

**Annual Progress Report (APR)**



**2018 Air Quality Annual Progress Report  
(APR) for  
East Lothian Council**

**In fulfilment of Part IV of the  
Environment Act 1995**

**Local Air Quality Management**

**June, 2018**

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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 the Nitrogen dioxide (NO<sub>2</sub>) 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<sub>2</sub> 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 includes 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<sub>2</sub> objective where relevant exposure exists.

The Further Assessment (Ref 3) estimated that ambient Nitrogen oxides (NO<sub>x</sub>) reductions in the AQMA of up to 27% at some locations were required in order to achieve compliance with the annual mean NO<sub>2</sub> 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<sub>x</sub> reductions. Measures that reduced overall traffic, reduced queuing and reduced bus numbers, where appropriate, would reduce road NO<sub>x</sub> 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<sub>2</sub> emissions in 2013 and 2014 continued to exceed, or were very close to, the Annual Mean Air Quality Objective for NO<sub>2</sub> 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<sub>2</sub> 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).

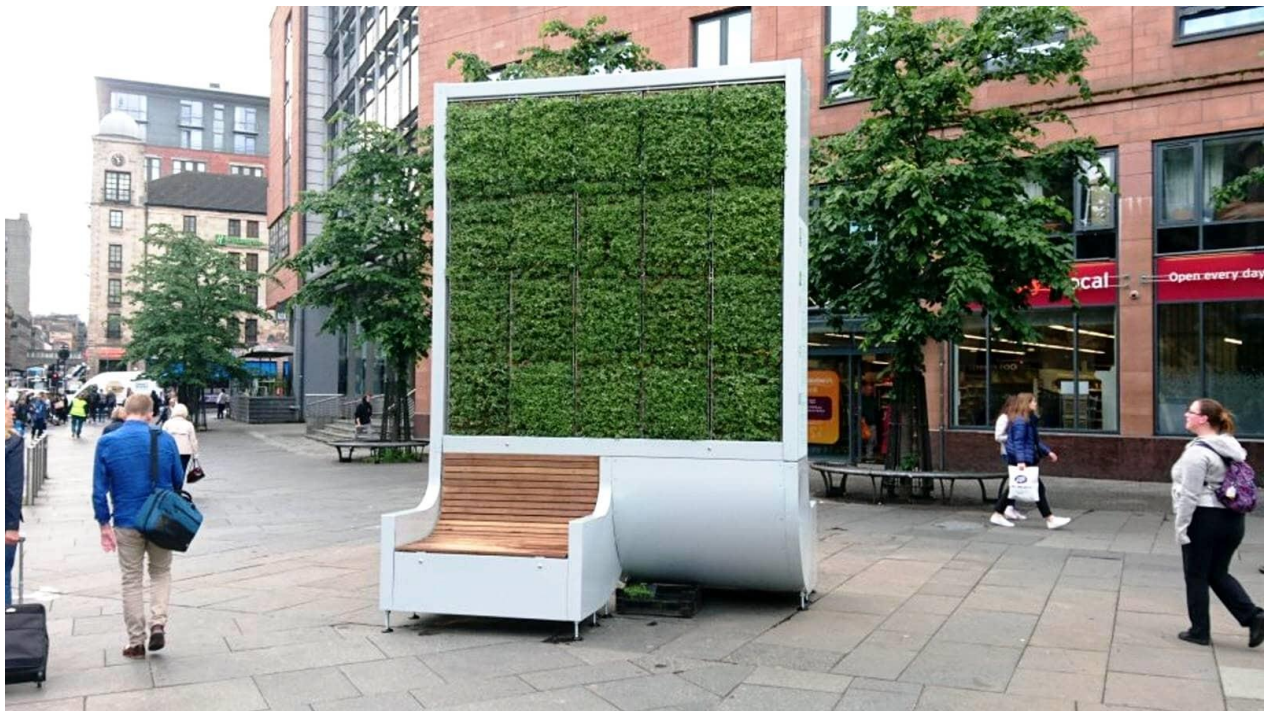
However, the 2017 Progress Report (Ref 9) confirmed that during 2016 exceedences of the NO<sub>2</sub> Annual Mean AQO within the AQMA were again recorded at two locations. There were no other exceedences of any other AQO noted throughout the County

The 2018 Progress Report 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<sub>2</sub> Annual Mean AQO. However, given that Nitrogen dioxide levels within the Musselburgh High Street AQMA remain close to the annual mean AQO and further significant development is proposed for the Musselburgh conurbation the Council has formed the opinion that it is not appropriate to revoke the AQMA at this point.

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 01/01/17 to 31/12/17 indicate no exceedences of the NO<sub>2</sub> 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 will provide a City Tree, which is specifically designed to combat traffic pollution, within the Musselburgh AQMA. The tree will be commissioned in Summer 2018, fully funded by the Scottish Government through the East Central Scotland Vehicle Emissions Partnership. An image of a City Tree is shown below:



### **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](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 2017. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) (Ref 10) and the relevant Policy and Technical Guidance documents (Ref's 11 and 12).

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Progress Report (APR) summarises the work being undertaken by East Lothian 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 <sub>2</sub> )	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m <sup>3</sup>	Annual mean	31.12.2005
Particulate Matter (PM <sub>10</sub> )	50 µg/m <sup>3</sup> , not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
	18 µg/m <sup>3</sup>	Annual mean	31.12.2010
Particulate Matter (PM <sub>2.5</sub> )	10 µg/m <sup>3</sup>	Annual mean	31.12.2020
Sulphur dioxide (SO <sub>2</sub> )	350 µg/m <sup>3</sup> , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m <sup>3</sup> , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005
Benzene	3.25 µg/m <sup>3</sup>	Running annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
Carbon Monoxide	10.0 mg/m <sup>3</sup>	Running 8-Hour mean	31.12.2003
Lead	0.25 µg/m <sup>3</sup>	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](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 <sub>2</sub> annual mean	Musselburgh	High Street, Musselburgh (A199) from its junction with Newbigging and extending westwards to the junction with Bridge Street and Mall Avenue	<a href="https://www.eastlothian.gov.uk/downloads/file/23473/air_quality_action_plan_2017">https://www.eastlothian.gov.uk/downloads/file/23473/air_quality_action_plan_2017</a>

### 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 2017 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 (Ref 8) relating to each AQMA. Key completed measures are:

- 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. The scheme had 59 members in August 2017 and now has 100 members and will be continued through 2018/19 when it is anticipated membership numbers will increase further.

- **SCOOT Traffic Management System (Measure No 7)** – East Lothian Council have made a budgetary commitment this year to examine the Urban Traffic Control (UTC) system in Musselburgh which comprises SCOOT. ELC Road Services will be discussing appropriate solutions with City of Edinburgh Council, who manage the SCOOT system on behalf of East Lothian Council, and prepare an action plan based on LDP triggers and vehicle growth going forward. This remains an outstanding item of business, however, a budgetary commitment has been made to re-evaluate the SCOOT system and incorporate Intelligent Traffic Systems (ITS) into the network to advise drivers of journey time delays.
- **The East Central Scotland Vehicle Emissions Partnership (Measure No 10)** – East Lothian Council works 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. In Spring 2017 the partnership were the first in Scotland to use NASA technology to monitor vehicle emissions. They have undertaken a pilot scheme using state-of-the-art remote Emissions Detecting and Reporting (EDAR) technology in sites in Edinburgh and Broxburn in West Lothian and are assisting with set up in Coatbridge in North Lanarkshire. EDAR uses satellite and laser technology to give a true picture of vehicle emissions, as well as recording license plate, speed, acceleration and temperature of the exhaust. Information recorded during the pilot will be shared between the local authorities involved, and Scottish Government agencies such as Transport Scotland and SEPA. 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](https://www.eastlothian.gov.uk/info/210568/environmental_health/12172/pollution/4)

- **AQMA Signage (Measure No 9)** – East Lothian Council will be commissioning a City Tree within the AQMA in Musselburgh during the Summer of 2018. As well as providing the locus for the Tree, the structure will also contain signage and information on Air Quality.

