffusion tubes 2014-2018



There have been no exceedences of the Annual Mean NO_2 Objective recorded at any locations, including those locations within the AQMA since 2016. For diffusion tubes, the full 2018 dataset of monthly mean values is provided in Appendix B. Details of ratified data for the automatic monitor for 2018 are provided in Appendix C.

Table A.4 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past 5 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 2018.

3.2.2 Particulate Matter (PM_{10})

Table A.5 in Appendix A compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past 5 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 between 2014-2018. It can be seen that there has been a reduction in annual mean PM_{10} concentrations since 2014 and there have been no exceedences of the Air Quality Objective.

Figure 4: PM_{10} concentrations on Musselburgh North High Street 2014-2018

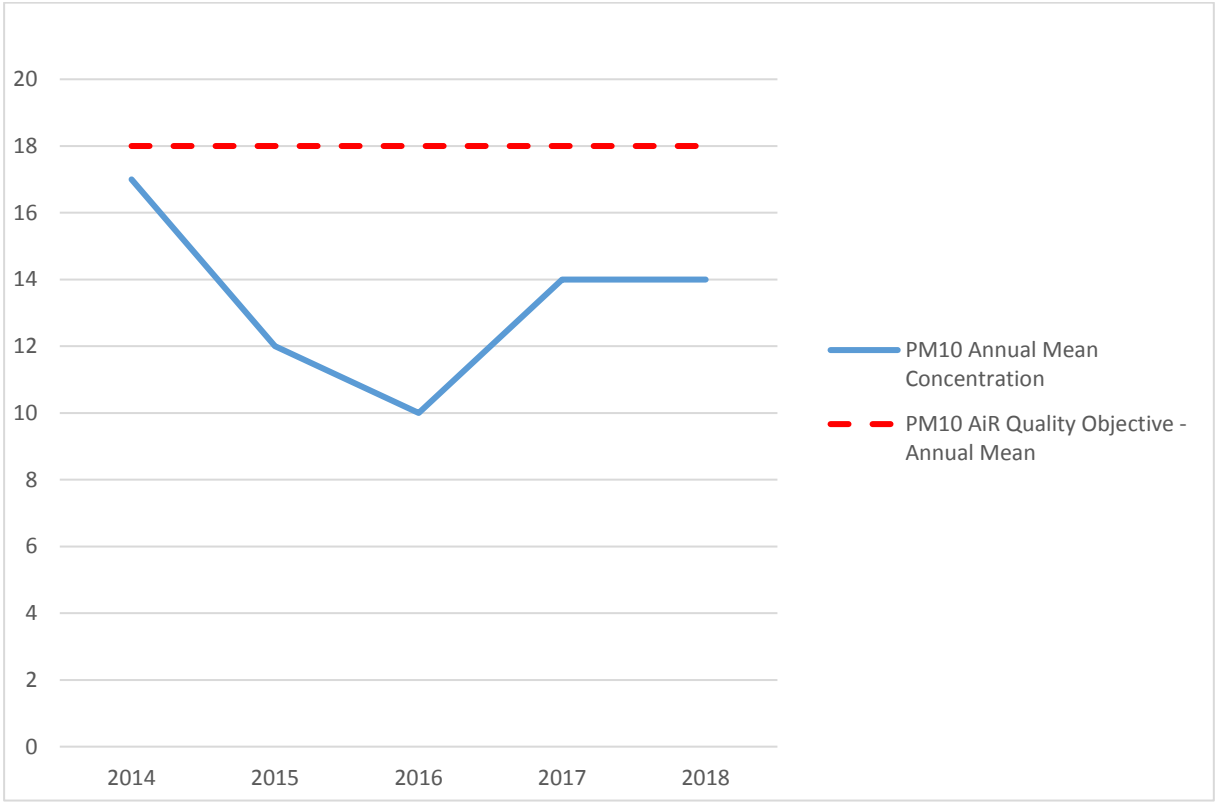


Table A.6 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past 5 years with the air quality objective of 50µg/m^3, not to be exceeded more than 7 times per year.

There was one exceedence of the daily mean concentration of 50ug/m^3 but this did not result in an exceedence of the Air Quality Objective as up to 7 exceedences are permitted per year.

3.2.3 Particulate Matter ($PM_{2.5}$)

East Lothian Council do not currently monitor $PM_{2.5}$ and have no plans to do so in the future

3.2.4 Sulphur Dioxide (SO_2)

East Lothian Council do not currently monitor Sulphur dioxide (SO_2).

3.2.5 Carbon Monoxide, Lead and 1,3-Butadiene

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

4. New Local Developments

4.1 Road Traffic Sources

East Lothian Council can confirm that there are no new:

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

since the 2018 Annual Progress Report (Ref 10)

4.2 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 2018 Annual Progress Report (Ref 10)

4.3 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 2018 Annual Progress Report (Ref 10). However, East Lothian Council are aware of the possible introduction of new sensitive receptors to a proposed housing development in close proximity to an existing Industrial Source that could result in exceedences of the Nitrogen dioxide 1-Hour Mean Air Quality Objective in part of the proposed development site. This is discussed further in Section 5.

4.4 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 2018 Annual Progress Report (Ref 10)

4.5 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 2018 Annual Progress Report (Ref 10).

5. Planning Applications

The East Lothian Local Development Plan 2018 (Ref 15) was adopted on 27th September 2018. The adopted LDP 2018 sets out the strategy for change and growth in the area over the next 10 years. The Council is committed to environmental improvements including to air quality, and the adopted LDP 2018 includes various interventions, strategies and policies to manage change and growth in a sustainable manner and where it is necessary to mitigate any resultant environmental effects.

The LDP 2018 identifies how air quality issues arising as a result of development related activity and increases in traffic will be managed across the plan area. This will be through the implementation of specific policies at the planning application stage and other project level decisions.

As part of delivering the interventions identified in the LDP 2018, the Council has recently adopted its Developer Contributions Framework Supplementary Guidance. This provides more detailed guidance on how much (and in what locations) new developments will be required to contribute towards addressing air quality issues that arise through development related impacts.

The Council has also recently adopted its Town Centre Strategies Supplementary Guidance. This Supplementary Guidance provides an agreed strategic approach to the issues faced by each town centre, and will inform future decision making to help achieve their sustained long-term improvement. Improving air quality is one of the actions for improvements to Musselburgh Town Centre which is designated as an Air Quality Management Area. These improvements will be delivered through Transport related interventions as set out in the adopted LDP 2018, specifically Policy T19, PROP T20: Transport related Air Quality Measures and PROP T21: Urban Traffic Control System. For Tranent, there is no designated Air Quality Management Area, however maintaining and improving air quality forms part of proposed improvements (Policy T26: Transport Improvements at Tranent Town Centre) in the LDP 2018.

The LDP 2018 is currently under review in preparation for the next Local Development Plan. As part of this, results from ongoing monitoring of air quality will be used to identify whether there have been any changes that would need to be considered as part of future strategies for the forthcoming LDP.

