East Lothian Council

REPORT TO: Cabinet

MEETING DATE: 14 February 2017

BY: Depute Chief Executive (Partnerships and Community Services)

SUBJECT: Musselburgh Air Quality Action Plan

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1 PURPOSE

1.1 To seek Cabinet approval of the Musselburgh Air Quality Action Plan and agreement for its submission to the Scottish Government, Scottish Environment Protection Agency and Department for Environmental, Food and Rural Affairs.

2 RECOMMENDATIONS

2.1 Cabinet is asked to:

2.1.1 note the content of this report, particularly in respect of progress with initiatives and actions to reduce emissions from road traffic sources, and the ongoing reduction in general levels of nitrogen dioxide (NO_2) concentrations in Musselburgh High Street;

2.1.2 approve the Musselburgh Air Quality Action Plan to improve air quality in Musselburgh High Street and note the ongoing work that is being undertaken to further develop the Plan in conjunction with road traffic modelling work that is being undertaken in relation to the Local Development Plan (LDP); and

2.2 approve submission of the Musselburgh Air Quality Action to the Scottish Government, Scottish Environment Protection Agency (SEPA) and Department for Environment, Food and Rural Affairs (DEFRA), as required under the Environment Act 1995.

3 BACKGROUND

3.1 The Environment Act 1995 requires the UK Government and devolved administrations to publish a National Air Quality Strategy.

3.2 A set of air quality standards and objectives has been developed for several pollutants of concern for human health. Standards are concentrations of pollutants that are considered safe for humans and the environment. Objectives are derived from the standards and are a compromise between what is desirable purely on health grounds and what is practical in terms of feasibility and costs. Each objective has a date by when it must be achieved.

3.3 The objectives adopted in Scotland for the purpose of Local Air Quality Management are set out in the Air Quality (Scotland) Regulations 2000, the Air Quality (Scotland) Amendment Regulations 2002 and the Air Quality (Scotland) Amendment Regulations 2016. Similar targets are set at EU level, where there are called limit or target values. These are set out in the European 2008 Ambient Air Quality Directive (2008/50/EC) and transposed into Scottish legislation by the Air Quality Standards (Scotland) Regulations 2010. It is the responsibility of EU Member States to achieve the limit and target values.

3.4 Since December 1997 each local authority in the UK has a statutory duty to review and assess air quality in their area on an annual basis.

3.5 Whenever it appears that one or more of the air quality objectives is unlikely to be met, the local authority concerned must declare an Air Quality Management Area (AQMA), covering the area of concern. The authority must then prepare and implement an Action Plan outlining how it intends to tackle the issues identified. The Plan will include timescales to indicate when the measures will be implemented.

3.6 On 14th June 2016, Cabinet was asked to note the ongoing work that was being undertaken to develop the Action Plan in conjunction with road traffic modelling work being undertaken in relation to the Local Development Plan (LDP).

3.7 A Draft Action Plan was published for public consultation on 31st October 2016 and closed on 16th December 2016. Scottish Government and SEPA were also consulted.

Development of the Action Plan

3.8 Studies have concluded that road traffic is the principal source responsible for the local exceedances of NO_2 within the Musselburgh High St AQMA. However, the latest Annual Progress Report (2016) indicates that there were no exceedances of the NO_2 annual mean objective during 2015; with a downward trend in NO_2 concentrations in the past five years. This may be, in part, as a result of the current measures that have been put in place by East Lothian Council including the Split Cycle Offset Optimisation Technique (SCOOT) traffic management system adopted within the AQMA, work with the vehicle emissions partnership and the ECOstars Fleet Recognition scheme, significant work undertaken by Transportation colleagues to reduce

diesel emissions from the Council fleet, and in particular public transport operators and alteration of bus stop locations. Air quality monitoring will need to be continued to confirm the downward trend and it is likely that the additional measures proposed within this Action Plan will help to reduce NO_2 concentrations further. An Annual Progress Report on Air Quality will be presented to Cabinet, envisaged late summer/Autumn, following SEPA and Scottish Government appraisal.

3.9 Council Services considered the wide range of potential measures for improving air quality within the Musselburgh High St AQMA. The measures were assessed against the following criteria:

- Potential air quality impact;
- Potential costs;
- Overall cost-effectiveness;
- Potential co-environmental benefits, risk factors, social impacts and economic impacts;
- Feasibility and Acceptability

3.10 A total of 13 measures were identified and assessed for taking forward within the Action Plan. The assessments were then considered in total and the measures placed in a prioritised order for inclusion in the Action Plan. The measures and their timescales for implementation are summarised as:

Priority	Measure	Timescale
A	Improving links with Local Transport Strategy	Ongoing
B	Improving links with Local Development Plan	Ongoing
C	AQMA Signage	Short Term
D	Enforcement of idling provisions of The Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003	Short Term
E	Eco-Stars	Short-Medium Term
F	East Central Scotland Vehicle Emissions Partnership	Ongoing
G	Provision of information regarding air quality and travel options	Ongoing
H	Promotion of alternative modes (cycling and walking)	Ongoing
I	Green Travel Plans for large institutions and businesses	Short-Medium Term
J	SCOOT- Split Cycle Offset Optimisation Technique	Ongoing
K	Bus stop relocations on High Street	Short-Medium Term

L	Longer Trains and Platforms at Musselburgh Rail Station	Short-Medium Term
M	Electrification of Lothian Buses in Musselburgh	Short-Medium Term

3.11 It is important that, notwithstanding the current situation, the Action Plan must consider Local Development Plan (LDP) impact too. In order to effectively capture and assess the consequential impacts of housing and economic allocations on the AQMA, the Council must finalise technical work to assess the cumulative impacts of proposed growth and the impact of interventions designed to address transportation issues within the LDP itself.

3.12 Further feasibility studies will be carried out for a number of traffic management schemes in the Musselburgh area. The studies consist of both traffic modelling and air dispersion modelling which will help inform which schemes to adopt. Further consultation will be carried out on any proposed measures emerging from the LDP as it goes through its adoption process and these may determine Action Plan revisions.

3.13 The Action Plan is an organic document and dynamic process that will be under constant monitoring and review.

4 POLICY IMPLICATIONS

4.1 There is a direct correlation between the work being undertaken on air quality management and the development of the proposed LDP particularly in regard to traffic modelling and traffic flow interventions in the context of housing and economic land allocations.

5 INTEGRATED IMPACT ASSESSMENT

5.1 The Action Plan has a positive impact on the wellbeing of the community and on equality, the environment or economy. The acceptance of the contents of this report will assist the Council in meeting its statutory obligations in relation to Local Air Quality Management.

6 RESOURCE IMPLICATIONS

6.1 Financial – In formulating this Action Plan it was necessary to consider the financial implications of the options chosen not only in terms of effectiveness in reducing NO_2 levels but also in the implementation of those options. The capacity to successfully implement an Air Quality Action Plan is heavily dependent upon obtaining adequate funding and resources to deliver the proposed measures. Many of the measures included within the plan are already supported through existing

strategies (e.g. local transport strategy) but may require some additional funding to facilitate modification in line with the requirements of this action plan. For other measures, other sources of funding will require to be secured. Other potential sources of funding include:

- Scottish Government Air Quality Funding;
- Transport Scotland;
- Transport Fund;
- Developer contributions

6.2 Scottish Government grant funding has been awarded for financial year 2016/17 to assist the Council with the development and implementation of its Air Quality Action Plan and initiation of the ECO Stars Fleet Recognition Scheme. Further funding may be available for future financial years.

6.3 Personnel – there will be no immediate impacts upon personnel resources as a consequence of this report.

6.4 Other – none

7 BACKGROUND PAPERS

7.1 Cabinet Report – Air Quality Management Area: Action Plan Update (14 June 2016)

7.2 Cabinet Report – Local Air Quality Management – Air Quality Management Area in Musselburgh : Update (21 October 2014)

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DATE	1st February 2017

Draft Air Quality Action Plan - Public Consultation

Contents

Question 1: Are you responding as an individual or on behalf of an organisation?

Individual or organisation

Option	Total	Percent
Individual	16	100.00%
Organisation	0	0%
Not Answered	0	0%

If you are responding on behalf of an organisation please tell us which organisation

There were **1** responses to this part of the question.

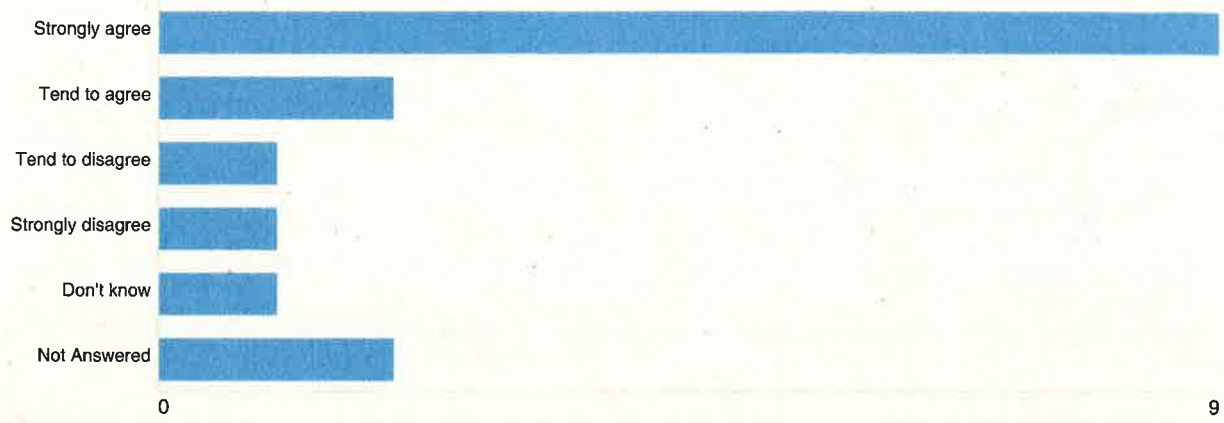
Question 2: What is your email address?

Email

There were **10** responses to this part of the question.