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

- **Improving Links with Local Transport Strategy (Measure No 1)** - The development of the Local Transport Strategy was deferred because of the delay in determining the exact nature of the interventions associated with the LDP. To identify these interventions SIAS have been 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 will be consulting on the LTS in conjunction with its Strategic environmental assessment. The draft Local Transport Strategy was approved for consultation on 27<sup>th</sup> February 2018 with the period of public consultation ran from 30<sup>th</sup> March until 10<sup>th</sup> May 2018. A paper will be taken to Council in September making recommendations to adopt the strategy and associated plans. The strategy provides for specific interventions to mitigate the impact of development growth and support economy growth in Musselburgh, which are detailed in the plan.
- **Improving Links with Local Development Plan (Measure No 2)** - Scottish Ministers have completed their examination of the proposed East Lothian Local Development Plan (LDP) and issued their Report of Examination and recommended post-examination Modifications on 12<sup>th</sup> March 2018. East Lothian Council considered the Report and Modifications and made post-

examination modifications to the LDP. The Council, at its meeting on the 29<sup>th</sup> May 2018, decided that it intends to adopt the LDP (as modified following Examination in Public). The LDP was submitted to Scottish Ministers on 8<sup>th</sup> June 2018 for their final review of the LDP before the Council may adopt the plan as the up to date LDP for East Lothian. The LDP will not become constituted until such time as Scottish Ministers issue clearance to the Council confirming that the Council may formally adopt the LDP. The Examination Report confirmed that through Scottish Ministers consideration of the issue of air quality, and the proposed mitigation measures set out in the LDP, that the Council's approach to this issue was acceptable. Only minor changes to the wording of paragraph 6.34 of the proposed LDP were recommended as post-examination modifications. These post-examination modifications were accepted by the Council, and they are intended to clarify how contributions towards air quality improvements will be sought through Policy T8, and excluding those set out in Policy T20. The Council continues to seek environmental improvements to air quality through the application of planning policies and project level decisions. Once the LDP becomes the adopted plan for East Lothian, the Council will have an up to date policy position with regards to air quality across the plan area, and how development related activity and increases in traffic can be managed across the plan area. In the case of Musselburgh, with an Air Quality Management Area being designated, these improvements will be delivered through Transport related interventions. The Council has also recently finalised its proposed Supplementary Guidance on Developer Contributions Framework, the consultation period for this has already begun. This Supplementary Guidance 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.

- **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. East Lothian Council Road Services are currently bidding for match funding to move forward active travel and future proof Musselburgh and these considerations will have to be taken into account. In conjunction with SEStran, Midlothian and the City of Edinburgh Council, East Lothian Council commissioned AECOM to investigate the feasibility of future proofing active travel routes in though and around Musselburgh to generate modal shift in Musselburgh and connecting to Edinburgh and Midlothian. A draft report and business case has been undertaken and will be reported to Council in autumn 2018, which includes for public realm improvements in Musselburgh high Street. The report is based on preliminary design principles and will evolving to detailed design subject to budgetary considerations.

- **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.
- **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 obtained funding through the scheme to develop a Green Travel Plan for East Lothian Council. ELC commissioned Anson Consultants in 2016 to assess demand, employee travel choices, and barriers and prepare a report with recommendations. This has been completed subject to a final review and should be adopted by Council by 2018. Investment into each of the Area partnerships initiatives 'East Lothian – On the Move' through SCSP has been continued in 2018-19. The purpose of this funding is to encourage behaviour change through local based initiatives and interventions.

No progress has been made on the following measures:

- **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 draft Local Transport Strategy was approved for consultation on 27 <sup>th</sup> February 2018 with the period of public consultation ran from 30 <sup>th</sup> March until 10 <sup>th</sup> May 2018. A paper will be taken to Council in September making recommendations to adopt the strategy and associated plans. The strategy provides for specific interventions to mitigate the impact of development growth and support economy growth in Musselburgh, which are detailed in the plan.	Sep 2018	



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					<p>Scottish Ministers have completed their examination of the proposed East Lothian Local Development Plan (LDP) and issued their Report of Examination and recommended post-examination Modifications on 12<sup>th</sup> March 2018. East Lothian Council considered the Report and Modifications and made post-examination modifications to the LDP. The Council, at its meeting on the 29<sup>th</sup> May 2018, decided that it intends to adopt the LDP (as modified following Examination in Public). The LDP was submitted to Scottish Ministers on 8<sup>th</sup> June 2018 for their final review of the LDP before the Council may adopt the plan as the up to date LDP for East Lothian. The LDP will not become constituted until such time as Scottish Ministers issue clearance to the Council confirming that the Council may formally adopt the LDP.</p>	Sep 2018	
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## East Lothian Council

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					In conjunction with SEStran, Midlothian and the City of Edinburgh Council, East Lothian Council commissioned AECOM to investigate the feasibility of future proofing active travel routes in though and around Musselburgh to generate modal shift in Musselburgh and connecting to Edinburgh and Midlothian. A draft report and business case has been undertaken and will be reported to Council in autumn 2018, which includes for public realm improvements in Musselburgh high Street. The report is based on preliminary design principles and will evolving to detailed design subject to budgetary considerations.	2019	

## East Lothian Council

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	

## East Lothian Council

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
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 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. The scheme had 59 members in August 2017 and now has 100 members and will be continued through 2018/19 when it is anticipated membership numbers will increase further	Ongoing	

## East Lothian Council

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					This remains an outstanding item of business, however, a budgetary commitment has been made to re-evaluate the SCOOT system and incorporate Intelligent Traffic Systems (ITS) into the network to advise drivers of journey time delays.	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					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)	

## East Lothian Council

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
9	AQMA Signage	Public Information	Increase awareness of Air Quality	ELC Env Health					East Lothian Council will be commissioning a City Tree within the AQMA in Musselburgh during the Summer of 2018. As well as providing the locus for the Tree, the structure will also contain signage and information on Air Quality.	2018	

## East Lothian Council

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			In Spring 2017 the partnership were the first in Scotland to use NASA technology to monitor vehicle emissions. They have undertaken a pilot scheme using state-of-the-art remote Emissions Detecting and Reporting (EDAR) technology in sites in Edinburgh and Broxburn in West Lothian and are assisting with set up in Coatbridge in North Lanarkshire. EDAR uses satellite and laser technology to give a true picture of vehicle emissions, as well as recording license plate, speed, acceleration and temperature of the exhaust. Information recorded during the pilot will be shared between the local authorities involved, and Scottish Government agencies such as Transport Scotland and SEPA.	Ongoing	

## East Lothian Council

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
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 obtained funding through the scheme to develop a Green Travel Plan for East Lothian Council. ELC commissioned Anson Consultants in 2016 to assess demand, employee travel choices, and barriers and prepare a report with recommendations. This has been completed subject to a final review and should be adopted by Council by 2018. Investment into each of the Area partnerships initiatives 'East Lothian – On the Move' through SCSP has been continued in 2018-19. The purpose of this funding is to encourage behaviour change through local based initiatives and interventions	Autumn 2018	



## East Lothian Council

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 obtained funding through the scheme to develop a Green Travel Plan for East Lothian Council. ELC commissioned Anson Consultants in 2016 to assess demand, employee travel choices, and barriers and prepare a report with recommendations. This has been completed subject to a final review and should be adopted by Council by 2018. Investment into each of the Area partnerships initiatives 'East Lothian – On the Move' through SCSP has been continued in 2018-19. The purpose of this funding is to encourage behaviour change through local based initiatives and interventions	Autumn 2018	
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: <a href="https://www.eastlothian.gov.uk/info/210568/environmental_health/12172/pollution/4">https://www.eastlothian.gov.uk/info/210568/environmental_health/12172/pollution/4</a>	Ongoing	

### **2.3 Cleaner Air for Scotland**

Cleaner Air for Scotland – The Road to a Healthier Future (CAFS) 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 <http://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 Active Travel Improvement Plan (ATIP), an associated plan of the LTS has been prepared to provide a series of interventions to encourage modal shift. The (Green) travel plan has been prepared and will follow on from the adoption of the LTS. Further, work is also ongoing to explore electric bikes (e-bikes) with partner organisations, parking management and enforcement to deter car use and improvements to bus service have realised significant gains in local patronage.