Planning Application 18/00937/PPM was submitted to East Lothian Council in respect of Planning Permission in Principal for a proposed residential development comprising in excess of 600 residential units in Tranent. The proposed site is in close proximity to an existing Research Facility that incorporates an incinerator and 7 diesel generators. The main purpose of 5 1MW generators on the site is to provide back-up power to the site and participate in both TRIAD avoidance and capacity market schemes to provide power to the National Grid. These generators operate less than 500 hours per annum and are therefore not subject to the Emission Limit Values of the Medium Combustion Pant Directive and The Pollution Prevention and Control (Scotland) Amendment Regulations 2017 (Ref 20). Accordingly, East Lothian Council requested an Air Quality Impact Assessment be provided. The Air Quality Report (Ref 21) concluded that part of the site would result in exceedence of the Nitrogen dioxide 1-hour mean Air Quality Objective. The planning application has yet to be determined. However, development will not be permitted on any part of the site where exceedences of any Air Quality Objectives are predicted to occur.

6. Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

Monitoring for the 12-month period from 01/01/18 to 31/12/18 indicates that there were no exceedences of any AQO's in East Lothian in 2018. 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 34ug/m^3 recorded at T31, 69 High Street, Musselburgh.

6.2 Conclusions relating to New Local Developments

As discussed in Section 5 above, Medium Combustion Plant used to provide back-up power to industrial/commercial sites that participate in TRIAD avoidance and/or capacity market schemes have significant potential to impact upon air quality, in particular the Nitrogen dioxide 1-hour mean Air Quality Objective. These plant generally operate for less than 500 hours per annum and, as such, are exempt from any requirement to comply with Emission Limit Values. It is the opinion of East Lothian Council that additional controls are required by the Scottish Government to regulate these Short Term Operating Reserve (STOR) plant in order to minimise their impacts upon Air Quality and existing or proposed sensitive receptors. Furthermore, any controls would need to consider the impacts of sites comprising individual units as well as sites where multiple units are installed as the cumulative impact of a number of plant on a single site can be significant.

6.3 Proposed Actions

The new monitoring data has not identified any new or existing exceedences of the objectives for any pollutant. Existing monitoring of NO_2 will continue throughout East Lothian, including Musselburgh, while PM_{10} monitoring will also continue in Musselburgh. The AQMA does not require amending or revoking at this time as 5 years of data with no exceedences will be required before the AQMA can be revoked.

East Lothian Council shall continue to implement measures outlined within the AQAP and also develop and publish policies that supplement CAFS throughout 2019 and

beyond and will report progress in the Annual Progress Report due in June 2020, including the NLEF Stage One Screening appraisal.

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

(1) 0 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(3)	Haddington – 23 Hardgate	Roadside	351693	673998	NO_2	N	Y (5m)	2m	N
T34(3)	Haddington – 2 Bothwell Bank, Hardgate	Roadside	351702	674034	NO_2	N	Y (5m)	2m	N

(1) 0 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

(3) New monitoring tubes in Haddington from July 2018 HAVE BEEN Annualised

Table A.3 – Annual Mean NO_2 Monitoring Results 2014 - 2018

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2018 (%) (2)	NO_2 Annual Mean Concentration (µg/m^3)				
					2014(3)	2015(3)	2016(3)	2017(3)	2018(3)
NO_x	Roadside	Automatic	96	95	23	22	25	23	20
T1	Roadside	Passive Diffusion Tube	100	100	30	27	29	30	29
T4	Roadside	Passive Diffusion Tube	91.7	91.7	25	25	25	24	23
T6	Roadside	Passive Diffusion Tube	100	100	**43**	36	**40**	38	30
T7	Roadside	Passive Diffusion Tube	100	100	38	33	39	34	30
T8	Roadside	Passive Diffusion Tube	100	100	23	21	24	23	23
T9	Roadside	Passive Diffusion Tube	100	100	28	24	28	24	22
T10	Roadside	Passive Diffusion Tube	100	100	34	31	34	33	28
T11	Roadside	Passive Diffusion Tube	100	100	33	31	39	32	26
T12	Roadside	Passive Diffusion Tube	100	100	25	24	29	22	22
T13	Roadside	Passive Diffusion Tube	100	100	29	27	30	27	22
T14	Roadside	Passive Diffusion Tube	91.7	91.7	24	21	25	20	17
T15	Roadside	Passive Diffusion Tube	100	100	17	16	20	18	17
T16	Urban	Passive Diffusion Tube	100	100	8	8	9	7	7
T23	Roadside	Passive Diffusion Tube	100	100	23	22	24	22	19
T24	Roadside	Passive Diffusion Tube	100	100	22	22	25	21	19
T25	Roadside	Passive Diffusion Tube	100	100	23	22	26	24	20
T26	Roadside	Passive Diffusion Tube	91.7	91.7	24	21	25	28	21
T27	Roadside	Passive Diffusion Tube	100	100	22	21	26	22	20
T28	Roadside	Passive Diffusion Tube	100	100	26	23	28	22	22
T29	Roadside	Passive Diffusion Tube	91.7	91.7	39	32	39	35	30
T30	Roadside	Passive Diffusion Tube	100	100	32	27	31	29	25
T31	Roadside	Passive Diffusion Tube	100	100	**44**	35	**43**	39	34
T32	Roadside	Passive Diffusion Tube	100	100	37	30	33	32	26
T33	Roadside	Passive Diffusion Tube	50	50	-	-	-	-	20(4)
T34	Roadside	Passive Diffusion Tube	50	50	-	-	-	-	14(4)

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.**

(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%).

(3) Means for ALL diffusion tubes have been corrected for bias.

(4) Means have been "annualised" as per Box 7.10 of LAQM.TG(16) as valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Table A.4 – 1-Hour Mean NO_2 Monitoring Results 2014 - 2018

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2018 (%) (2)	NO_2 1-Hour Means > 200µg/m^3 (3)				
					2014	2015	2016	2017	2018
NO_X	Roadside	Automatic	99	99	0 (78)	0 (75)	0	0	0

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

(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%).

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

Table A.5 – Annual Mean PM_{10} Monitoring Results 2014 - 2018

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2015 (%) (2)	PM_{10} Annual Mean Concentration ($\mu g/m^3$)				
				2014	2015	2016	2017	2018
PM_{10}	Roadside	90	90	17	12	10	14	14

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

(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%).

(3) 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.

Table A.6 – 24-Hour Mean PM_{10} Monitoring Results 2014 - 2018

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2015 (%) (2)	PM_{10} 24-Hour Means > 50µg/m^3 (3)				
				2014	2015	2016	2017	2018
PM_{10}	Roadside	90	90	3	1	0	0	1

Notes: Exceedances of the PM_{10} 24-hour mean objective (50µg/m^3 not to be exceeded more than 7 times/year) are shown in **bold.**

(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%).