Question 3: What do you think of the proposed measures to improve air quality? (please tick the most appropriate response for each)

views on actions - Improving links to Local Transport Strategy



Option	Total	Percent
Strongly agree	9	56.25%
Tend to agree	2	12.50%
Tend to disagree	1	6.25%
Strongly disagree	1	6.25%
Don't know	1	6.25%
Not Answered	2	12.50%

views on actions - Improving links with Local Development Plan

Option	Total	Percent
Strongly agree	8	50.00%
Tend to agree	3	18.75%
Tend to disagree	1	6.25%
Strongly disagree	2	12.50%
Don't know	0	0%
Not Answered	2	12.50%

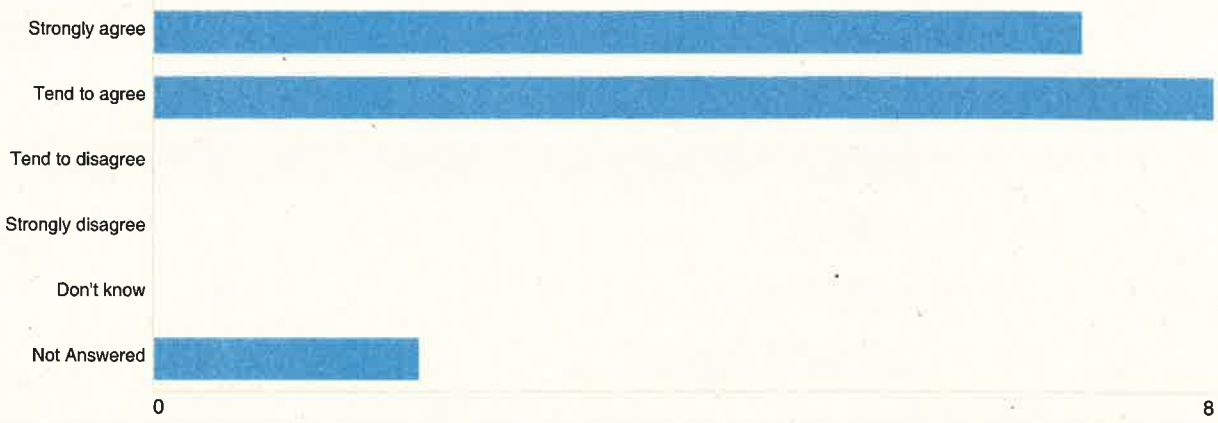
views on actions - Bus stop relocations on Musselburgh High Street

Option	Total	Percent
Strongly agree	6	37.50%
Tend to agree	2	12.50%
Tend to disagree	5	31.25%
Strongly disagree	1	6.25%
Don't know	1	6.25%
Not Answered	2	12.50%

views on actions - Enforcement of idling vehicle fines

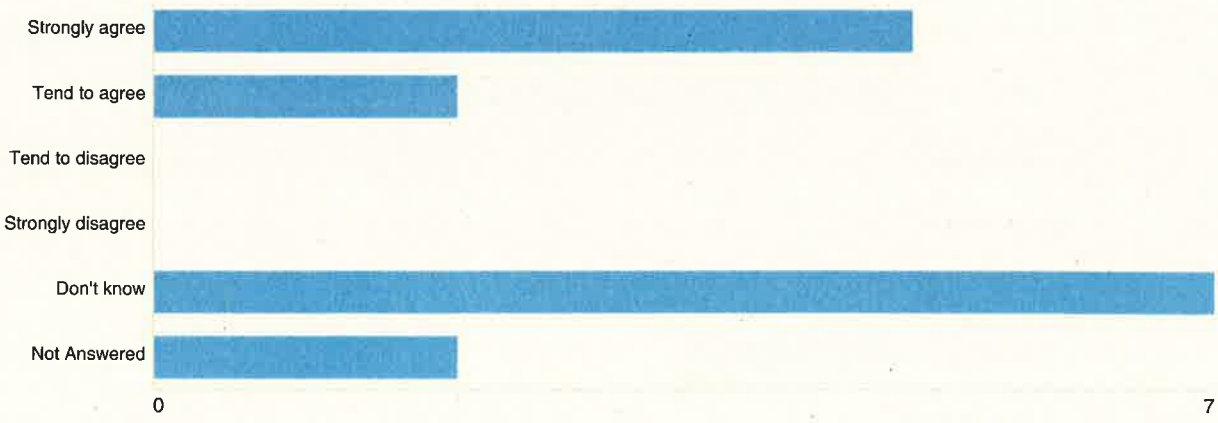
Option	Total	Percent
Strongly agree	9	56.25%
Tend to agree	4	25.00%
Tend to disagree	0	0%
Strongly disagree	0	0%
Don't know	1	6.25%
Not Answered	2	12.50%

views on actions - Electrification of Lothian Buses in Musselburgh



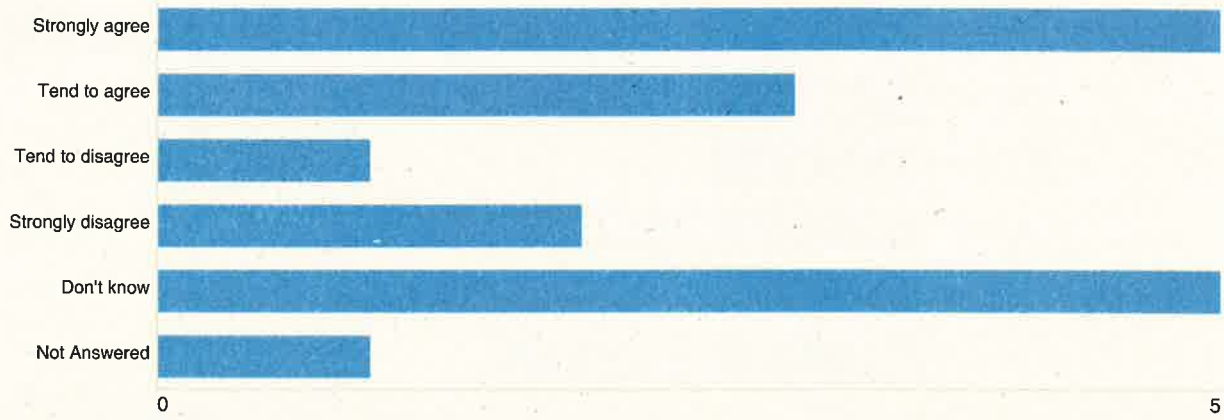
Option	Total	Percent
Strongly agree	7	43.75%
Tend to agree	8	50.00%
Tend to disagree	0	0%
Strongly disagree	0	0%
Don't know	0	0%
Not Answered	2	12.50%

views on actions - Eco Stars Fleet Recognition Scheme



Option	Total	Percent
Strongly agree	5	31.25%
Tend to agree	2	12.50%
Tend to disagree	0	0%
Strongly disagree	0	0%
Don't know	7	43.75%
Not Answered	2	12.50%

views on actions - SCOOT Traffic Management

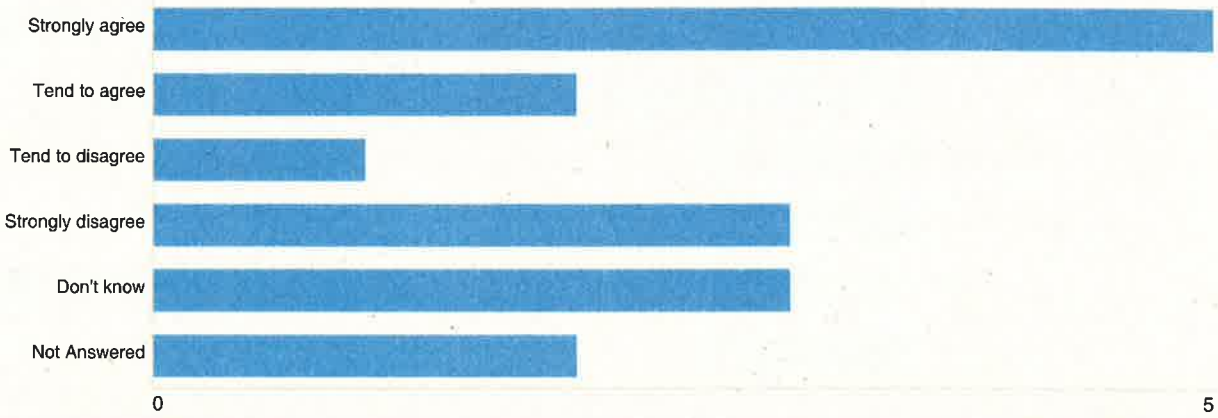


Option	Total	Percent
Strongly agree	5	31.25%
Tend to agree	3	18.75%
Tend to disagree	1	6.25%
Strongly disagree	2	12.50%
Don't know	5	31.25%
Not Answered	1	6.25%

views on actions - Larger trains and platforms at Musselburgh Rail Station

Option	Total	Percent
Strongly agree	6	37.50%
Tend to agree	6	37.50%
Tend to disagree	1	6.25%
Strongly disagree	0	0%
Don't know	1	6.25%
Not Answered	2	12.50%

views on actions - AQMA signage



Option	Total	Percent
Strongly agree	5	31.25%
Tend to agree	2	12.50%
Tend to disagree	1	6.25%
Strongly disagree	3	18.75%
Don't know	3	18.75%
Not Answered	2	12.50%

views on actions - East Central Scotland Vehicle Emissions Partnership

Option	Total	Percent
Strongly agree	5	31.25%
Tend to agree	3	18.75%
Tend to disagree	1	6.25%
Strongly disagree	1	6.25%
Don't know	4	25.00%
Not Answered	2	12.50%

views on actions - Development of Travel Plans

Option	Total	Percent
Strongly agree	8	50.00%
Tend to agree	2	12.50%
Tend to disagree	4	25.00%
Strongly disagree	0	0%
Don't know	0	0%
Not Answered	2	12.50%

views on actions - Promotion of cycling and walking

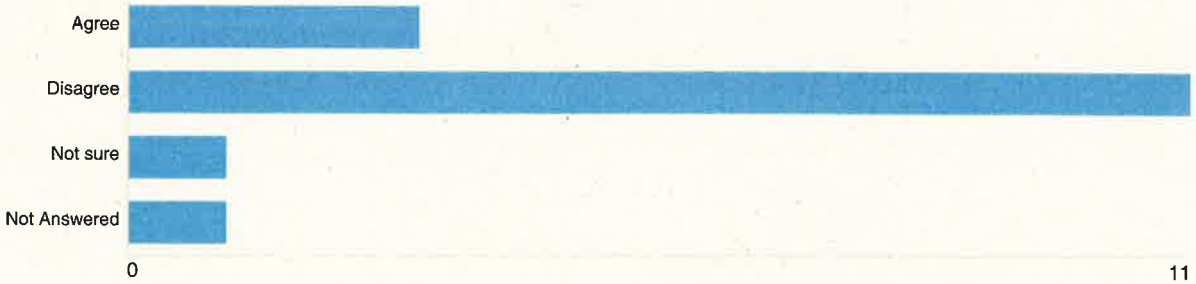
Option	Total	Percent
Strongly agree	9	56.25%
Tend to agree	3	18.75%
Tend to disagree	1	6.25%
Strongly disagree	0	0%
Don't know	1	6.25%
Not Answered	2	12.50%

views on actions - Provision of information relating to air quality and travel options