#### **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. East Lothian Council has recently employed a Sustainable Energy and Climate Change Officer who has been tasked with taking forward the Climate Change Mitigation and Adaptation Strategy. The Strategy is currently being prepared and is anticipated to be completed by July 2019. The Strategy will identify priorities and actions which contribute to the delivery of East Lothian's climate change obligations and will be wide-ranging and cover air quality considerations.

#### **2.3.3 Additional actions**

One of six main objectives 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 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 (in Section 2.3.4), Strategic Development Plan for South East Scotland – SESplan (in Section 2.3.5), East Lothian Council Local Development Plan (in Section 2.3.6) and Climate Change Declaration (in Section 2.3.7).

### **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 2017. 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<sub>2</sub> at 23 sites during 2017. 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.

Two additional diffusion tube sites will be provided in Haddington from July 2018 to assess impacts due to significant new housing development in the town. Details of the new sites are provided in Table A.2 in Appendix A. Maps showing the location of the new 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<sub>2</sub>)**

Table A.3 in Appendix A compares the ratified and adjusted monitored NO<sub>2</sub> annual mean concentrations for the past 5 years with the air quality objective of 40µg/m<sup>3</sup>. Figures 1 and 2 below show the trends for diffusion tubes located within the AQMA on Musselburgh High Street and also for tubes located Tranent High Street between

2013-2017. It can be seen that there has been a slight downward trend in annual mean NO<sub>2</sub> concentrations between 2013-2017:

Figure 1: Diffusion Tubes on Musselburgh High Street 2013-2017

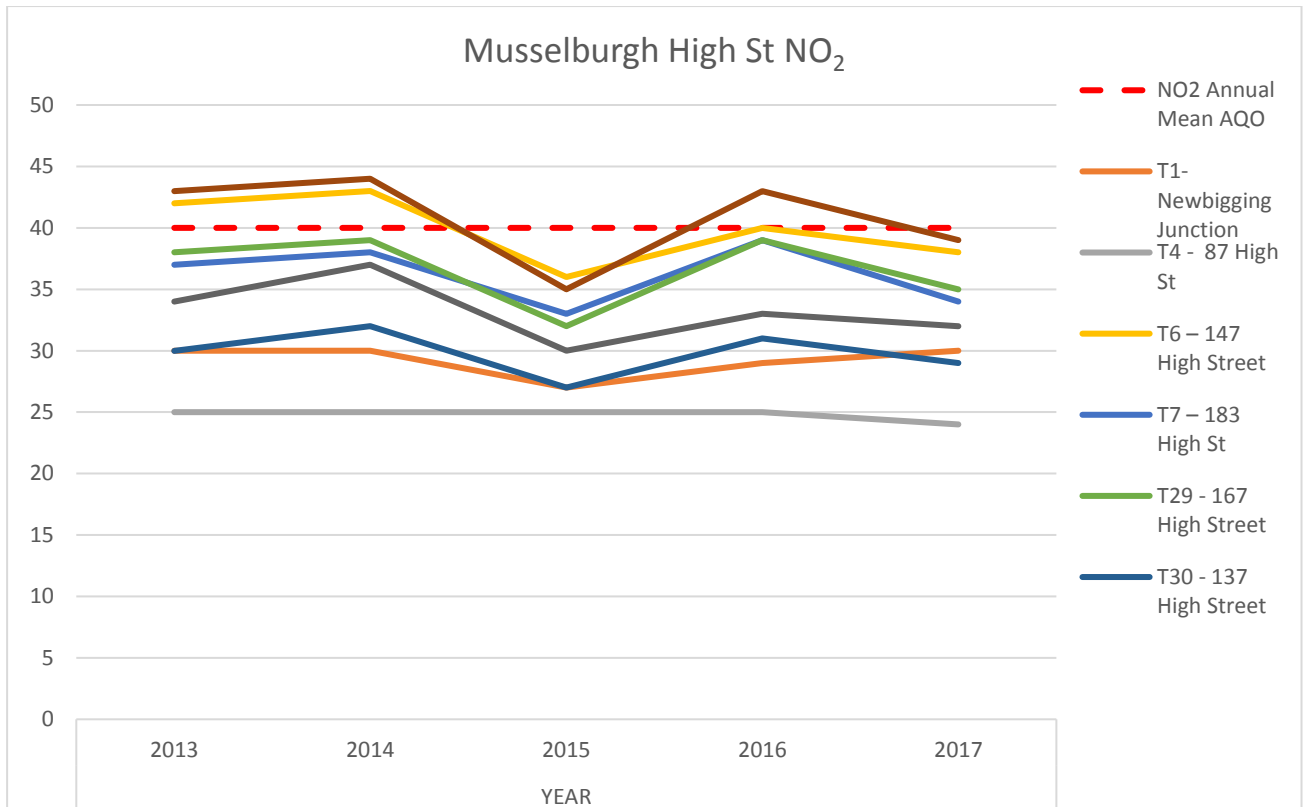
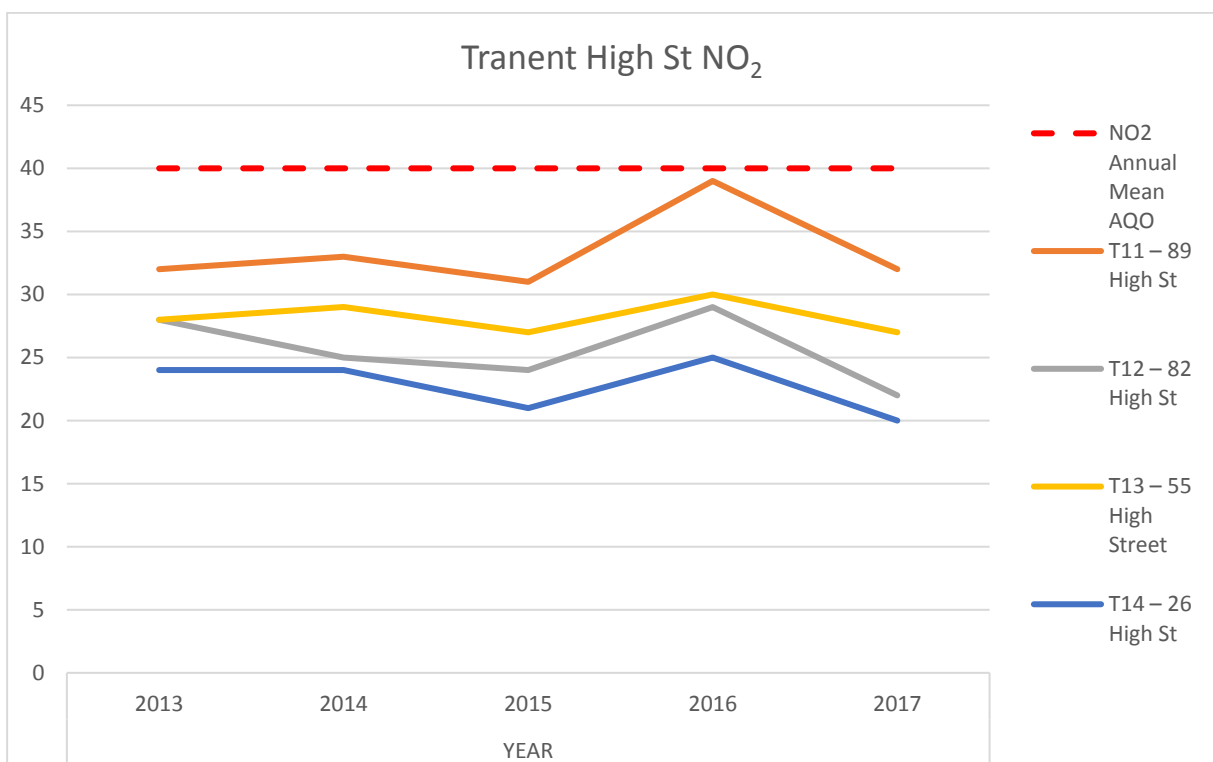


Figure 2: Diffusion Tubes on Tranent High Street 2013-2017



There were no exceedences of the Annual Mean NO<sub>2</sub> Objective recorded at any locations, including those locations within the AQMA. However, concentrations of Nitrogen dioxide at two locations within the AQMA, T6 (147 High Street, Musselburgh) and T31 (69 High Street, Musselburgh) confirm that levels remain close to the Annual Mean AQO. The Objective was close to being exceeded at T11 (89 High Street, Tranent) in 2016 but this was reported as likely due to road works within the vicinity of the tubes in the town during October 2016. This conclusion would appear to be correct as results for Tranent have fallen back to well within the objective levels in 2017.