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

Appendix B: Full Monthly Diffusion Tube Results for 2018

Table B.1 – NO_2 Monthly Diffusion Tube Results for 2018

Site ID	Location	01/01/18 - 31/12/18												AVERAGE	Data Capture %	BIAS ADJUSTED (0.9 local)
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Musselburgh – Newbigging Junction	37	36	35	20	20	20	20	26	24	31	87	30	32	100	29
4	Musselburgh - 87 High St	34	32	30	16	17	15	17	21	21	24	46	29	25	100	23
6	Musselburgh – 147 High Street	38	45	M	30	33	35	30	29	28	35	31	30	33	91.7	30
7	Musselburgh – 183 High St	33	35	30	34	37	42	28	28	26	36	31	34	33	100	30
8	Musselburgh - Mall Av	34	35	19	24	21	13	17	21	19	21	46	32	25	100	23
9	Musselburgh – 45 Bridge Street	34	31	28	22	27	20	18	15	17	25	30	30	25	100	22
10	Musselburgh – 150 North High St	29	44	39	24	20	21	26	28	22	32	50	37	31	100	28
11	Tranent – 89 High St	38	37	33	19	26	25	25	26	30	32	30	28	29	100	26
12	Tranent – 82 High St	23	30	31	26	26	29	18	18	16	22	27	22	24	100	22
13	Tranent – 55 High Street	28	34	29	22	23	20	22	23	11	29	29	27	25	100	22
14	Tranent – 26 High St	27	10	25	21	22	20	17	16	12	21	22	19	19	100	17
15	Tranent – 58 Bridge St	26	25	21	14	17	14	16	15	14	18	23	21	19	100	17
16	Haddington - Lyn Lea	13	13	9	6	5	5	5	6	5	7	9	10	8	100	7
23	Musselburgh - 133 N High St	29	28	25	17	21	21	18	18	17	16	22	27	22	100	19
24	Musselburgh - 133 N High St	29	26	25	18	18	20	16	17	16	18	23	25	21	100	19
25	Musselburgh - 133 N High St	26	28	28	17	22	20	19	17	16	20	22	27	22	100	20
26	Wallyford - 116 Salters Rd	29	25	27	20	24	23	22	21	18	22	23	21	23	100	21
27	Wallyford - 71 Salters Rd	34	23	22	17	21	8	19	19	19	24	31	26	22	100	20
*28	Musselburgh - 15 Bridge Street	28	36	31	22	27	21	17	17	15	25	26	27	24	100	22
*29	Musselburgh - 167 High Street	38	37	34	37	21	42	30	30	31	35	34	34	34	100	30
*30	Musselburgh - 137 High Street	34	31	32	28	26	27	21	25	21	25	30	30	28	100	25
*31	Musselburgh - 69 High Street	38	41	45	28	39	42	34	36	33	38	36	37	37	100	34
*32	Musselburgh - 86 High Street	42	40	32	23	21	21	21	23	24	28	33	39	29	100	26
33	Haddington - 23 Hardgate							18	15	17	19	21	31	22	50	20
34	Haddington - 2 Bothwell Bank, Hardgate							11	11	8	14	18	19	15	50	14

Three of the diffusion tubes are co-located with the continuous analyser on Musselburgh North High Street (Tube Numbers T23, T24 and T25). The bias adjustment factor has been calculated from the comparison of the diffusion tubes and continuous analyser measurements during the monitoring period. The average for the co-located tubes was 22 μg/m^3. The average for the continuous analyser was 20 μg/m^3. This provided a diffusion tube bias adjustment factor of 0.9.

Method	Average for period (μg/m^3)
Analyser	20
Tubes	22
BIAS ADJUSTMENT	**0.9**

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

Air Pollution Report

1st January to 31st December 2018

Air Quality in Scotland

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	-	325
Number Days Moderate	-	0	-	1
Number Days High	-	0	-	0
Number Days Very High	-	0	-	0
Max Daily Mean	78	56	169	53
Annual Max	255	106	498	156
Annual Mean	11	20	37	14
98th Percentile of daily mean	-	-	-	32
90th Percentile of daily mean	-	-	-	21
99.8th Percentile of hourly mean	-	83	-	-
98th Percentile of hourly mean	62	62	154	37
95th Percentile of hourly mean	37	51	106	29
50th Percentile of hourly mean	6	15	25	13
% Annual data capture	**99.77%**	**99.67%**	**99.67%**	**90.00%**

Instruments: PM_{10}: BAM Gravimetric Equivalent (correction applied)

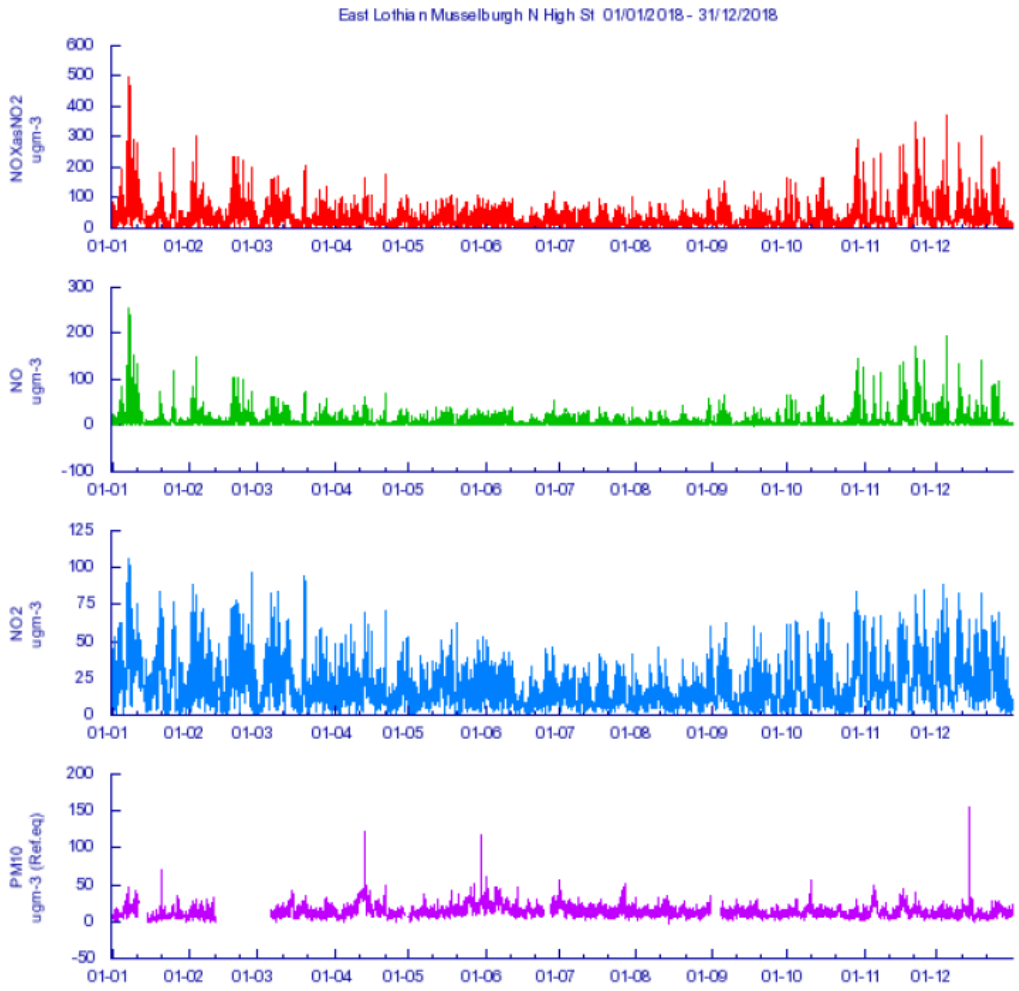
All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO_X mass units are NO_X as NO_2 µg m-3