Option	Total	Percent
Strongly agree	7	43.75%
Tend to agree	3	18.75%
Tend to disagree	1	6.25%
Strongly disagree	1	6.25%
Don't know	1	6.25%
Not Answered	3	18.75%

Question 4: Do you think the Air Quality Action Plan has identified all the actions needed to improve air quality in East Lothian?

identified all actions?



Option	Total	Percent
Agree	3	18.75%
Disagree	11	68.75%
Not sure	1	6.25%
Not Answered	1	6.25%

If you ticked 'disagree', what other actions would you like to see included?

There were **12** responses to this part of the question.

Question 5: Do you have any other comments on the Draft Air Quality Action Plan?

Any other comments

There were **8** responses to this part of the question.

East Lothian Council

DRAFT AIR QUALITY ACTION PLAN – CONSULTATION COMMENTS

Question 4: Do you think the Air Quality Action Plan has identified all the actions needed to improve air quality in East Lothian – what other actions would you like to see included:

1. To promote more use of sustainable travel options the introduction of a congestion charge (targeting vehicles with single occupancy; excluding disabled users using Musselburgh High Street as a short cut) may help make some commuters look at their current practice and opt to change. Some people are put off using public transport because it may not match their daily work pattern or even service the area they work making car use necessary.
   On another note. Electric cars are available for rent in other areas of East Lothian, why not Musselburgh?

2. Monitor excessive use of buses and heavy goods vehicles along Inveresk road also as advised with neighborhood these vehicles mounting pavements likely to cause a fatal accident.

3. With ALL the new housing developments in and around the Musselburgh area the town is struggling with the amount of traffic passing through Musselburgh.
   I have only lived here 9 years and already see a dramatic increase in traffic on north high street as well as the main high street. I dread to think impact on both streets once the new high school and new development is ready as well as all the other proposed areas.....Musselburgh just does not have the infrastructure to cope.... opening the electric would dramatically decrease traffic in turn would help air quaintly an 1 way system could also help.....

4. The current downward trend in pollution levels is down to better car emission controls from European-wide legislation on car manufacturers and not council policy. You could have hired a troupe of shamans to perform an exotic pollution purging ritual and had exactly the same result inreducing levels over the last few years.The long-term trend for Musselburgh is increased traffic levels and that's before the implementation of the LDP which will exacerbate levels further.
   You have eliminated from the plan, very deliberately (in table 4.2), the only means of truly reducing pollution and all the concomitant car related problems i.e. the managed reduction in vehicles entering Musselburgh.
   Around 70% of traffic entering Musselburgh is transitory: it doesn't stop.
   Musselburgh is a convenient short-cut for commuters in East Lothian towns and villages along the coast who do not want to use the A1.
   Their transit through Musselburgh is merely an option; an option with hugely damaging effects on the health and well being of residents here.
   No consultation can proceed without facing this issue.
   Musselburgh's pollution problems (exhaust and noise) are as a consequence of commuting indolence, convenience and possibly fear of congestion on the A1 and city bypass. Traffic reduction should be an option back on the table.

5. Toll charging - especially as most cars have only 1 person per vehicle.
   Automatic toll charging - A premium should be charged to access the town centre to stop unnecessary use of car journeys. The charges should be raised during peak times and decreased when traffic is less and no charge after a certain hour - late evening
   Access from the High Street to Dalrymple Loan should be stopped and all traffic should be kept moving

and the conjestion and tail backs at the junction of Dalrymple Loan should reduce pollution.
Access from Tesco Invesresk Road to Dalrymple Loan should be opened as a one way street with speed bumps (bollards removed) especially because of the new flat development.
There should be another bus stop outside B&M Store to prevent conjestion at the bus stop further up the High Street and buses backing right up pass Farmfoods and buses getting stuck trying to access the High Street from Bridge Street as cars are blocking the road as they are waiting at the traffic lights to enter Dalrymple Loan. The road turning is far to tight for bus to pass stationary cars.
Some of the car parking spaces - except for the disabled should be reduced and more people should park further along and walk
Only buses should be permitted to turn from the High street into Newbigging and from Newbigging into the High street and cars should go straight ahead to the Linkfield roundabout and join the road to their destination.
This would prevent cars backing up Newbigging as most of the times only one bus manages to get onto the High Street from Newbigging as there should be a yellow box painted to prevent cars sitting in the middle of the juction and cannot move when the traffic lights change and all the traffic comes to a halt.
Another bus stop should be created opposite the B&M store as there are far too may buses backing up outside the Police station and the distance between bus stops
St Peter's Episcopal Church and outside the Police Station is far too much a distance for the elderly, children and disabled.
Loading and offloading goods - Lorries should be regulated by setting firm loading / unloading times down.
The pathways are cluttered with the fruit/veg shop displaying their wares and the Costa cafe outside furniture.
Either it should be removed or the pavements wided, especially the corner to Shorthope Street and no cars to enter by crossing over from the High Street (costa Cafe) side into Shorthope Street.

6. Too many buses running together so idling and causing traffic to back up behind them. Buses do not pull properly into stops. To reduce traffics, relocate fast food outlets away from e.g. north High Street. Use planning requests to improve the environment not feather the pockets of a few speculators.

7. There appears to be nothing about rearranging the traffic flow in Musselburgh town centre. In my view the Inveresk Road needs to be reopened to through traffic at the Tesco end, close Dalrymple Loan at Mansfield Place. Reorganise the traffic lights at the Bridge to ease the flow with equal time given to traffic coming from Fisherrow along North High Street and down the Mall. Ensure the flow of traffic is smooth and quick. At present traffic is often backed up to the Tesco roundabout on the Mall with trafic moving very slowly. Adjust traffic lights at the junction Mall/Olivebank Road and Inveresk Road to match the actuial traffic flow. At preswent the traffic coming out of Inveresk Road gets more time than needed holding up traffic on the main road, helping to cause traffic jams and back-ups.
Look to spending money to open up the Store Bridge and New Street to traffic ansuring a good and efficient flow of traffic through the towen moving much traffic away from the bottlenecks in the town centre.

8. Radical interventions are the only way to address the issues regarding air pollution which damages our health. Car use is the main concern here and AQAP for East Lothian Council seems to pay scant regard to this fact. The polluters must pay for their damage to the environment. Money must be used for more public transport. The recommendation of more bus stops for different companies makes no sense as people should be able to stand at one stop to have access to all busses. Public transport should be easy to use.
Public transport should cost less to encourage use.
Local busses should be available to access all amenities in the area.

9. Take away a lot of the traffic lights, especially on Musselburgh high street, as there are far too many which just slows the traffic which then makes for congestion and pollution. More traffic wardens are needed too. Open up more roads that were closed to traffic a few years ago.

10. You should narrow the High Street road, get rid of all parking at the side of the High Street and widen the pavements. Introduce segregated cycle lanes on High Street and North High Street. To compensate, improve the existing parking facilities behind the shops. I'm under no illusion that shop owners and drivers will like this. There are a lot of vocal, bully car drivers in Musselburgh. The council should stand up to them.

Question 5: Do you have any other comments on the Draft Air Quality Action Plan:

1. The use of electric buses is good in reducing the amount of emissions in a local area however a lot of electricity is still generated using fossil fuels so the overall impact on the environment is still negative. In addition the use of single decked buses may not meet the need of commuters at peak times.
   I currently use public transport from the High Street before 7am and on most days the double decker buses have at least one person sitting on over 60% of the seats. Last year I was a regular traveller on the 113 single decker before 6.30am which was often standing room only. Now that it is a double decker more people can use it.
   The trains do not start early enough to make it viable for me to use to get to work plus the train station is a 15 minute walk from my house. There are also well know capacity issues within the current East Lothian commuter train services which are hopefully being addressed in collaboration with the service provider, East Lothian Council and the Scottish Government. In addition I hope that the current requirement to provide a large number of additional houses in East Lothian is also being taken into account during the commuter train capacity planning.
   Tesco Musselburgh has two buses that go both east and west from the store; travelling close to both Wallyford and Musselburgh train stations. I have suggested to the Manager in the past that the buses should run in line with the train timetable?

2. This is not a serious consultation if feasible options are precluded from the debate and stated objectives can be attained through long term improvements in vehicle emissions and widespread adoption of non-polluting electric or hydrogen and hybrid vehicles.
   Enforcement on idling vehicles will not happen as there are no traffic wardens in East Lothian and the police will not respond in time, if at all.
   The majority of drivers don't care about the noise and pollution they create: it's always about the path of least resistance. You know that.
   Cycling is getting more and more popular but there is no viable cycle network in Musselburgh and the planners blythely ignore opportunities to create a network in Musselburgh that is something other than recreational. It is patchy and invariably leads from nowhere to nowhere. There is no viable link to Edinburgh: the Brunstane link is unusable in winter (when a path is truly needed) and congested with walkers in summer.
   Signing up to all these partnerships (Eco Stars etc.) looks good on mission statements but has no meaning to the car using public who will, as I stated earlier, follow whatever route that is most convenient for them regardless of the problems it will cause to the local residents who have to live alongside the routes.