For diffusion tubes, the full 2017 dataset of monthly mean values is provided in Appendix B. Details of ratified data for the automatic monitor for 2017 are provided in Appendix C.

Table A.4 in Appendix A compares the ratified continuous monitored NO<sub>2</sub> hourly mean concentrations for the past 5 years with the air quality objective of 200µg/m<sup>3</sup>, not to be exceeded more than 18 times per year. There were no exceedences of the hourly mean air quality objective in 2017.

### **3.2.2 Particulate Matter (PM<sub>10</sub>)**

Table A.5 in Appendix A compares the ratified and adjusted monitored PM<sub>10</sub> annual mean concentrations for the past 5 years with the air quality objective of 18µg/m<sup>3</sup>. Figure 3 below shows the trend for PM<sub>10</sub> concentrations on Musselburgh North High Street between 2013-2017. It can be seen that there has been a slight downward trend in annual mean PM<sub>10</sub> concentrations between 2013-2016 although levels increased slightly in 2017 but remained below 2013 levels.

**Figure 3: PM<sub>10</sub> concentrations on Musselburgh North High Street 2013-2017**

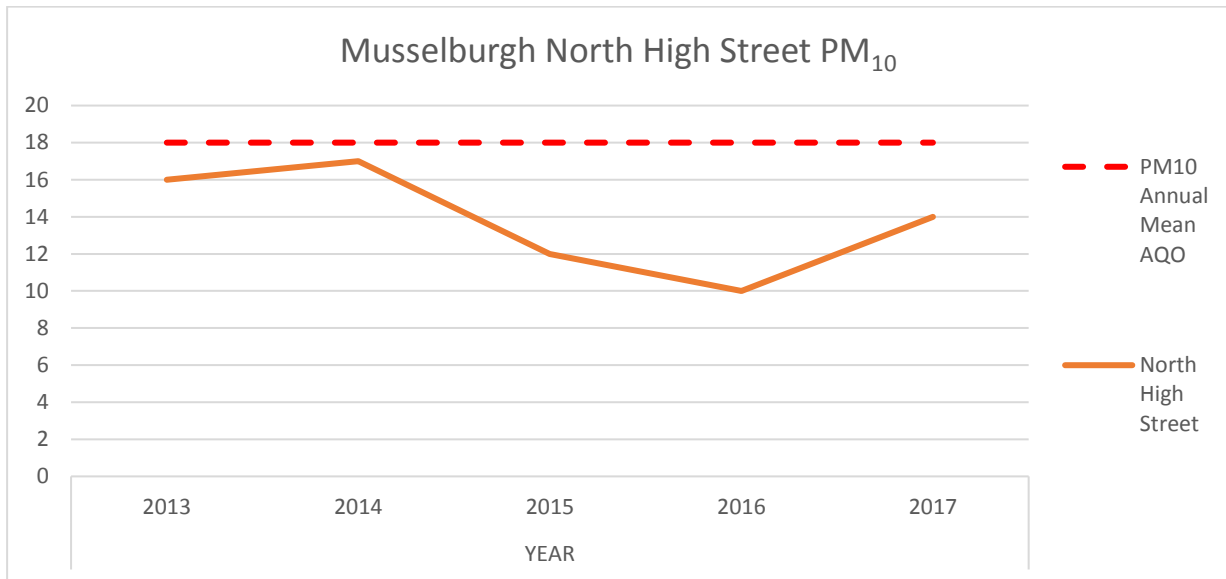


Table A.6 in Appendix A compares the ratified continuous monitored PM<sub>10</sub> daily mean concentrations for the past 5 years with the air quality objective of 50µg/m<sup>3</sup>, not to be exceeded more than 7 times per year.

There were no exceedences of the annual mean or daily mean air quality objectives in 2017.

### 3.2.3 Particulate Matter (PM<sub>2.5</sub>)

East Lothian Council do not currently monitor PM<sub>2.5</sub> and have no plans to do so in the future

### 3.2.4 Sulphur Dioxide (SO<sub>2</sub>)

East Lothian Council do not currently monitor Sulphur dioxide (SO<sub>2</sub>).

### 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 2017 Annual Progress Report (Ref 9 )

### 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 2017 Annual Progress Report (Ref 9 )

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

since the 2017 Annual Progress Report (Ref 9)

### 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 2017 Annual Progress Report (Ref 9)

#### **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 2017 Annual Progress Report (Ref 9).

## 5. Planning Applications and the Local Development Plan

The proposed East Lothian Local Development Plan was submitted to Scottish Ministers on 4th May 2017 and the subsequent Report of Examination was received by the Council on the 12th March 2018.

The council considered the Report of Examination's conclusions and recommended post-examination modifications at a meeting of the council on the 29th May 2018. At that meeting the council decided to make post-examination modifications to the proposed Local Development Plan 2016.

On the 29th May 2018 East Lothian Council also decided that it intends to adopt the proposed East Lothian Local Development Plan 2016 (as modified following Examination in Public), namely the East Lothian Local Development Plan 2018 (ELLDP 2018) (Ref 13).

The council has now submitted the ELLDP 2018 to the Scottish Ministers for their review. Following this review, should the Scottish Ministers give clearance to the council such that it may adopt the ELLDP 2018, the decision of the council on the 29th May also makes provision for the council to formally adopt the ELLDP 2018 and to constitute this plan as the up to date local development plan for East Lothian. The ELLDP 2018 identifies a number of preferred sites throughout the County that may be used to accommodate up to 10, 000 new homes. A number of these sites are within the Musselburgh 'cluster' area and the cumulative impacts of these developments on the AQMA will have to be taken into account when determining associated planning applications. There are also a number of preferred sites within the Tranent "cluster" area and the impacts of these developments on local air quality will also be taken into account in order to minimise the possibility of a new AQMA being declared in Tranent. Air Quality Assessments will be required on a case-by-case basis but where assessment indicates that air quality is likely to be an issue, mitigation measures will need to be identified. These could include, but not be limited to, providing new housing with infrastructure to support modes of transport with low impact on air quality; or financial contributions from developers towards other infrastructure that may be required to off-set impacts upon air quality (e.g. alterations to road network). Developments that result in a breach of AQOs or significant

increases in pollutant concentrations within an existing AQMA will not be supported. The LDP will seek to integrate land use and transport and minimise the need to travel as well as the distance travelled. It will do this by promoting town centres as accessible locations for a mix of land uses and services and by providing community services locally. It will help promote active travel choices and public transport as alternatives to other motorised transport.

## **6. Conclusions and Proposed Actions**

### **6.1 Conclusions from New Monitoring Data**

Monitoring for the 12-month period from 01/01/17 to 31/12/17 indicates that there were no exceedences of any AQO's in East Lothian in 2017. However, concentrations of nitrogen dioxide at two locations within the AQMA, T6 (147 High Street, Musselburgh) and T31 (69 High Street, Musselburgh) confirm that levels remain close to the Annual Mean AQO.

### **6.2 Conclusions relating to New Local Developments**

A number of preferred sites have been identified with the East Lothian Local Development Plan 2018 to provide up to 10,000 new homes in the County. Many of these will be built within the Musselburgh and Tranent "clusters" where air quality is a material consideration. Air Quality Assessments will be required on a case-by-case basis and any mitigation measures that may be required will be incorporated into the development layout as required by the ELLDP 2018.

### **6.3 Proposed Actions**

The new monitoring data has not identified any new or existing exceedences of the objectives for any pollutant. However, two additional diffusion tube sites will be provided in Haddington from July 2018 to assess impacts due to significant new housing development within the town. Details of the new sites are provided in Table A.2 in Appendix A. Maps showing the location of the new sites are provided in Appendix D.

In addition to the proposed new monitoring sites described above, existing monitoring of NO<sub>2</sub> will continue throughout East Lothian, including Musselburgh, while PM<sub>10</sub> monitoring will continue in Musselburgh. The AQMA does not require amending or revoking at this time as levels within the AQMA remain close to the Nitrogen dioxide Annual Mean AQO.