Note: For a strict comparison against the objectives there must be a data capture of 85% or greater throughout the calendar year.

Report produced by Ricardo Energy & Environment

Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 microgrammes per metre cubed	1	1
PM10 particulate matter (Hourly measured)	Annual mean > 18 microgrammes per metre cubed	0	-
Nitrogen dioxide	Hourly Mean > 200 microgrammes per metre cubed	0	0
Nitrogen dioxide	Annual Mean > 40 microgrammes per metre cubed	0	-

Annual Graph



3 / 3

Report produced by Ricardo Energy & Environment

NO_2 Monitoring Data

- No distance corrections have been carried out per LAQM (TG)(16) for NO_2 diffusion tubes for 2018 monitoring results as no measured results were obtained in excess of the Annual Mean Air Quality Objective of 40ug/m^3 or within 10% of the Annual Mean, i.e. above 36ug/m^3.

- NO_2 tubes T33 and T34 have been Annualised per method described in LAQM (TG)(16) as only 6 months of data was available for both tubes for 2018.

Start	End	B1	T33	T34	B1 when T33 is available	B1 when t34 is available
03/01/18	31/01/18	13				
31/01/18	05/03/18	13				
05/03/18	28/03/18	9				
28/03/18	02/05/18	6				
02/05/18	06/06/18	5				
06/06/18	04/07/18	5				
04/07/18	01/08/18	5	18	11	5	5
01/08/18	05/09/18	6	15	11	6	6
05/09/18	03/10/18	5	17	8	5	5
03/10/18	01/11/18	7	19	14	7	7
01/11/18	05/12/18	9	21	18	9	9
05/12/18	09/01/19	10	31	19	10	10
AVERAGE		**7.75**	**20.2**	**13.5**	**7**	**7**

The Annual mean (Am) of B1 is 7.75. The Period meam (Pm) of B1 when T33 and T34 were available was 7. The Ratio (R) of the annual mean to the period mean (Am/Pm) is 1.11. As this is the only background measurement then the annualisation factor is 1.11. The Period means of T33 and T34 were 20.2 for T33 and 13.5 for T34. If we multiply the measured period means of T33 and T34 by the annualisation factor we get an estimate of the annual means for 2018 as follows: **T33 = 20.2 X 1.11 = 22.4** and **T34 = 13.5 x 1.11 = 14.98**.

- The Diffusin Tubes were analysed by Edinburgh Scientific Services. The method used during the analysis is 50% TEA in acetone. An example of diffusion tube report is provided below.

·EDINBVRGH·
THE CITY OF EDINBURGH COUNCIL

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

For the attention of: Derek Oliver

Date of Issue: 31 May 2019

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 07/05/2019 Submitted by

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)
50510878	1	Muss - Newbigging	04/04/2019	01/05/2019	1.300	28.3
50510879	4	Muss - 87 High St	04/04/2019	01/05/2019	0.754	16.4
50510880	6	Muss - 147 High St	04/04/2019	01/05/2019	1.918	41.7
50510881	7	Muss - 183 High St	04/04/2019	01/05/2019	1.910	41.5
50510882	8	Muss - Mall Av	04/04/2019	01/05/2019	1.120	24.3
50510883	9	Muss - 45 Bridge St	04/04/2019	01/05/2019	1.629	35.4
50510884	10	Muss - 150 North High St	04/04/2019	01/05/2019	1.243	27.0
50510885	11	Tranent - 89 High St	04/04/2019	01/05/2019	1.653	35.9
50510886	12	Tranent - 82 High St (Crolla's)	04/04/2019	01/05/2019	1.557	33.8
50510887	13	Tranent - 55 High St	04/04/2019	01/05/2019	1.359	29.5
50510888	14	Tranent - 26 High St (P.O)	04/04/2019	01/05/2019	1.723	37.5
50510889	15	Tranent - 58 Bridge St	04/04/2019	01/05/2019	0.834	18.1
50510890	16	Haddington - Lynn Lea	04/04/2019	01/05/2019	0.389	8.4
50510891	23	Muss - Co-located 133 N High St	04/04/2019	01/05/2019	1.187	25.8
50510892	24	Muss - Co-located 133 N High St	04/04/2019	01/05/2019	0.580	12.6
50510893	25	Muss - Co-located 133 N High St	04/04/2019	01/05/2019	1.233	26.8
50510894	26	Wallyford - 116 Salters Rd	04/04/2019	01/05/2019	1.267	27.5
50510895	27	Wallyford - 71 Salters Rd	04/04/2019	01/05/2019	1.339	29.1

ROBERT C BEATTIE
Scientific Bereavement and Registration Services Manager
Edinburgh Scientific Services
4 Marine Esplanade, Edinburgh EH6 7LU Tel 0131 555 7980, Fax: 0131 555 7987
Email: scientific.services @edinburgh.gov.uk

UKAS TESTING 1005

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UK CUSTOMER SERVICE EXCELLENCE

REPORT OF NITROGEN DIOXIDE ANALYSIS OF PASSIVE DIFFUSION TUBES

Received from East Lothian Council on 07/05/2019 Submitted by

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)
50510896	28	Muss - 15 Bridge Strreet	04/04/2019	01/05/2019	1.489	32.4
50510897	29	Muss - 167 High Street	04/04/2019	01/05/2019	1.998	43.4
50510898	30	Muss - 137 High Street	04/04/2019	01/05/2019	1.422	30.9
50510899	31	Muss - 69 High Street	04/04/2019	01/05/2019	1.946	42.3
50510900	32	Muss - 86 High Street	04/04/2019	01/05/2019	1.512	32.9
50510901	33	Haddington - 23 Hardgate	04/04/2019	01/05/2019	0.801	17.4
50510902	34	Haddington - 2 Bothwell Bank Hardgate	04/04/2019	01/05/2019	0.891	19.4

Signed:

Rose Sandilands : Scientist

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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Edinburgh Scientific Services
4 Marine Esplanade, Edinburgh EH6 7LU Tel 0131 555 7980, Fax: 0131 555 7987
Email: scientific.services @edinburgh.gov.uk

UKAS TESTING 1005

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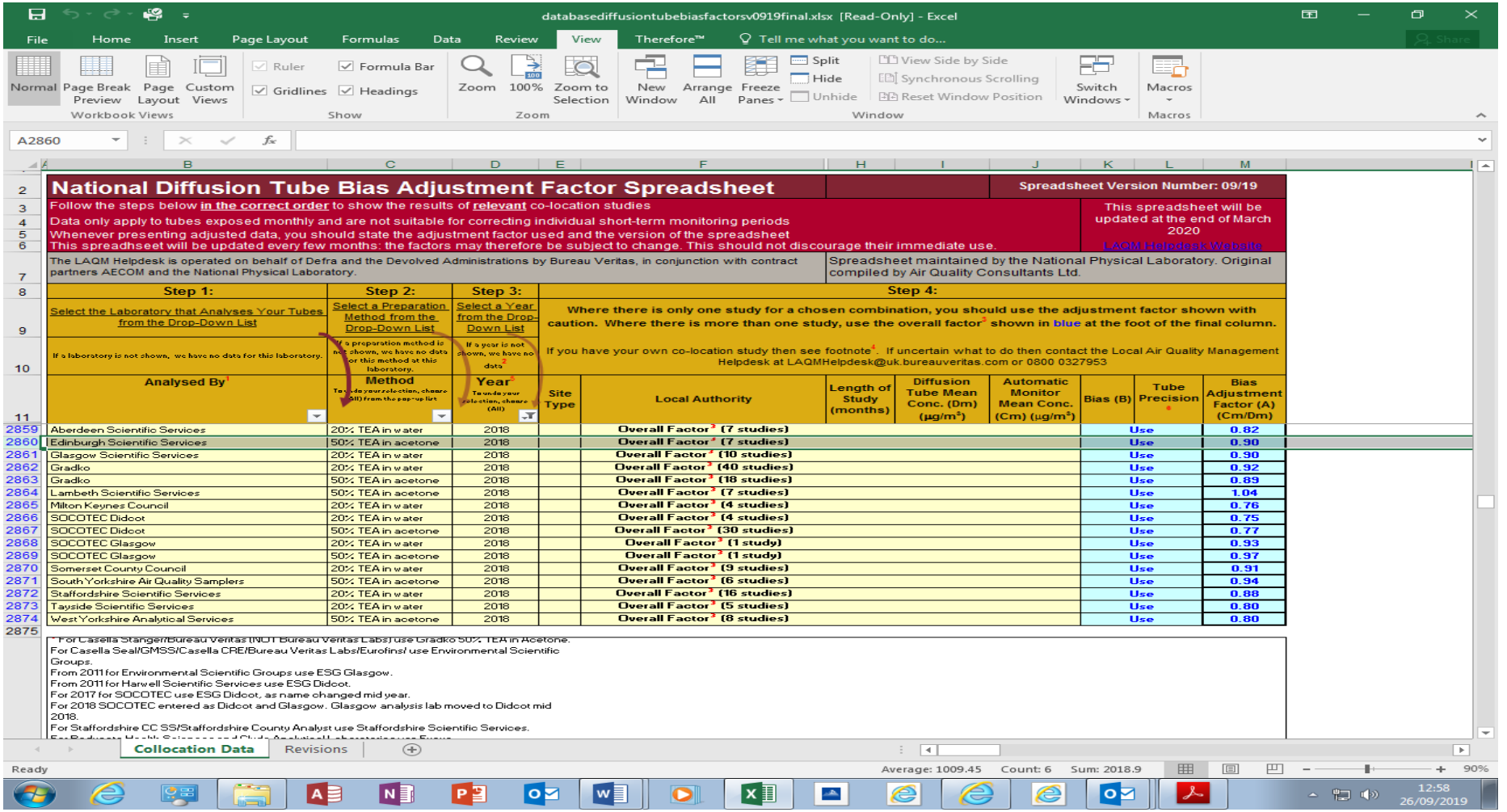
- Three of the diffusion tubes are co-located with the continuous analyser on Musselburgh North High Street (Tube Numbers T23, T24 and T25). The bias adjustment factor has been calculated from the comparison of the diffusion tubes and continuous analyser measurements during the monitoring period. The average for the co-located tubes was 22 $\mu g/m^3$. The average for the continuous analyser was 20 $\mu g/m^3$. This provided a diffusion tube bias adjustment factor of 0.9. The National Bias Adjustment for Edinburgh Scientific Services, the laboratory who carried out the analysis of the diffusion tubes throughout East Lothian, was also 0.9 as obtained from the National Diffusion Tube Bias Adjustment Factor Spreadsheet and highlighted below. The use of the National Bias Adjustment Figure as opposed to the Locally derived Bias Adjustment Figure would have resulted in NO CHANGE to the reported and bias adjusted results.



databasediffusiontubebiasfactorsv0919final.xlsx [Read-Only] - Excel

National Diffusion Tube Bias Adjustment Factor Spreadsheet

Spreadsheet Version Number: 09/19

Follow the steps below in the correct order to show the results of relevant co-location studies

Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods

Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet

This spreadhseet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of March 2020

LAQM Helpdesk Website

The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1: Select the Laboratory that Analyses Your Tubes from the Drop-Down List

If a laboratory is not shown, we have no data for this laboratory.

Step 2: Select a Preparation Method from the Drop-Down List

If a preparation method is not shown, we have no data for this method at this laboratory.

Step 3: Select a Year from the Drop-Down List

If a year is not shown, we have no data[2]

Step 4: Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.

If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@uk.bureauveritas.com or 0800 0327953

	Analysed By[1]	Method (To make your selection, choose (All) from the pop-up list)	Year[2] (To make your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision	Bias Adjustment Factor (A) (Cm/Dm)
2859	Aberdeen Scientific Services	20% TEA in water	2018		Overall Factor[3] (7 studies)				Use		0.82
2860	Edinburgh Scientific Services	50% TEA in acetone	2018		Overall Factor[3] (7 studies)				Use		0.90
2861	Glasgow Scientific Services	20% TEA in water	2018		Overall Factor[3] (10 studies)				Use		0.90
2862	Gradko	20% TEA in water	2018		Overall Factor[3] (40 studies)				Use		0.92
2863	Gradko	50% TEA in acetone	2018		Overall Factor[3] (18 studies)				Use		0.89
2864	Lambeth Scientific Services	50% TEA in acetone	2018		Overall Factor[3] (7 studies)				Use		1.04
2865	Milton Keynes Council	20% TEA in water	2018		Overall Factor[3] (4 studies)				Use		0.76
2866	SOCOTEC Didcot	20% TEA in water	2018		Overall Factor[3] (4 studies)				Use		0.75
2867	SOCOTEC Didcot	50% TEA in acetone	2018		Overall Factor[3] (30 studies)				Use		0.77
2868	SOCOTEC Glasgow	20% TEA in water	2018		Overall Factor[3] (1 study)				Use		0.93
2869	SOCOTEC Glasgow	50% TEA in acetone	2018		Overall Factor[3] (1 study)				Use		0.97
2870	Somerset County Council	20% TEA in water	2018		Overall Factor[3] (9 studies)				Use		0.91
2871	South Yorkshire Air Quality Samplers	50% TEA in acetone	2018		Overall Factor[3] (6 studies)				Use		0.94
2872	Staffordshire Scientific Services	20% TEA in water	2018		Overall Factor[3] (16 studies)				Use		0.88
2873	Tayside Scientific Services	20% TEA in water	2018		Overall Factor[3] (5 studies)				Use		0.80
2874	West Yorkshire Analytical Services	50% TEA in acetone	2018		Overall Factor[3] (8 studies)				Use		0.80
2875											