3. Not enough is getting done and it appears the Council is pampering to the car user in fear of the impact to local trading as this situation is being going on for many years. The Council could subsidide the T1/ T2 bus for free travel to cover the short journey that these buses cover. Perhaps a drop off/pick up point along the High Street? It would attract more people to use a free local sprinter bus and encourage spending along the High Street If the Council would prioritise the Bus services ie. cleaner and wider bus stops with tracker information and speedier travel to and from Musselburgh, more people would use the service. I know of people who use their cars for 5 mins to drive through from one end of the High street to the other end just to buy a newpaper or to pick up a prescription despite having to sit in traffic for 30 mins!
   Air pollution costs peoples health, adding more costs to the medical practices and NHS costs. People are put off with the stench of the pollution and start avoiding the High street and spend less in the shops. Parents find the footpaths too narrow for use of prams.
   Those who really want to add pollution by using their cars should pay towards the cost and to cover the never ending consultations etc it costs the Councils to implement improvements. Also those who feel the car is more of a luxury than walking should pay the price for that luxury.
   Not enough is getting done by the Council but pollution and a vast sea of stationary cars and buses is making Musselburgh High Street unattractive, a known health hazard and filthy.

4. I am dismayed at the number of cars delivering pupils to school at Campie School near my flat. In my school days, local pupils walked to school 2 miles). It is healthier, saves emissions and weight gain, improves opportunities for pupils to form friendships walking to school, and free! A win win in my view so ban driving kids to school but inform parents and families of the benefits and offer assistance with healthy lifestyle. Get Tesco to co-operate with families and encourage healthier lunch and snack options for pupils and make it easier to walk into the shop and get a few groceries without a car (product placement).

5. Until the Council loses its anti car policy and starts making driving easier in town then the air quality is not going to improve as cars will be backed up. Narrowing roads and making parking difficult does not help make for better air conditions. The fewer cars siting idle in traffic jams the better. Cutting down the number of road works in the area would help greatly as well. Can hardly move in Musselburgh just now due to road works at some point or other.

6. The impact on public health should be the main concern.

7. Other local authorities have moved much quicker on similar problems. Queuing traffic and volume of traffic are identified as the main causes of the pollution, yet the measures suggested are either intangible (such as "improving links" with other Council strategies), long-term and costly (such as a longer platform and longer trains at Musselburgh station) or downright pointless (such as relocation of bus stops). I don't see how erecting signs at various locations within Musselburgh Town Centre to alert drivers to the presence of the AQMA will encourage behavioural change. We need to reduce traffic coming into Musselburgh in the first place.
   Enforcement of idling provisions is very sensible. The Vehicle Emissions Partnership needs to randomly stop vehicles in the High Street and fine those drivers whose vehicles don't meet modern standards, rather than taking a passive approach.
   "Provision of information regarding air quality and travel options." What does that even mean?
   While I strongly support promotion of alternative modes (cycling + walking), is there much point on such a dangerous road that has no cycling infrastructure? Can we also widen pavements and provide safer crossings for pedestrians?
   Scoot traffic light sequencing has not been shown to make a difference.
   Bus stop relocations. This is an utterly bizarre idea. The consultants' report modelled what would happen if an additional bus stop was put outside B&M and found it would make no difference to emissions.
   Please resist those who think the simple answer is to open up more roads. As your consultants state: "Overall emissions may be increased by such actions."
   The Action Plan should include clear timescales for implementation of the agreed measures. There are no such timescales in the draft plan, so this is a big gap that needs filled. My consultation response will stress that the situation is urgent and I simply won't allow the Council to continue kicking the can down the road.
   Other big gaps that need addressed are funding and health impacts. There's no indication in the draft plan of the kind of funds that the Council should be setting aside to tackle this problem, and although the plan will need the approval of the Scottish Government and the Environment Protection Agency, there's no sign that the NHS or any other public health experts will be involved.
   This isn't just a pollution problem; it's an opportunity to improve public health and the local economy. If we invest in measures that reduce traffic in Musselburgh High Street, and encourage walking and cycling, we can have a healthier community and thriving local businesses. Thank you.

Musselburgh Air Quality Action Plan

Report for East Lothian Council
ED59976

Customer:

East Lothian Council

Customer reference:

ED59976

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02 February 2017

Ricardo Energy & Environment reference:

Ref: ED59976- Issue 1

Executive summary

This Air Quality Action Plan (AQAP) for the Musselburgh High St AQMA, has been prepared by East Lothian Council in line with its statutory obligations under Section 84 [2] of the Environment Act 1995.

The Council has a statutory duty to manage local air quality within its designated boundaries. Under the Strategic Policy Framework for Local Air Quality Management published by the Scottish Government, East Lothian Council has undertaken a programme of air quality assessments. The strategy requires each unitary authority to undertake a series of air quality assessments to determine the current situation regarding local air quality, and to outline the progress of their local air quality management procedures to date.

A Detailed Assessment was prepared in 2008, which confirmed that exceedances of the NO_2 annual mean objective existed at the location. These objectives have been set to protect human health, and hence it is now East Lothian Council's duty to make progress towards these where possible. Where an authority identifies that a given air quality objective is likely to be exceeded at a relevant location, it is obliged to declare an Air Quality Management Area (AQMA) and undertake a further assessment of existing and likely future air quality. The Authority must then develop an AQAP, setting out the local or strategic actions that it will be implement to improve air quality and work towards meeting the objectives.

What is the cause of the problem?

The findings of the Further Assessment (2014) indicate that road traffic is the principal source responsible for the local exceedances of NO_2 within the Musselburgh High St AQMA. However, the latest Annual Progress Report (2016) indicates that there were no exceedances of the NO_2 annual mean objective during 2015; with a downward trend in NO_2 concentrations in the past five years. This may be, in part, as a result of the current measures that have been put in place by East Lothian Council e.g. the Split Cycle Offset Optimisation Technique (SCOOT) traffic management system adopted within the AQMA. Air quality monitoring will need to be continued to confirm the downward trend and it is likely that the additional measures proposed within this AQAP will help to reduce NO_2 concentrations further.

Air Quality Action Plan

East Lothian Council considered the conclusions listed above and the wide range of potential measures for improving air quality within the Musselburgh High St AQMA. The measures were assessed against the following criteria:

- Potential air quality impact;
- Potential costs;
- Overall cost-effectiveness;
- Potential co-environmental benefits, risk factors, social impacts and economic impacts;
- Feasibility and Acceptability.

A total of 13 measures were identified and assessed for taking forward within the AQAP (Section 4). The assessments were then considered in total and the measures placed in a prioritised order for inclusion in the AQAP (Section 6). This then became the AQAP. The plan is summarised in Tabular form below.

Summary of the Action Plan for the Musselburgh High St AQMA

Priority	Measure No	Measure	Timescale
Strategic Measures			
A	1	Improving links with Local Transport Strategy	Ongoing
B	2	Improving links with Local Development Plan	Ongoing
Direct Measures			
C	9	AQMA Signage	Short Term

Priority	Measure No	Measure	Timescale
D	4	Enforcement of idling provisions of The Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003	Short Term
E	6	Eco Stars	Short-Medium Term
F	10	East Central Scotland Vehicle Emissions Partnership	Ongoing
G	13	Provision of information regarding air quality and travel options	Ongoing
H	12	Promotion of alternative modes (cycling + walking)	Ongoing
I	11	Green Travel Plans for large institutions and businesses.	Short-Medium Term
J	7	SCOOT - Split Cycle Offset Optimisation Technique	Ongoing
K	3	Bus stop relocations on High St, Musselburgh	Short-Medium Term
L	8	Longer Trains and Platforms at Musselburgh Rail Station	Short-Medium Term
M	5	Electrification of Lothian Buses in Musselburgh	Short-Medium Term

Note: AQMA = Air Quality Management Area. In this document the AQMA is an area of Musselburgh Town Centre that has been subject to a formal order defining it as an area where an air quality objective is not being achieved.

The plan aims to reduce transport emissions of NOx in the AQMA by approximately 21%. It is anticipated that a reduction of this scale will lead to the annual mean NO_2 air quality standard (40 $\mu g\ m^{-3}$) within the Musselburgh AQMA being achieved and maintained. East Lothian Council will continue to review and assess air quality to monitor the situation and success of the plan. It should also be noted that although reducing particulate matter (PM_{10} and $PM_{2.5}$) concentrations is not the aim of this AQAP, it is envisaged that any measures put in place to reduce NO_2 concentrations will also have a positive impact on PM_{10} and $PM_{2.5}$ concentrations.

What happens next?

ELC has consulted Statutory Consultees and other stakeholders on its intention to implement this plan. The consultation exercise provided a general consensus that the measures identified would have a positive impact upon air quality in Musselburgh.

The AQAP is an organic document with amendments, additions and revisions being included in response to future modelling work. Further feasibility studies are being carried out for a number of traffic management schemes in the Musselburgh area (Section 4.2.2.1). The studies consist of both traffic modelling and air dispersion modelling which will help inform which schemes to adopt. Further consultation will also be carried out on any proposed measures, in addition to those defined within this version of the AQAP.

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Appendices

1 Introduction

This Action Plan has been produced by East Lothian Council and constitutes the Air Quality Action Plan (AQAP) designed to address the air quality problems identified in Musselburgh High Street, East Lothian. It is a statutory duty for East Lothian Council to develop an Air Quality Action Plan following the declaration of an air quality management area (AQMA) in response to identified exceedance(s) of one or more of the air quality strategy objectives. Before the plan can be adopted it must be subject to consultation with the general public, and must also be appraised and accepted by the Scottish Government and the Scottish Environment Protection Agency as being suitable for purpose. The purpose of the AQAP is, on the basis of the evidence available, to set out the local actions that will be implemented to improve air quality and work towards meeting the objectives. **Not all of the measures discussed in this report have been formally adopted by East Lothian Council, but are actively under consideration.**

Notwithstanding future inclusions or revisions, this document constitutes the final AQAP. It has been developed from discussions within East Lothian Council and on the basis of guidance from East Lothian Council's contracted consultants, Ricardo Energy & Environment. A draft version of the AQAP has been consulted upon and was submitted to:

- East Lothian Council;
- Scottish Government;
- Scottish Environment Protection Agency (SEPA);
- Statutory consultation, where the document was made available to the general public and other stakeholders for scrutiny and general comment.