East Lothian Council shall continue to implement measures outlined within the AQAP and also develop and publish policies that supplement CAFS throughout 2018 and beyond and will report progress in the Annual Progress Report due in June 2019.

## 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Inlet Height (m)
NO <sub>x</sub>	Musselburgh North High Street - NO <sub>x</sub>	Roadside	333 941	672837	NO <sub>2</sub>	N	Gas-phase chemilluminescence detection	5	3	1.5
PM <sub>10</sub>	Musselburgh North High Street - BAM	Roadside	333 941	672837	PM <sub>10</sub>	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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube collocated with a Continuous Analyser?
T1	Musselburgh – Newbigging Junction	Roadside	334659	672720	NO <sub>2</sub>	Y	Y (15m)	2m	N
T4	Musselburgh - 87 High St	Roadside	334526	672700	NO <sub>2</sub>	Y	Y (15m)	4m	N
T6	Musselburgh – 147 High Street	Roadside	334392	672652	NO <sub>2</sub>	Y	Y 20m)	3m	N
T7	Musselburgh – 183 High St	Roadside	334301	672632	NO <sub>2</sub>	Y	Y 20m)	3m	N
T8	Musselburgh - Mall Av	Roadside	334172	672524	NO <sub>2</sub>	N	Y (25m)	4m	N
T9	Musselburgh – 45 Bridge Street	Roadside	334105	672750	NO <sub>2</sub>	N	Y (3m)	4m	N
T10	Musselburgh – 150 North High St	Roadside	333800	672822	NO <sub>2</sub>	N	Y (3m)	4m	N
T11	Tranent – 89 High St	Roadside	340686	672692	NO <sub>2</sub>	N	Y (3m)	3m	N
T12	Tranent – 82 High St	Roadside	340738	672687	NO <sub>2</sub>	N	Y (4m)	3m	N
T13	Tranent – 55 High Street	Roadside	340608	672738	NO <sub>2</sub>	N	Y (4m)	3m	N
T14	Tranent – 26 High St	Roadside	340570	672780	NO <sub>2</sub>	N	Y (2m)	2m	N
T15	Tranent – 58 Bridge St	Roadside	340112	672905	NO <sub>2</sub>	N	Y (5m)	2m	N
T16	Haddington - Lyn Lea	Urban	352249	673631	NO <sub>2</sub>	N	Y 8m)	3m	N
T23	Musselburgh - Co-located 133 N High St	Roadside	333941	672837	NO <sub>2</sub>	N	Y (5m)	3m	Y
T24	Musselburgh - Co-located 133 N High St	Roadside	333941	672837	NO <sub>2</sub>	N	Y (5m)	3m	Y
T25	Musselburgh - Co-located 133 N High St	Roadside	333941	672837	NO <sub>2</sub>	N	Y (5m)	3m	Y
T26	Wallyford - 116 Salters Rd	Roadside	336691	672055	NO <sub>2</sub>	N	Y (5m)	2m	N
T27	Wallyford - 71 Salters Rd	Roadside	336769	672127	NO <sub>2</sub>	N	Y (5m)	2m	N
T28	Musselburgh - 15 Bridge Street	Roadside	334164	672708	NO <sub>2</sub>	N	Y (5m)	3m	N
T29	Musselburgh - 167 High Street	Roadside	334354	672643	NO <sub>2</sub>	Y	Y (5m)	3m	N
T30	Musselburgh - 137 High Street	Roadside	334427	672664	NO <sub>2</sub>	Y	Y (5m)	3m	N
T31	Musselburgh - 69 High Street	Roadside	334580	672713	NO <sub>2</sub>	Y	Y (5m)	3m	N
T32	Musselburgh - 86 High Street	Roadside	334578	672695	NO <sub>2</sub>	Y	Y (5m)	3m	N
T33 <sup>(3)</sup>	Haddington – 23 Hardgate	Roadside	351693	673998	NO <sub>2</sub>	N	Y (5m)	2m	N
T34 <sup>(3)</sup>	Haddington – 2 Bothwell Bank, Hardgate	Roadside	351702	674034	NO <sub>2</sub>	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 proposed in Haddington from July 2018

Table A.3 – Annual Mean NO<sub>2</sub> Monitoring Results 2013 - 2017

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2017 (%) <sup>(2)</sup>	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> )				
					2013	2014	2015	2016	2017
NO <sub>x</sub>	Roadside	Automatic	96	95	24	23	22	25	23
T1	Roadside	Passive Diffusion Tube	100	100	30	30	27	29	30
T4	Roadside	Passive Diffusion Tube	91.7	91.7	25	25	25	25	24
T6	Roadside	Passive Diffusion Tube	100	100	<b>42</b>	<b>43</b>	36	<b>40</b>	38
T7	Roadside	Passive Diffusion Tube	100	100	37	38	33	39	34
T8	Roadside	Passive Diffusion Tube	100	100	24	23	21	24	23
T9	Roadside	Passive Diffusion Tube	100	100	26	28	24	28	24
T10	Roadside	Passive Diffusion Tube	100	100	34	34	31	34	33
T11	Roadside	Passive Diffusion Tube	100	100	32	33	31	39	32
T12	Roadside	Passive Diffusion Tube	100	100	28	25	24	29	22
T13	Roadside	Passive Diffusion Tube	100	100	28	29	27	30	27
T14	Roadside	Passive Diffusion Tube	91.7	91.7	24	24	21	25	20
T15	Roadside	Passive Diffusion Tube	100	100	19	17	16	20	18
T16	Urban	Passive Diffusion Tube	100	100	8	8	8	9	7
T23	Roadside	Passive Diffusion Tube	100	100	23	23	22	24	22
T24	Roadside	Passive Diffusion Tube	100	100	24	22	22	25	21
T25	Roadside	Passive Diffusion Tube	100	100	24	23	22	26	24
T26	Roadside	Passive Diffusion Tube	91.7	91.7	23	24	21	25	28
T27	Roadside	Passive Diffusion Tube	100	100	24	22	21	26	22
T28	Roadside	Passive Diffusion Tube	100	100	26	26	23	28	22
T29	Roadside	Passive Diffusion Tube	91.7	91.7	38	39	32	39	35
T30	Roadside	Passive Diffusion Tube	100	100	30	32	27	31	29
T31	Roadside	Passive Diffusion Tube	100	100	<b>43</b>	<b>44</b>	35	<b>43</b>	39
T32	Roadside	Passive Diffusion Tube	100	100	34	37	30	33	32

Notes: Exceedences of the NO<sub>2</sub> annual mean objective of 40µg/m<sup>3</sup> are shown in **bold**.

NO<sub>2</sub> annual means exceeding 60µg/m<sup>3</sup>, indicating a potential exceedence of the NO<sub>2</sub> 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 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.



Table A.4 – 1-Hour Mean NO<sub>2</sub> Monitoring Results 2013 - 2017

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2015 (%) <sup>(2)</sup>	NO <sub>2</sub> 1-Hour Means > 200µg/m <sup>3</sup> <sup>(3)</sup>				
					2013	2014	2015	2016	2017
NO <sub>x</sub>	Roadside	Automatic	95	95	0 (101)	0 (78)	0 (75)	0	0

Notes: Exceedences of the NO<sub>2</sub> 1-hour mean objective (200µg/m<sup>3</sup> 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 99.8<sup>th</sup> percentile of 1-hour means is provided in brackets.

**Table A.5 – Annual Mean PM<sub>10</sub> Monitoring Results 2013 - 2017**

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2015 (%) <sup>(2)</sup>	PM <sub>10</sub> Annual Mean Concentration (µg/m <sup>3</sup> )				
				2013	2014	2015	2016	2017
PM <sub>10</sub>	Roadside	90	90	16	17	12	10	14

Notes: Exceedences of the PM<sub>10</sub> annual mean objective of 18µg/m<sup>3</sup> 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<sub>10</sub> Monitoring Results 2013 - 2017**

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2015 (%) <sup>(2)</sup>	PM <sub>10</sub> 24-Hour Means > 50µg/m <sup>3</sup> <sup>(3)</sup>				
				2013	2014	2015	2016	2017
PM <sub>10</sub>	Roadside			2 (32)	3	1	0	0

Notes: Exceedences of the PM<sub>10</sub> 24-hour mean objective (50µg/m<sup>3</sup> 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 98.1<sup>st</sup> percentile of 24-hour means is provided in brackets.