For Casella Stanger/Bureau Veritas (NOT Bureau Veritas Labs) use Gradko 50% TEA in Acetone.
For Casella Seal/GMSS/Casella CRE/Bureau Veritas Labs/Eurofins/ use Environmental Scientific Groups.
From 2011 for Environmental Scientific Groups use ESG Glasgow.
From 2011 for Harwell Scientific Services use ESG Didcot.
For 2017 for SOCOTEC use ESG Didcot, as name changed mid year.
For 2018 SOCOTEC entered as Didcot and Glasgow. Glasgow analysis lab moved to Didcot mid 2018.
For Staffordshire CC SS/Staffordshire County Analyst use Staffordshire Scientific Services.

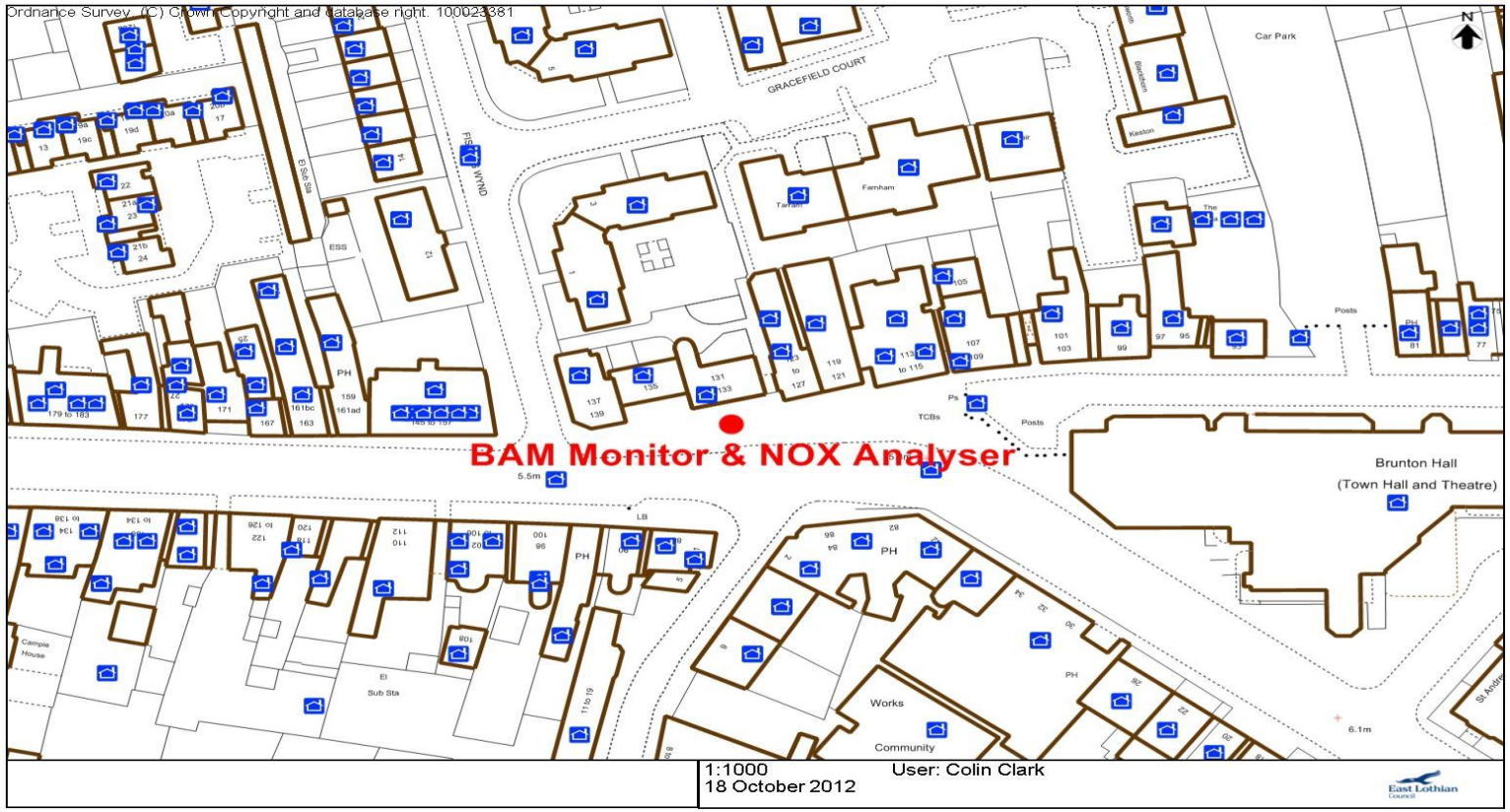
Collocation Data | Revisions

Ready | Average: 1009.45 | Count: 6 | Sum: 2018.9 | 90%

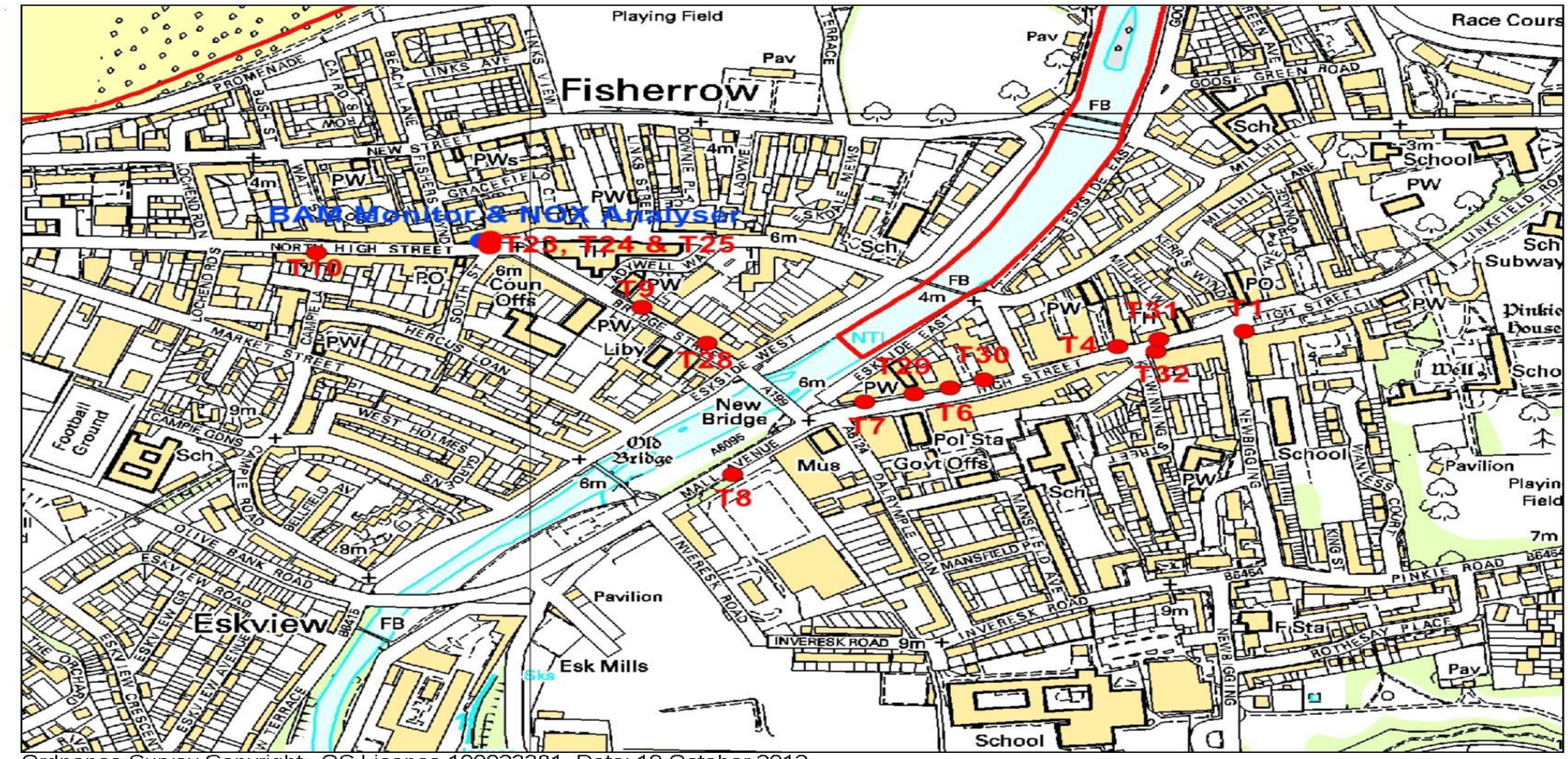
12:58 26/09/2019

Appendix D: Maps of monitoring locations

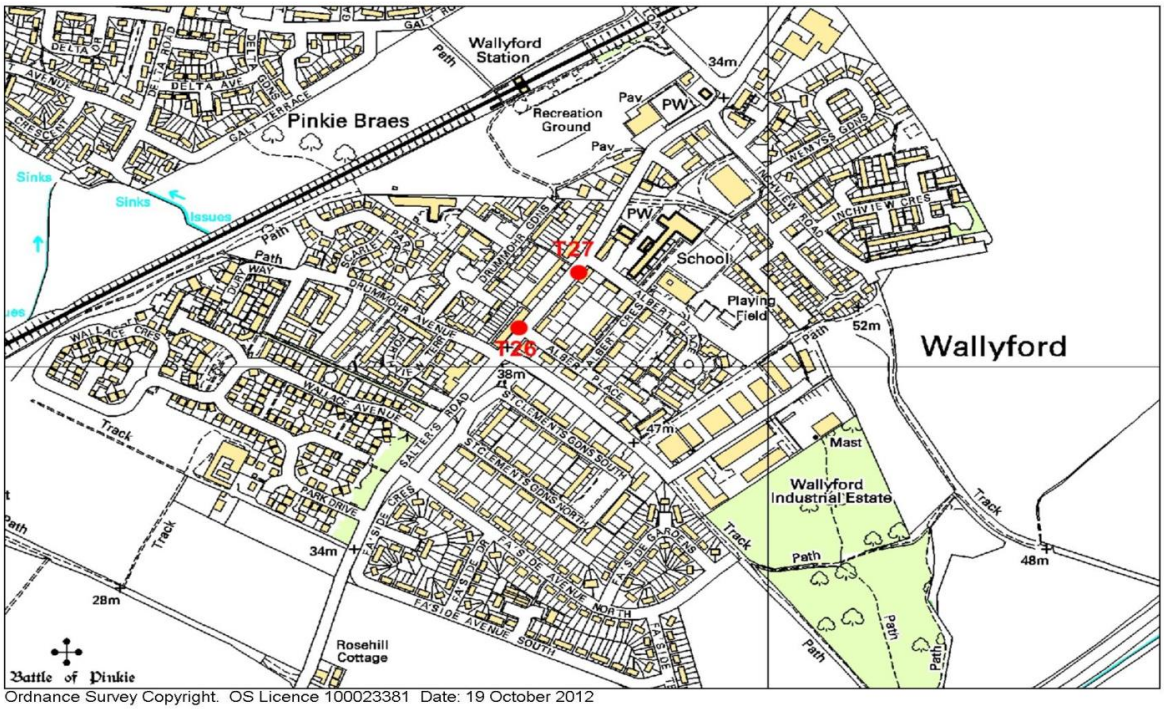
Map of Automatic Monitoring Site in Musselburgh