The Scottish Government and SEPA appraised the draft AQAP and accepted its contents. The consultation exercise with the public and other stakeholders (Section 2.4) provided a general consensus that the measures identified for including in the plan would have a positive impact upon air quality in Musselburgh although not enough measures were identified. However, further assessments and traffic modelling will likely identify and result in additional traffic management measures being implemented in a future AQAP to optimise movement of traffic through the Musselburgh AQMA. These measures are discussed further in Section 4.2.2.1.

The Plan will be submitted to the Scottish Government and SEPA, be adopted as a formal authority plan and be implemented via the efforts of East Lothian Council and other stakeholders.

1.1 Objectives

This AQAP summarises the air quality review and assessments that have been undertaken in East Lothian to date, focussing on exceedances of the National Air Quality Strategy Objectives, and outlining the mechanisms and the targeted measures proposed by East Lothian Council that aim to improve local air quality. The plan focuses on air quality within Musselburgh High Street, where an AQMA was declared in November 2013 as a result of elevated concentrations of nitrogen dioxide (NO_2). 13 measures have been incorporated within the Plan, many of which have already been developed/implemented through existing plans and policies. In addition, new measures have been proposed aimed at supplementing ongoing activities and focussing specifically on improving air quality within Musselburgh High Street.

1.2 Report Contents and Structure

Policy Guidance LAQM.PG(S) (16)[1] was published by the Scottish Government in March 2016 and provides statutory guidance on the development of air quality action plans. As a minimum, the AQAP is expected to include the following:

- A demonstration that the local air quality issues are clearly understood;

[1] Part IV of the Environment Act 1995 Local Air Quality Management Policy Guidance, PG(S) (16), The Scottish Government, March 2016. Available online:
http://www.gov.scot/Resource/0049/00497853.pdf

- An explanation of how the action plan will help to deliver the aims and objectives of Cleaner Air for Scotland Strategy (CAFS);
- Quantification of the source contributions to the predicted exceedances of the objectives; this will allow the action plan measures to be effectively targeted;
- Evidence that all available measures have been considered on the grounds of cost-effectiveness and feasibility;
- How the local authority will use its powers and also work in conjunction with other organisations in pursuit of the air quality objectives
- Clear timescales in which the authority and other organisations and agencies propose to implement the measures within its plan;
- Quantification of the expected impacts of the proposed measures and, where possible, an indication as to whether the measures will be sufficient to meet the objectives; and,
- How the local authority intends to monitor and evaluate the effectiveness of the Plan.

The Scottish Government recommends that further assessment of air quality should be undertaken in parallel with the development of the action plan to provide the technical justification for the measures an authority later includes in its action plan.

The remainder of this report is structured as follows:

- **Chapter 2** provides a brief overview of the significance of local air quality management on human health, the statutory duties placed on local authorities, and a summary of existing plans and strategies which may influence air quality within Musselburgh;
- **Chapter 3** presents a summary of recent reviews of local air quality undertaken in East Lothian Council, and the results of the source apportionment exercise undertaken for the Musselburgh High Street AQMA including the improvement required to meet the air quality objectives;
- **Chapter 4** describes how this AQAP has been developed by East Lothian Council;
- **Chapter 5** present the range of potential measures that were considered to improve local air quality in Musselburgh and a summary of proposed measures to be assessed against a variety of criteria;
- **Chapter 6** summarises the AQAP, outlining measures proposed for implementation and makes reference to important factors that require to be considered and addressed prior to the adoption of the plan.

2 Ambient Air Quality and Local Air Quality Management

This action plan has been developed in recognition of the legal requirement on the local authority to work towards air quality objectives under Part IV of the Environment Act 1995 and associated regulations. This chapter outlines the significance of local air quality management in the context of

human health, the legislation in place to protect human health. This information is included to provide readers with a general overview of air quality issues in Scotland.

2.1 Potential Impacts of Air Pollution on Human Health

Air pollution has been associated with a wide range of effects on human health and the wider environment; however, it is the potential negative impacts of ambient air pollution on human health that is the primary focus of local air quality management. Air pollution has been associated with both long- and short-term effects on human health (COMEAP, 2009), with the nature of the effects influenced by factors such as the type and concentration of pollutant and the duration of exposure. Short-term exposure to high concentrations of common outdoor pollutants has been linked with a temporal increase in hospital admissions (Anderson et al., 2001) and with contributing to the premature mortality of susceptible individuals with pre-existing lung or cardio-vascular disorders.

In the long-term, the available scientific evidence indicates that air pollution can have a significant effect on human health, although the effects will vary depending on where an individual resides (urban or rural) and the type of pollutant(s) to which they are exposed. Whilst the full extent of these impacts across the population is difficult to quantify, in the UK, poor air quality is considered to reduce the average life expectancy by several months (COMEAP, 2009).

As a result, action is being taken at local, national and international levels to reduce exposure to air pollution. National Government, through the National Air Quality Strategy for England, Scotland, Wales and Northern Ireland and the Integrated Transport Policy, is setting the framework for local action to be taken to reduce levels of pollution (NAQS, 2007).

2.2 The Air Quality Objectives

A list of health Objectives relevant to Scotland is presented in Table 2.1.

Table 2.1 Air Quality Objectives

Pollutant	Concentration	Measured as	Obligation
Benzene	16.25 μg m^{-3}	Running annual mean	All local authorities
	5 μg m^{-3}	Annual mean	England and Wales only
	3.25 μg m^{-3}	Running annual mean	Scotland and Northern Ireland only
Carbon Monoxide	10.0 mg m^{-3}	Maximum daily running 8-hour mean	England, Wales and Northern Ireland only
	10.0 mg m^{-3}	Running 8-hour mean	Scotland only
Lead	0.5 μg m^{-3}	Annual mean	All local authorities
	0.25 μg m^{-3}	Annual mean	All local authorities
Nitrogen dioxide	200 μg m^{-3} not to be exceeded more than 18 times a year	1-hour mean	All local authorities
	40 μg m^{-3}	Annual mean	All local authorities
Particulate Matter (PM_{10})	50 μg m^{-3} not to be exceeded more than 35 times a year	24-hour mean	All local authorities
	40 μg m^{-3}	Annual mean	All local authorities
	50 μg m^{-3} not to be exceeded more than 7 times a year	24-hour mean	Scotland only
	18 μg m^{-3}	Annual mean	Scotland only

Pollutant	Concentration	Measured as	Obligation
Particulate Matter ($PM_{2.5}$)	Working towards reducing emissions/concentrations of $PM_{2.5}$	Annual mean	England only
	10 μg m^{-3}	Annual mean	Scotland only
Sulphur dioxide	350 μg m^{-3} not to be exceeded more than 24 times a year	1-hour mean	All local authorities
	125 μg m^{-3} not to be exceeded more than 3 times a year	24-hour mean	All local authorities
	266 μg m^{-3} not to be exceeded more than 35 times a year	15-minute mean	All local authorities

The Objectives apply at locations where members of the public are likely to be exposed over the averaging period of the objective. Table 2.2 below summarises the locations where these objectives should and should not apply respectively.

Table 2.2 Typical locations where the objectives should and should not apply

Averaging Period	Pollutants	Objectives should apply at …	Objectives should not generally apply at …
Annual mean	1,3 Butadiene Benzene Lead Nitrogen dioxide PM_{10}	All background locations where members of the public might be regularly exposed.	Building facades of offices or other places of work where members of the public do not have regular access.
		Building facades of residential properties, schools, hospitals, libraries etc.	Gardens of residential properties. Kerbside sites (as opposed to locations at the building facade), or any other location where public exposure is expected to be short term
24-hour mean and 8-hour mean	Carbon monoxide PM_{10} Sulphur dioxide	All locations where the annual mean objective would apply.	Kerbside sites (as opposed to locations at the building facade), or any other location where public exposure is expected to be short term.
		Gardens of residential properties.	
1-hour mean	Nitrogen dioxide Sulphur dioxide	All locations where the annual mean and 24 and 8-hour mean objectives apply.	Kerbside sites where the public would not be expected to have regular access.
		Kerbside sites (e.g. pavements of busy shopping streets). Those parts of car parks and railway stations etc. which are not fully enclosed.	
15-minute mean	Sulphur dioxide	Any outdoor locations to which the public might reasonably be expected to have access.	

Averaging Period	Pollutants	Objectives should apply at …	Objectives should not generally apply at …
		All locations where members of the public might reasonably be exposed for a period of 15 minutes or longer.	

Whilst it is anticipated that measures adopted at a national and international level will enable the objectives to be attained in the majority of relevant locations, measures adopted at a local level can make a significant contribution to improving air quality in specific locations. The UK government acknowledges the significant role that local authorities play in helping to achieve the air quality objectives.

2.3 Existing Strategies and Policies relevant to Air Quality in Musselburgh

Numerous existing policies and strategies adopted at a local, regional and national level can exert significant effects, both positive and negative, on air quality in East Lothian. It is important that these plans and strategies are considered at an early stage of the development of the plan, as these will likely establish the context in which any specific measures for improving air quality can be implemented. This Chapter identifies the most important of these.

2.3.1 Cleaner Air for Scotland (CAFS) [2]

CAFS was published in November 2015 to provide a national strategy in which all sectors can work together towards the common aim of achieving improved air quality in Scotland. The proposed actions outlined in CAFS not only work towards reducing pollutant concentrations but in turn aim to reduce congestion and improve traffic flow within urban areas.

CAFS recognises that even at lower levels air pollution harms both human health and the environment, by producing a national framework CAFS sets out how the Scottish Government and Partner organisations proposed to achieve further pollutant reductions and fulfil the EU and UK legal requirements for air quality as soon as possible.