**Appendix B: Full Monthly Diffusion Tube Results for 2017**

Table B.1 – NO<sub>2</sub> Monthly Diffusion Tube Results for 2017

Site ID	Location	05/01/17 - 03/01/18												AVERAGE	Data Capture %	BIAS ADJUSTED (1.0 local)
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	Musselburgh – Newbigging Junction	43	29	41	30	27	24	19	22	23	26	37	35	30	100	30
4	Musselburgh - 87 High St	25	30	32	23	16	16	14	20	21	24	27	37	24	91.7	24
6	Musselburgh – 147 High Street	MISSING	85	44	42	41	32	25	28	32	21	36	35	38	100	38
7	Musselburgh – 183 High St	33	34	46	38	37	29	34	26	30	28	42	34	34	100	34
8	Musselburgh - Mall Av	27	30	30	16	22	14	16	16	21	21	33	30	23	100	23
9	Musselburgh – 45 Bridge Street	29	30	23	24	23	18	25	16	24	21	23	31	24	100	24
10	Musselburgh – 150 North High St	38	33	41	40	27	25	24	26	30	29	40	47	33	100	33
11	Tranent – 89 High St	42	35	42	32	30	22	21	MISSING	29	27	38	38	32	100	32
12	Tranent – 82 High St	25	26	32	23	29	16	19	15	18	18	23	20	22	100	22
13	Tranent – 55 High Street	39	33	33	25	24	21	18	18	25	23	30	32	27	100	27
14	Tranent – 26 High St	MISSING	22	1	47	24	20	16	MISSING	18	16	20	18	20	91.7	20
15	Tranent – 58 Bridge St	23	18	24	17	16	11	12	12	17	17	24	27	18	100	18
16	Haddington - Lyn Lea	13	8	4	7	5	3	4	4	6	8	11	15	7	100	7
23	Musselburgh - 133 N High St	26	25	29	19	24	17	16	14	19	18	27	28	22	100	22
24	Musselburgh - 133 N High St	23	21	23	24	21	17	16	14	18	21	26	26	21	100	21
25	Musselburgh - 133 N High St	30	24	29	23	22	18	23	16	22	21	27	33	24	100	24
26	Wallyford - 116 Salters Rd	83	24	31	22	18	16	14	19	22	20	35	31	28	91.7	28
27	Wallyford - 71 Salters Rd	33	28	36	20	21	15	13	17	20	21	1	33	22	100	22
28	Musselburgh - 15 Bridge Street	28	27	25	23	24	18	17	14	21	18	27	27	22	100	22
29	Musselburgh - 167 High Street	35	39	45	35	41	28	27	26	34	30	45	39	35	91.7	35
*30	Musselburgh - 137 High Street	33	32	43	30	33	20	25	19	21	27	32	30	29	100	29
*31	Musselburgh - 69 High Street	48	32	58	42	37	34	28	31	34	34	48	45	39	100	39
*32	Musselburgh - 86 High Street	44	40	42	30	26	25	20	20	28	32	38	36	32	100	32

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 22.3  $\mu\text{g}/\text{m}^3$ . The average for the continuous analyser was 23  $\mu\text{g}/\text{m}^3$ . This provided a diffusion tube bias adjustment factor of 1.

Method	Average for period ( $\mu\text{g}/\text{m}^3$ )
Analyser	23
Tubes	22.3
<b>BIAS ADJUSTMENT</b>	<b>1</b>

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

# Air Pollution Report

1st January to 31st December 2017



## 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/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> asNO <sub>2</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>
Number Days Low	-	355	-	324
Number Days Moderate	-	0	-	0
Number Days High	-	0	-	0
Number Days Very High	-	0	-	0
Max Daily Mean	81	85	207	48
Annual Max	467	177	883	342
Annual Mean	13	23	44	14
98th Percentile of daily mean	-	-	-	35
90th Percentile of daily mean	-	-	-	23
99.8th Percentile of hourly mean	-	123	-	-
98th Percentile of hourly mean	68	80	181	42
95th Percentile of hourly mean	45	62	130	32
50th Percentile of hourly mean	7	18	30	12
% Annual data capture	95.11%	95.06%	95.06%	90.45%

**Instruments:** PM<sub>10</sub>: BAM Gravimetric Equivalent (correction applied)

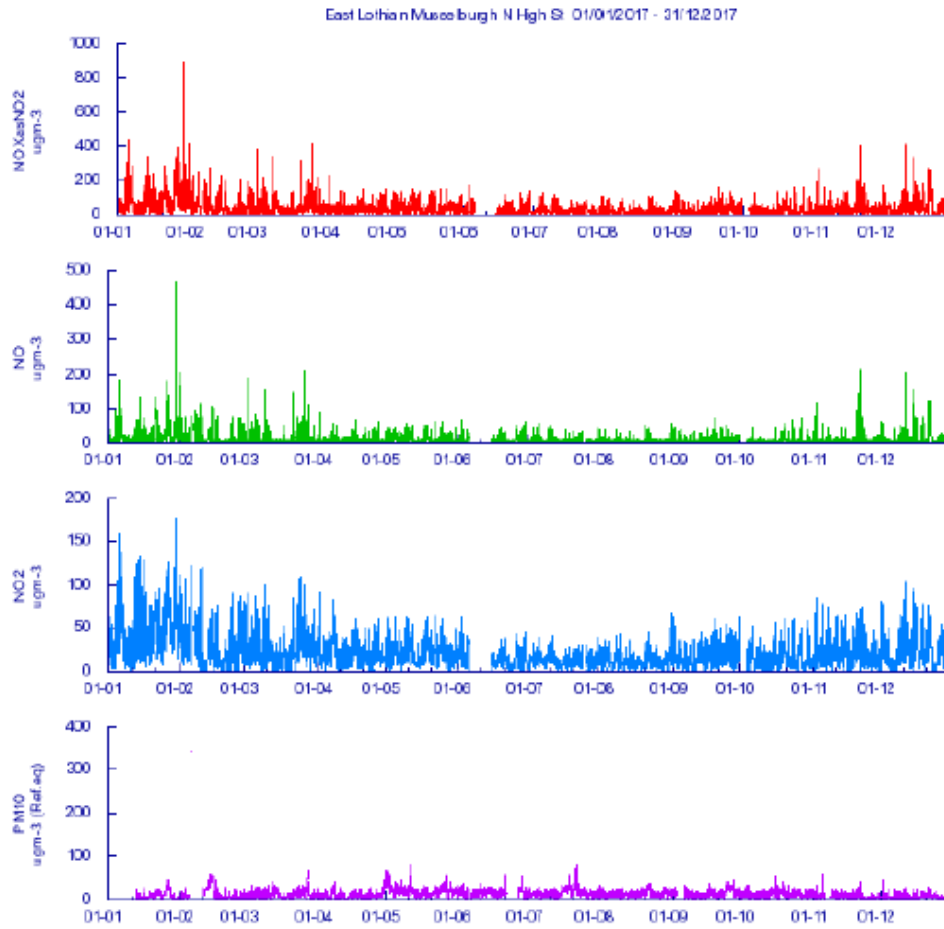
All gaseous pollutant mass units are at 20°C and 1013mb. Particulate matter concentrations are reported at ambient temperature and pressure. NO<sub>x</sub> mass units are NO<sub>x</sub> as NO<sub>2</sub> µg m<sup>-3</sup>