Map of Non-Automatic Monitoring Sites in Musselburgh

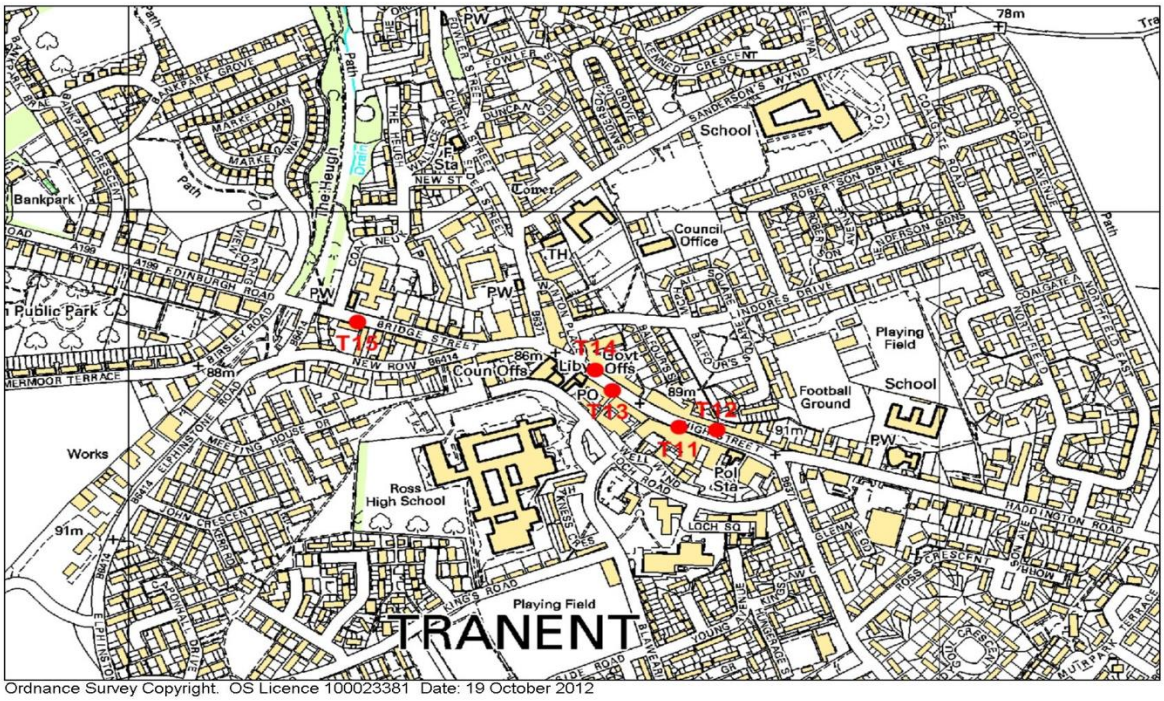


Map of Non-Automatic Monitoring Sites in Wallyford



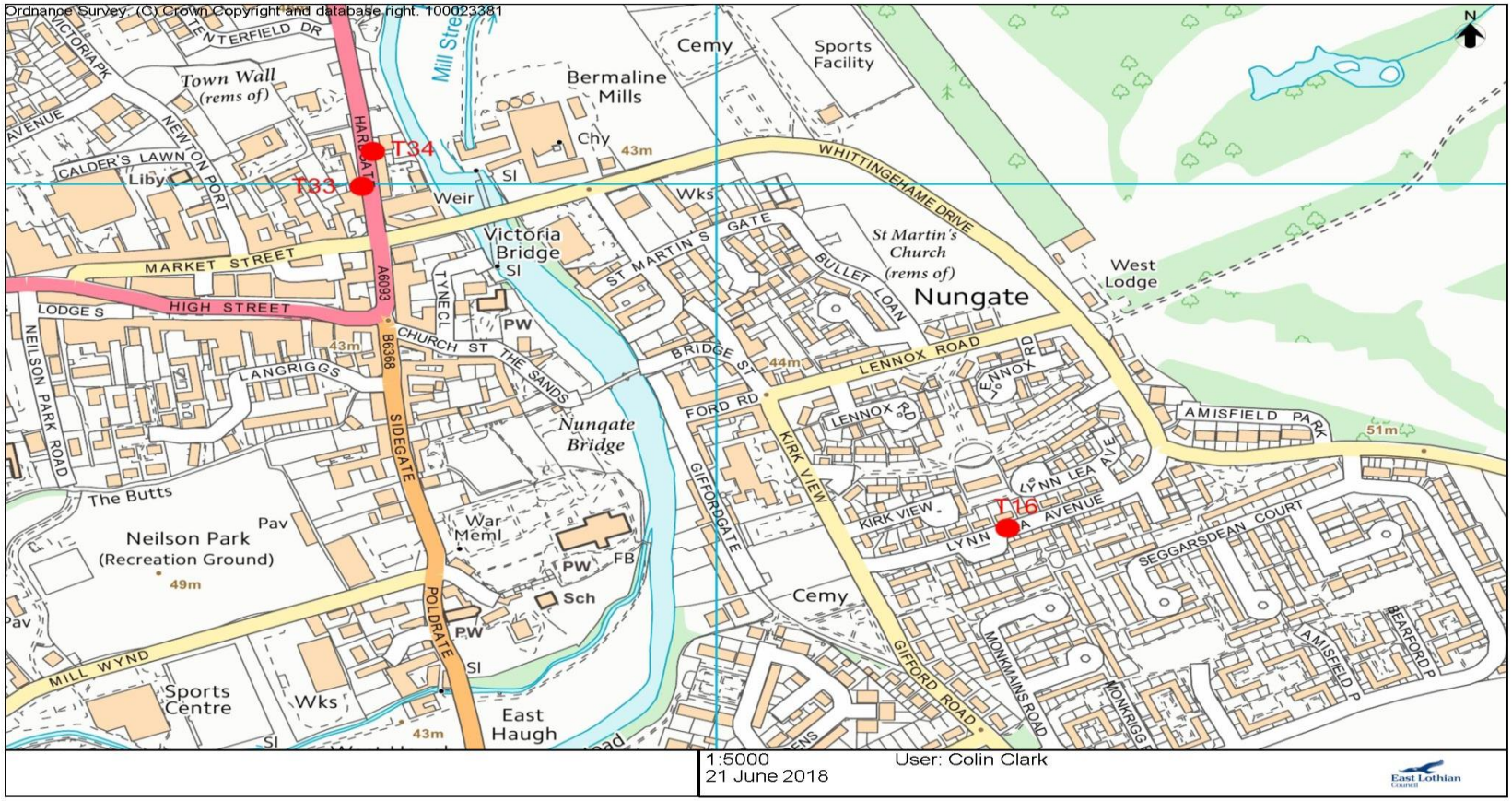
Ordnance Survey Copyright. OS Licence 100023381 Date: 19 October 2012

Map of Non-Automatic Monitoring Sites in Tranent



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

Map of Non-Automatic Monitoring Sites in Haddington



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 exceedences 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**	Exceedences of NO2 Annual Mean recorded at T6 and T31.

6-4	**Annual Progress Report**	**June 2018**	**June 2018**	No exceedences of any Air Quality Objectives
6-5	**Annual Progress Report**	**June 2019**	**June 2019**	No-exceedences of any Air Quality Objectives

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
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

References

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2. East Lothian Council High Street, Musselburgh (Air Quality Management Order) 2013
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4. East Lothian Council, Local Air Quality Management: Detailed Assessment, June 2012
5. East Lothian Council, Local Air Quality Management: Progress Report, July 2014
6. East Lothian Council, Local Air Quality Management: Updating and Screening Assessment, October 2015
7. East Lothian Council, 2016 Air Quality Annual Progress Report, (APR) Local Air Quality Management:, July 2016
8. East Lothian Council, Musselburgh Air Quality Action Plan, February 2017
9. East Lothian Council, 2017 Air Quality Annual Progress Report, (APR) Local Air Quality Management, August 2017
10. East Lothian Council, 2018 Air Quality Annual Progress Report, (APR) Local Air Quality Management, June 2018
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21. Air Quality Assessment, Windygoul South, Tranent, SWECO, March 2019