CAFS outlines six main objectives to be achieved across Scotland. The six key areas of focus all work towards the same aim of reducing pollutant concentrations; these include:

- Transport: promoting active travel and reduced emission technologies.
- Legislation and Policy: all EU and Scottish legal requirements achieved for air quality.
- Communication: a Scotland where all citizens are well informed and engaged.
- Health: protect citizens from harmful effects of air pollution.
- Place-making: air quality not to be compromised by new or existing developments.
- Climate Change: reduction in greenhouse gas emissions.

2.3.2 The National Transport Strategy[3]

The National Transport Strategy for Scotland was published in December 2006 and updated in January 2016. The Strategy identifies the need to provide an efficient, integrated and reliable transport network that successfully promotes economic growth, protection of the environment, health and social inclusion, and introduced three key strategic outcomes:

1. Improved journey times and connections by reducing congestion
2. To reduce emissions to tackle climate change
3. To improve the quality, accessibility and affordability of transport

[2] Cleaner Air for Scotland – The Road to a Healthier Future, The Scottish Government, November 2015. Available online: http://www.gov.scot/Resource/0048/00488493.pdf [Accessed on 31/01/2017]
[3] National Transport Strategy, Transport Scotland, January 2016. Available online: http://www.transport.gov.scot/report/national-transport-strategy-nts-8780 [Accessed on 31/01/2017]

Commitments identified as being of particular significance to Musselburgh and the AQMA include tackling congestion and improving connections. These key outcomes have been designed to support the role of Government and respond to the five strategic objectives, namely:

- Promotes economic growth
- Promote social inclusion
- Protect our environment and improve health
- Improve safety of journeys
- Improve integration

The Strategy clearly states that regional transport partnerships, local authorities and transport operators will be key partners in delivering the strategic outcomes.

2.3.3 Regional Transport Strategy (2008 – 2023) [4]

East Lothian Council is a member of the South East of Scotland Transport Partnership (SEStrans). The SEStran Regional Transport Strategy was developed to compliment the objectives of the National Transport Plan and includes 17 sub-objectives that stem from the four high level objectives of: Economy, Accessibility, Environment and Safety and Health.

The Strategy Framework comprises three different types of projects and initiatives:

Region-wide initiatives	Region wide initiatives that affect the area measures affecting the whole SEStran area e.g. travel behaviour/ planning, integrated ticketing, regional freight initiatives, awareness campaigns and frameworks for parking (standards and management).
Initiatives for specific areas and groups	Initiatives targeting accessibility and providing minimum levels of service to specific localities and groups, and rural areas.
Network-based initiatives	Covering specific infrastructure schemes and public transport services on principal travel corridors. These include a wide range of measures proposed for movements of strategic importance to the SEStran area.

The regional Strategy makes specific reference to the increasing importance of local air quality, its effects on human health and the role that transport plays in air quality issues in urban areas.

2.3.4 East Lothian Council Local Transport Strategy[5]

The Local Transport Strategy is currently being updated. The Strategy's objectives are:

- to deliver a more attractive and safer environment for pedestrians and cyclists;
- to reduce the overall dependence on the car and the environmental impact of traffic;
- to promote the availability and use of more sustainable means of travel;
- to locate new development to reduce the need to travel;
- to maximise accessibility for all and reduce social exclusion; and to promote integration and interchange between different means of travel

[4] South East of Scotland Transport Partnership. Available online: http://www.sestran.gov.uk/index.php [Accessed on 31/01/2017]
[5] East Lothian Local Transport Strategy Consultation, East Lothian Council. Available online: http://www.eastlothian.gov.uk/info/1539/town_centre_management/255/transport_planning_policy [Accessed on 31/01/2017]

2.3.5 Strategic Development Plan for South East Scotland (SESplan) [6]

The Local Planning Authorities in collaboration with Transport Scotland and the South East of Scotland Transport Partnership (SEStran) will support and promote the development of a sustainable transport network. Local Development Plans will: a. Ensure that development likely to generate significant travel demand is directed to locations that support travel by public transport, foot and cycle; b. Ensure that new development minimises the generation of additional car traffic, including through the application of mode share targets and car parking standards that relate to public transport accessibility; c. Relate density and type of development to public transport accessibility; d. Consider the need for additional rail freight facilities and when considering sites for development that would generate significant freight movements, require the potential for rail freight to be investigated; e. Consider the potential for expanded port capacity in the Firth of Forth and the cross-boundary implications this may have; f. Take account of the cross-boundary transport implications of all policies and proposals including implications for the transport network out with the SESplan area; g. Ensure that the design and layout of new development demonstrably promotes non-car modes of travel; and h. Consider the merits of protecting existing and potential traffic-free cycle and walking routes such as disused railways affected by any development proposal.

2.3.6 East Lothian Local Development Plan[7]

The Proposed East Lothian Local Development Plan (LDP) represents the Council's settled view for the future development of East Lothian. The Proposed Plan recognises that an AQMA has been declared along Musselburgh High Street and sets out specific policies and proposals that will to be put in place to mitigate existing air quality issues and will monitor and manage development impacts as required to ensure air quality is maintained to an acceptable standard in association with new development.

The proposed main aims of the LDP are:

1. To recognise that East Lothian is part of the wider city region and has a significant role to play in accommodating and providing for the city region's as well as its own economic, population and household growth in a sustainable way
2. To identify locations where development of different types associated with these aims should take place, where relevant within the appropriate timescales, as well as where development should not occur
3. To provide an appropriate framework of policies and proposals that can promote and manage development in the area towards these aims

The LDP's proposed objective in terms of air quality is:

- To ensure that the area's significant international, national and local cultural and natural heritage assets are protected and conserved, and where appropriate enhanced, including biodiversity, flora and fauna as well as soil, water and air quality

In order to achieve these aims and objective Policy HN12: Air Quality states: Impacts on air quality will be taken into account in assessing development proposals, particularly within and close to any Air Quality Management Area (AQMA). An Air Quality Assessment may be required for developments that are within an AQMA or where the proposed development may cause or exacerbate a breach of National Standards.

Development proposals that would result in either a breach of National Air Quality Standards or a significant increase in concentrations of air pollution within an existing AQMA will not be supported unless appropriate mitigation measures can be put in place.

[6] Strategic Development Plan for South East Scotland. Available online: http://www.sesplan.gov.uk/ [Accessed on 31/01/2017]
[7] Proposed Local Development Plan, East Lothian Council, 2016. Available online: file:///C:/Users/ss38/Downloads/Proposed_LDP.pdf [Accessed on 31/01/2017]

2.3.7 Climate Change Declaration[8]

Scotland's Climate Change declaration acknowledges the importance of climate change and is a means of demonstrating East Lothian's commitment to action: all of Scotland's 32 local authorities are signatories. The declaration includes commitments both to mitigate our impact on climate change through reducing greenhouse gas emissions and to adapt to future predicted climate change impacts.

East Lothian is a signatory to the Declaration and this has been included within the AQAP. Where measures seek to reduce road transport, this will have a direct impact on not only air quality within the AQMA but also a reduction in carbon dioxide CO_2 emissions.

2.4 Consultation on the Action Plan

Authorities in Scotland must consult on their preparation of an AQAP and the finalisation of the plan should take account of consultees' comments on the draft. Further consultation may be required due to the long term nature of AQAP's resulting in further revisions of the plan.

Consultation on the action plan should include:

- Details of which pollutants the authority will look at and an indication of where they come from;
- The timescales for implementing each proposed measure.
- Details of the other organisations or agencies whose involvement is needed to meet the plan's objectives and what the authority is doing to get their cooperation.

Following consultation and the formal adoption of the Action Plan, the Council is also required to submit annual Action Plan progress reports to the Scottish Government and SEPA, and also revise the Action Plan appropriately when circumstances influence the content and progress of the plan.

The results from the public consultation carried out for the draft AQAP is provided in Appendix 2 of this document. In total there were 16 responses from individuals. Overall, there was consensus that the proposed measures would have a positive impact on air quality in Musselburgh, although, that not enough measures were identified. However, further consultation will be carried out on any proposed road layout changes identified (as discussed in Section 4.4.2.1) and following the conclusions of feasibility studies currently being carried out.

3 Conclusions of previous rounds of LAQM Review and Assessment undertaken by East Lothian Council

3.1 Summary of LAQM Review and Assessment in East Lothian Council

Table 3.1 summarises the conclusions for NO_2 from assessments carried out between 2004 and 2016.

Table 3.1 Conclusions from previous Air Quality Review and Assessment Reports

Review and Assessment Round	Reports	Conclusions
2	Updating and Screening Assessment 2004[9] Detailed Assessment 2005[10]	It was identified the exceedances of the NO_2 objectives could occur in the Musselburgh area, which was mainly due to road traffic sources. The subsequent Detailed

[8] East Lothian Council Climate Change Declaration, available online: http://www.eastlothian.gov.uk/info/1116/environmental_health-pollution/764/sustainable_development_and_climate_change/3 [Accessed on 31/01/2017]
[9] Local Air Quality Management: Updating and Screening Assessment, Enviros Consulting Ltd, March 2004 Available online: http://www.eastlothian.gov.uk/download/meetings/id/3669/04_environment_act_1005-local_air_quality_management_road_traffic_vehicle_emissionsfixed_penaltyscotland_regulations_2003 [Accessed on 31/01/2017]
[10] Local Air Quality Management: Detailed Assessment, East Lothian Council, April 2005