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



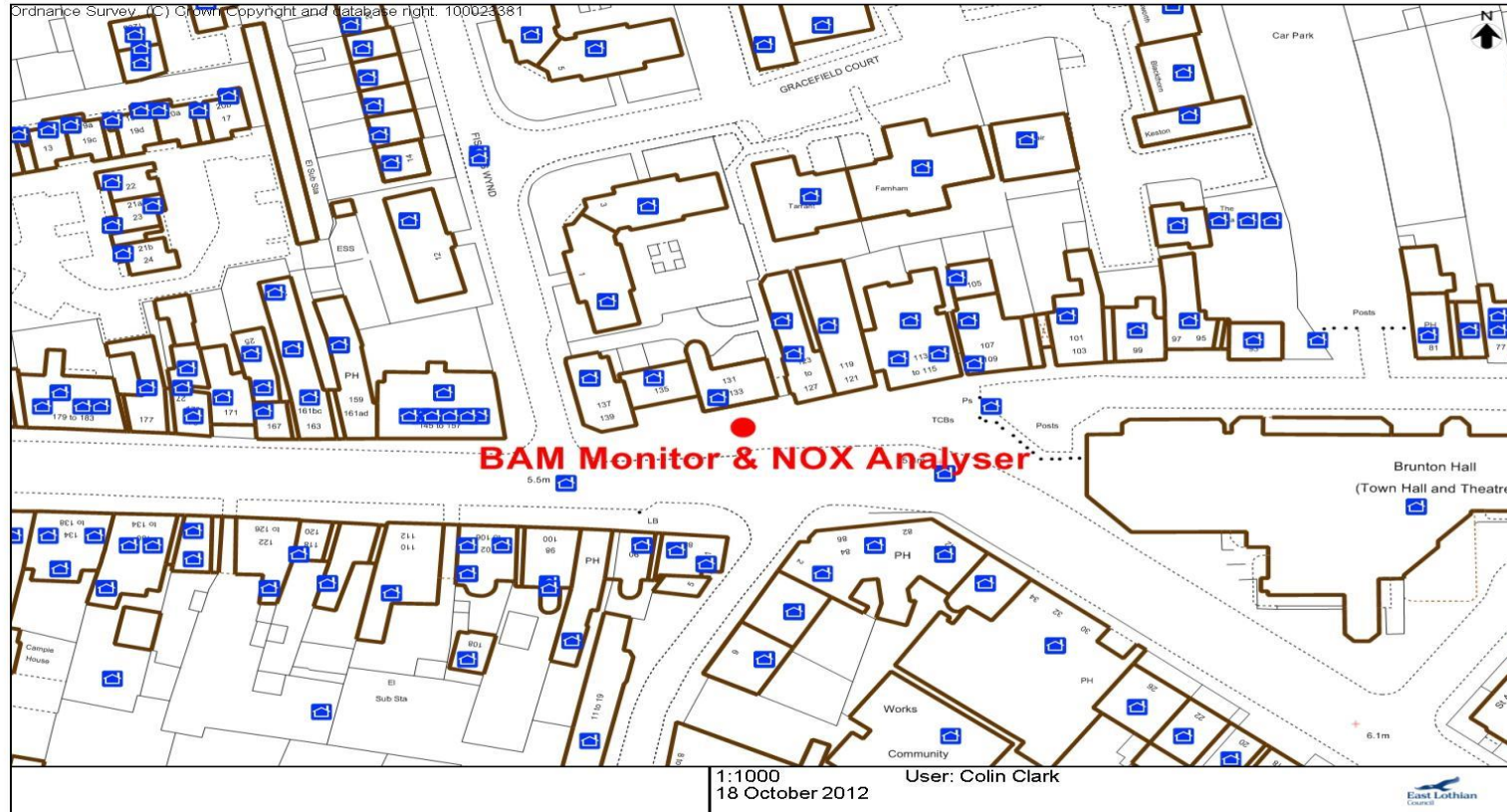
Pollutant	Air Quality Standards (Scotland) Regulations 2010	Exceedances	Days
PM10 particulate matter (Hourly measured)	daily mean > 50 microgrammes per metre cubed	0	0
PM10 particulate matter (Hourly measured)	Annual mean > 18 microgrammes per metre cubed	0	-
Nitrogen dioxide	Hourly Mean > 200 microgrammes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

## Annual Graph



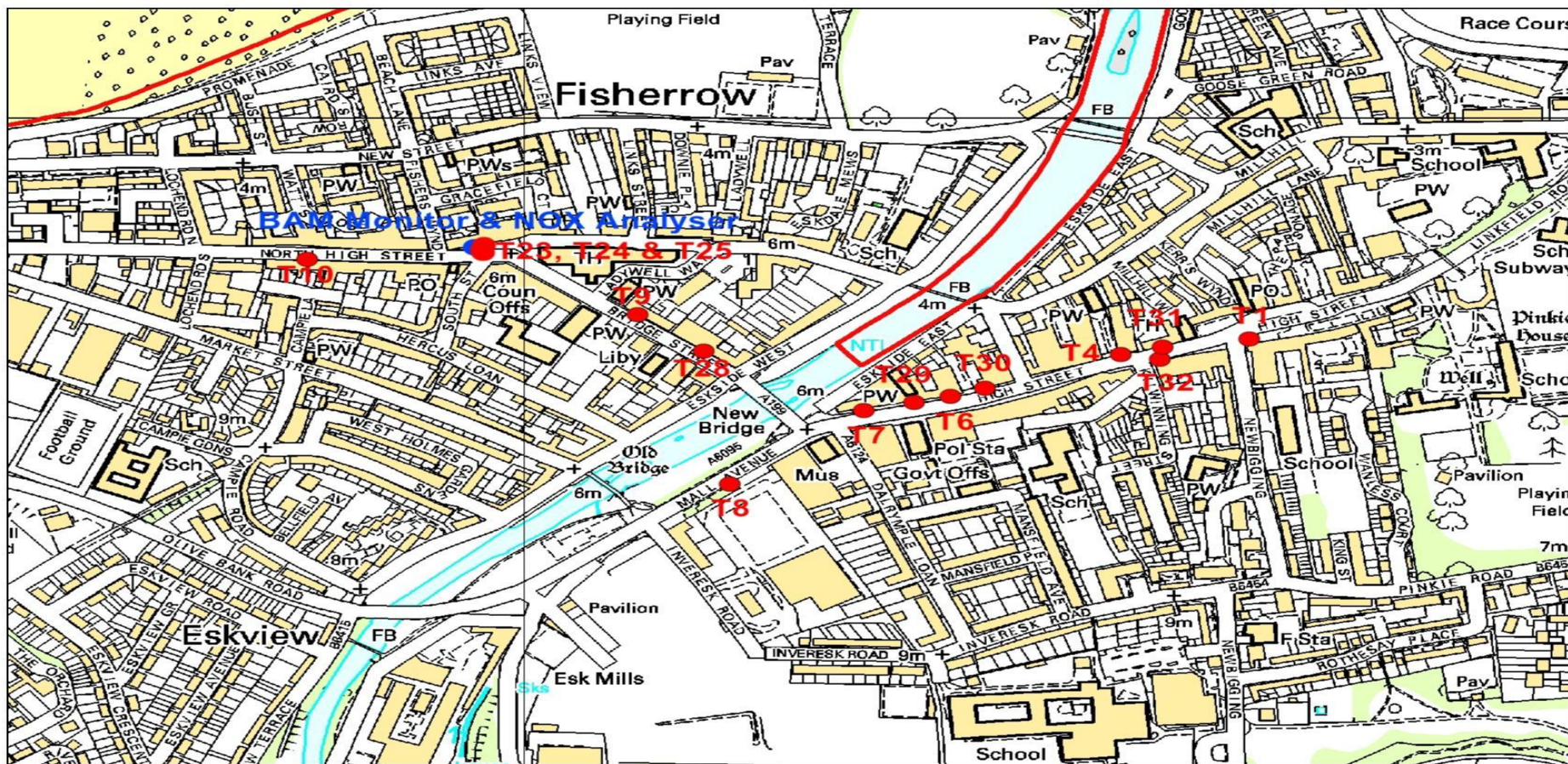
## Appendix D: Maps of monitoring locations

Map of Automatic Monitoring Site in Musselburgh





### Map of Non-Automatic Monitoring Sites in Musselburgh



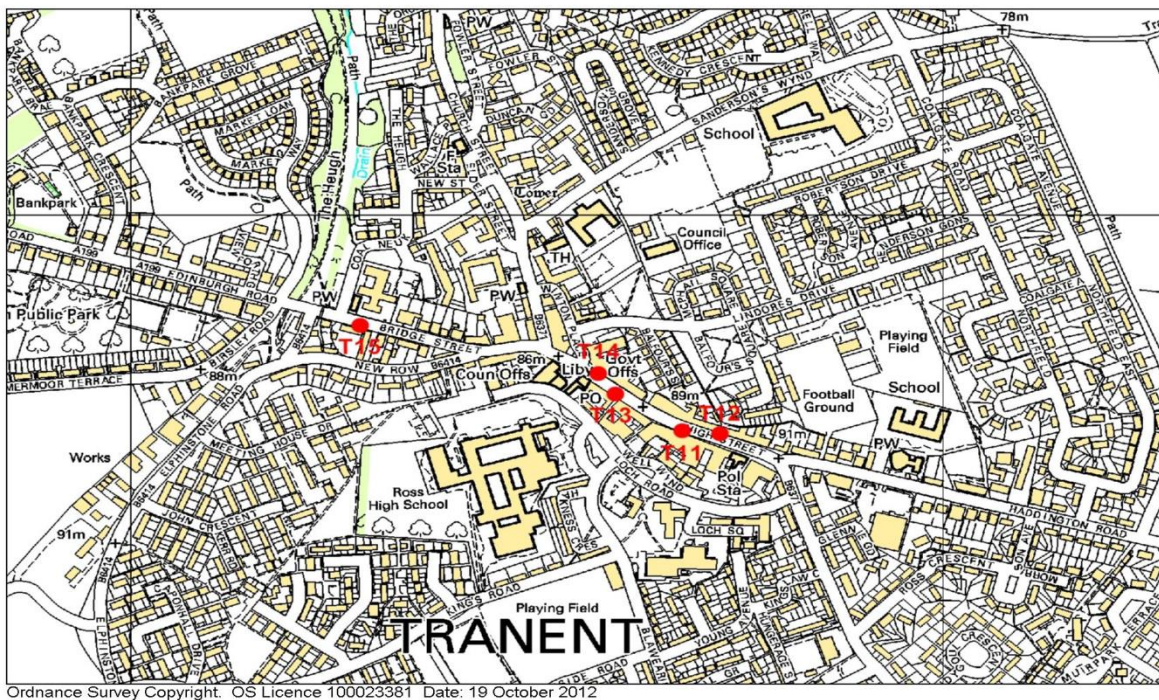
Ordnance Survey Copyright. OS Licence 100023381 Date: 19 October 2012



### Map of Non-Automatic Monitoring Sites in Wallyford

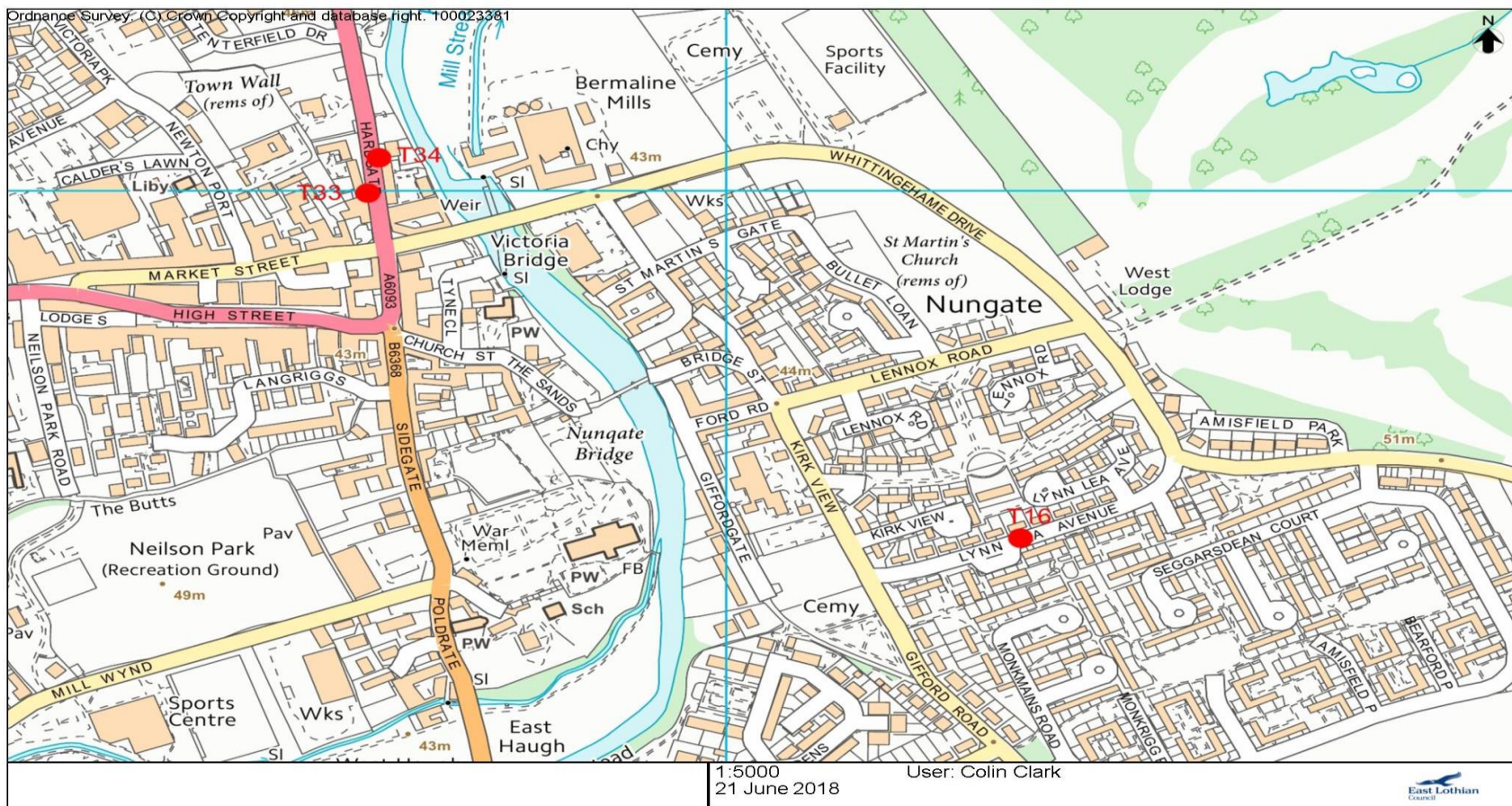


### Map of Non-Automatic Monitoring Sites in Tranent





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 <b>Carbon Monoxide, Benzene, Lead and 1,3-Butadiene</b> . Detailed Assessments required for: <b>Nitrogen Dioxide</b> due to road traffic sources in Musselburgh High St <b>Sulphur Dioxide</b> due to industrial sources (Cockenzie Power Station and Lafarge Cement Works) <b>PM10</b> 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	<b>Nitrogen Dioxide</b> due to road traffic in Musselburgh High St expected to meet Objectives by target year of 2005. No Further Assessment required at this time. <b>Sulphur Dioxide</b> 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. <b>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.</b>
2-2	Progress Report	April 2005	August 2005	<b>Nitrogen Dioxide</b> levels due to road traffic sources continue to comply with Objectives within Musselburgh and throughout East Lothian. <b>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.</b>
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	<b>Nitrogen Dioxide</b> 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. <b>PM10</b> 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	<b>Nitrogen Dioxide</b> 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	<b>PM10 and Nitrogen Dioxide</b> 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	<b>PM10 and Nitrogen Dioxide</b> 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 <b>Nitrogen Dioxide</b> 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 <b><i>if additional monitoring confirms predicted exceedences in 2012.</i></b>
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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> . 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.

<b>6-4</b>	<b>Annual Progress Report</b>	<b>June 2018</b>	<b>June 2018</b>	No exceedences of any Air Quality Objectives
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## 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 <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
PM <sub>10</sub>	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM <sub>2.5</sub>	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO <sub>2</sub>	Sulphur Dioxide

## References

1. East Lothian Council, Local Air Quality Management: Progress Report, August 2013
2. East Lothian Council High Street, Musselburgh (Air Quality Management Order) 2013
3. East Lothian Council, Local Air Quality Management, Further Assessment of Air Quality in Musselburgh, September 2014
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
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10. The Stationary Office, The Environment Act 1995
11. Part IV of The Environment Act 1995: Local Air Quality Management, Policy Guidance PG(S) (16), March 2016, The Scottish Government
12. Part IV of The Environment Act 1995: Local Air Quality Management, Technical Guidance (TG16), Department of Environment, Food and Rural Affairs, April 2016.
13. East Lothian Council, East Lothian Local Development Plan, 2018