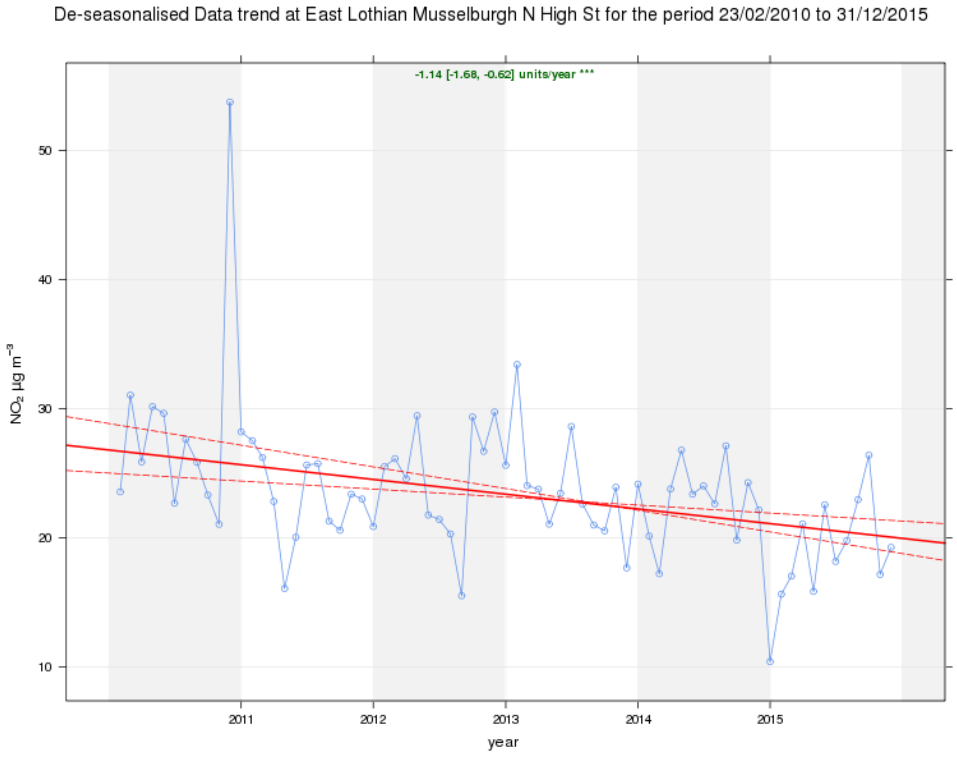
	Progress Report 2005[11]	Assessment concluded that it was unlikely that NO_2 concentrations would exceed the strategy objectives.
3	Updating and Screening Assessment 2006[12] Progress Report 2007[13] Progress Report 2009[14]	It was concluded that it was unlikely that the NO_2 objectives had been exceeded during this round.
4	Updating and Screening Assessment 2009[15] Progress Report 2010[16] Detailed Assessment 2010[17] Progress Report 2011[18]	It was concluded in 2009 that a Detailed Assessment for both NO_2 and PM_{10} was required to assess the possible air quality impacts of a biomass boiler installed at Queen Margaret University. The Detailed Assessment concluded that it was unlikely that the objectives for both PM_{10} and NO_2 would be exceeded as a result of emissions from the biomass boiler. The conclusion of the 2011 Progress Report, however, concluded that it was likely that the annual mean objective for NO_2 had been exceeded at two locations; 147 and 183 High St, Musselburgh. As a result, it was recommended that a Detailed Assessment of NO_2 concentrations should be carried out in the area of the High Street, Musselburgh.
5	Updating and Screening Assessment 2012[19] Progress Report 2013[20] Progress Report 2014[21]	It was concluded in the 2012 USA that passive monitoring of NO_2 during 2011 and the results of a Detailed Assessment for NO_2 in Musselburgh (discussed in Section 3.1.1) continued to indicate that NO_2 concentrations at various locations along High Street were close to the Annual Mean Objective. It was also considered appropriate by East Lothian Council to carry out passive monitoring of NO_2 at a representative sample of these exceeding receptor locations to confirm the results of the modelling assessment. East Lothian Council started monitoring NO_2 concentrations at 5 new locations on Musselburgh Bridge Street and High Street on 3rd May 2012 using passive diffusion tubes. These new monitoring sites are located at receptors 167 High Street (Tube No 29), 137 High Street (Tube No 30), 69 High Street (Tube No 31), 86 High Street (Tube No 32) and 15 Bridge Street Tube No 28). East Lothian Council should consider the declaration of an AQMA for the NO_2 annual mean objective after submission of the next LAQM Report, the 2013 Progress Report, due for submission by the

[11] Local Air Quality Management: Progress Report East Lothian Council, August 2005
[12] Local Air Quality Management: Updating and Screening Assessment, East Lothian Council, June 2006. Available from: http://www.scottishairquality.co.uk/assets/documents/reports/64061010_East_Lothian_Council_-_air_quality_review_and_assessme.pdf [Accessed on 31/01/2017]
[13] Local Air Quality Management: Progress Report East Lothian Council, July 2007
[14] Local Air Quality Management: Progress Report East Lothian Council, February 2009
[15] Local Air Quality Management: Updating and Screening Assessment, East Lothian Council, August 2009
[16] Local Air Quality Management: Progress Report East Lothian Council, October 2010. Available from: file:///C:/Users/ss38/Downloads/Progress_Report_2010_Exec_Summary.pdf [Accessed on 31/01/2017]
[17] Air Quality Assessment: Queen Margaret University Biomass Boiler, AEA, October 2010. Available from: file:///C:/Users/ss38/Downloads/DA_2010_Exec_Summary%20(1).pdf [Accessed on 31/01/2017]
[18] Local Air Quality Management: Progress Report East Lothian Council, June 2011. Available from: http://www.scottishairquality.co.uk/assets/documents/reports/64120831_East_Lothian_Progress_Report_2011_Draft.pdf [Accessed on 31/01/2017]
[19] Local Air Quality Management: Updating and Screening Assessment, East Lothian Council, November 2012. Available from: http://www.scottishairquality.co.uk/assets/documents/reports/East_Lothian_USA_2012_Exec_Summary.pdf [Accessed on 31/01/2017]
[20] Air Quality Progress Report for East Lothian Council, East Lothian Council, August 2013. Available from: http://www.scottishairquality.co.uk/assets/documents/reports/East_Lothian_Council_Progress_Report_2013.pdf [Accessed on 31/01/2017]
[21] Air Quality Progress Report for East Lothian Council, East Lothian Council, August 2014. Available from: file:///C:/Users/ss38/Downloads/Progress_Report_2014%20(1).pdf [Accessed on 31/01/2017]

		end of April 2013 if monitoring results obtained from new locations, in addition to existing monitoring locations, confirms the modelling results that the NO_2 annual mean objective has been exceeded. The 2013 Progress Report concluded that with the additional monitoring carried out no exceedances of the annual mean NO_2 objective were measured on Bridge St. However further exceedances were measured at 167 and 69 High St. As a result of these exceedances and the Detailed Assessment an AQMA will be declared in Musselburgh.
6	Updating and Screening Assessment 2015[22] Annual Progress Report 2016[23]	It was concluded in the 2015 USA that NO_2 concentrations within the Musselburgh AQMA remain close to or exceed thNO_2 annual mean objective. No exceedances of the AQS objectives were measured at any other monitoring within the local authority area. The 2016 Annual Progress Report concluded that there were no exceedances of the AQS objectives with a downward trend seen in NO_2 annual mean concentrations.

Note that the latest Annual Progress Report (2016) indicates that there were no exceedances of the NO_2 annual mean objective during 2015 with a downward trend in NO_2 concentrations seen at the North High Street automatic monitoring site between 2010 and 2015 (Figure 3.1). The reduction in annual mean NO_2 concentrations within the AQMA may be, in part, due to the current measures that have been put in place by East Lothian Council e.g. the Split Cycle Offset Optimisation Technique (SCOOT) traffic management system adopted within the AQMA. Air quality monitoring will need to be continued to confirm the downward trend within the AQMA. However, the additional measures proposed within this AQAP are likely to decrease NO_2 concentrations further.

Figure 3.1 NO_2 Trend at North High Street, Musselburgh – 2010 to 2015

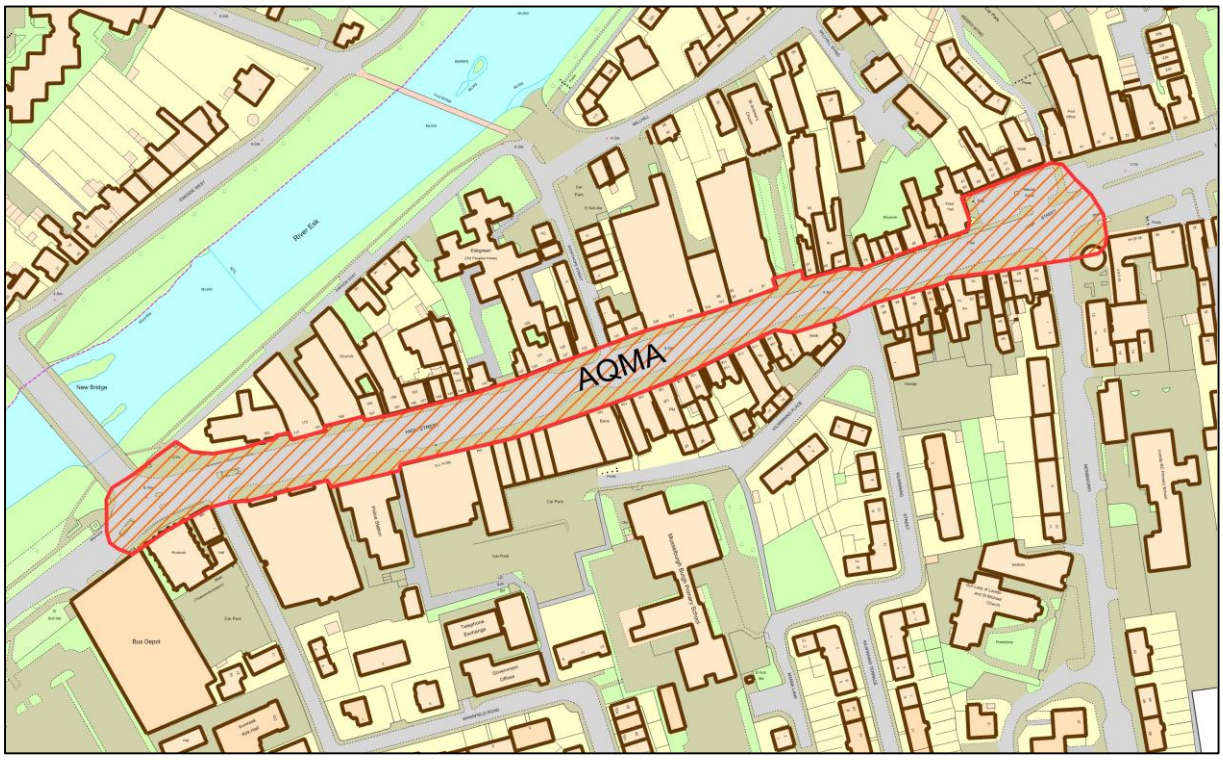


[22] Local Air Quality Management: Updating and Screening Assessment, East Lothian Council, October 2015. Available from: file:///C:/Users/ss38/Downloads/airquality_updatingandscreeningassessment_2015%20(1).pdf [Accessed on 31/01/2017]
[23] Local Air Quality Management: Air Quality Annual Progress Report, East Lothian Council, July 2016. Available from: http://www.eastlothian.gov.uk/downloads/file/11548/2016_air_quality_progress_report [Accessed on 31/01/2017]

3.1.2 Summary of Detailed Assessment for High Street, Musselburgh – 2012

The 2012 Detailed Assessment[24] indicated that the annual mean objective for NO_2 was likely to have been exceeded at four receptors on High St and three receptors on Bridge St. It was noted that the highest annual average NO_2 concentrations were predicted receptors located close to bus stops and that the majority of the predicted annual mean exceedances are marginal. An element of uncertainty has been introduced to the model as a result of estimating emissions from both queuing traffic and stationary buses. Therefore, it would be appropriate to carry out monitoring of NO_2 at a representative sample of exceeding receptors to confirm the results of this modelling assessment. This would greatly enhance the reliability of the forthcoming Further Assessment and allow better delineation of any required Air Quality Management Area (AQMA) boundary. East Lothian Council declared an AQMA encompassing High Street, Musselburgh in November 2013 (the Order is provided in Appendix 1). The AQMA boundary is shown in Figure 3.2 below.

Figure 3.2 AQMA - High Street, Musselburgh (Newbigging to The Mall)

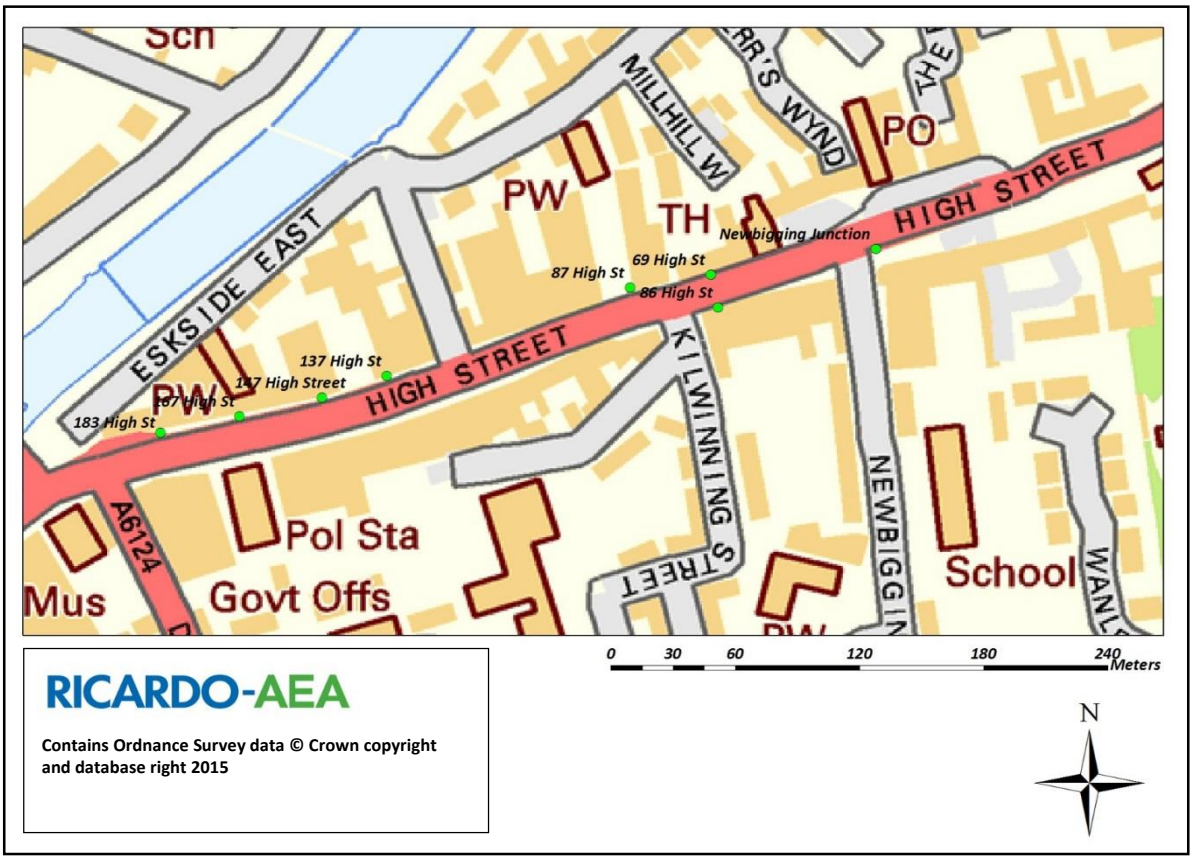


3.2 Summary of a Further Assessment for High Street, Musselburgh – 2014

The Further assessment allows the findings of the Detailed Assessment to be checked in light of new monitoring and traffic data, and also to assess the appropriateness of the AQMA boundary. The potential impact of traffic management scenarios on pollutant concentrations in future years and their likely effectiveness at addressing local air pollution are assessed. The report investigates current and potential future nitrogen dioxide levels through a combination of modelling exercises and by reference to monitored air quality data. Figure 3.3 shows the study area and includes locations of the NO_2 diffusion tube monitoring sites with the automatic monitoring being located at 133 North High Street.

[24] Air Quality Detailed Assessment for Musselburgh, AEA, AEAT/ENV/R3281, June 2012

Figure 3.3 Study Area for the Further Assessment



3.2.1 Source Apportionment

Source apportionment is the process whereby the sources of pollutants can be assessed so that the Local Authority can proceed with an action plan to attempt to address the air quality problems in the area of interest.

The source apportionment should:

- Confirm if exceedances of NO_2 are due to road traffic;
- Determine the extent to which different vehicle types are responsible for the emission contributions to NO_x and hence NO_2; and
- Quantify what proportion of total NO_x is due to background emissions, or local emissions from busy roads in the local area. This will help determine whether local traffic management measures could have a significant impact on reducing emissions in the area of exceedance or whether national measures would be a suitable approach to achieving the air quality objectives.

The source apportionment exercise was carried out for all the Council's monitoring locations within the High St AQMA, Musselburgh.

The following sources have been considered:

- Background concentrations;
- Moving vehicles;
- Queuing vehicles;
- Light duty vehicles (LDV- comprising cars, vans, motorcycles);
- Heavy duty vehicles (HDV - articulated and rigid HGVs);
- Buses; and
- Buses at Bus Stops.

Table 3.2 and 3.3 summarise the relevant NOx contributions from the above sources at each of the monitoring locations in the Musselburgh High St AQMA. Figures 3.4 and 3.5 show the percentage contributions split by traffic source type and moving/queuing traffic, respectively.

It was found that the largest proportion that can be attributed to emissions from buses is seen at 147 High St with 38% of the NOx emissions estimated to be as a result of moving and queuing buses, and buses at bus stops. On average throughout the AQMA, 29% of NOx emissions were attributed to bus activity.

In the case of moving versus queuing traffic, it was found that queuing traffic contributed the largest proportion at all locations except 87 High St. The largest proportion that can be attributed to queuing traffic was seen at 69 High St with 57% of the total NOx emissions estimated to be as a result of queuing traffic. On average throughout the AQMA, 34% of the total NOx emissions were attributed to queuing traffic.

Table 3.2 High St AQMA NOx Source Apportionment (μg m^{-3})*

Location	Total NOx (a)	Road NOx (b)	Background (c)	Moving (d)	Queuing (e)	LDV (f)	HDV (g)	Bus (h)	Bus Stops (i)
Newbigging_Jnct	53.4	19.7	33.7	8.5	11.2	5.5	2.5	8.6	3.2
87_High_St	47.1	13.4	33.7	7.3	6.1	5.0	1.3	6.9	0.3
147_High_St	90.2	56.5	33.7	6.5	50.0	18.1	4.6	29.7	4.1
183_High_St	80.6	46.9	33.7	14.3	32.6	16.7	4.0	25.5	0.8
167 High St	84.9	51.2	33.7	17.5	33.7	17.7	4.2	26.7	2.6
137 High St	73.2	39.5	33.7	18.0	21.5	12.1	2.9	17.2	7.3
69 High St	94.5	60.8	33.7	7.0	53.8	20.7	5.4	34.5	0.3
86 High St	48.9	15.2	33.7	6.6	8.6	5.4	1.6	8.0	0.3

*Note that:

- a = b + c;
- b = d + e; **and** b = f + g + h + i

Table 3.3 High St AQMA NOx Source Apportionment - Sources as % of Total NOx*

Location	Background (BG) % (a)	Moving % (b)	Queuing % (c)	LDV % (d)	HDV % (e)	Bus % (f)	Bus Stops % (g)
Newbigging_Jnct	63.1	15.9	21.0	10.3	4.6	16.0	5.9
87_High_St	71.5	15.5	12.9	10.5	2.7	14.6	0.7
147_High_St	37.4	7.2	55.4	20.0	5.1	33.0	4.5
183_High_St	41.8	17.8	40.4	20.7	5.0	31.6	0.9
167 High St	39.7	20.6	39.7	20.9	5.0	31.4	3.0
137 High St	46.0	24.5	29.4	16.5	3.9	23.6	9.9
69 High St	35.7	7.4	56.9	21.9	5.7	36.5	0.3
86 High St	68.9	13.4	17.6	11.0	3.2	16.3	0.6

*Note that:

- a + b + c = 100%;
- a + d + e + f + g = 100%

Figure 3.4 High St AQMA NOx Source Apportionment - Sources as % of Total NOx

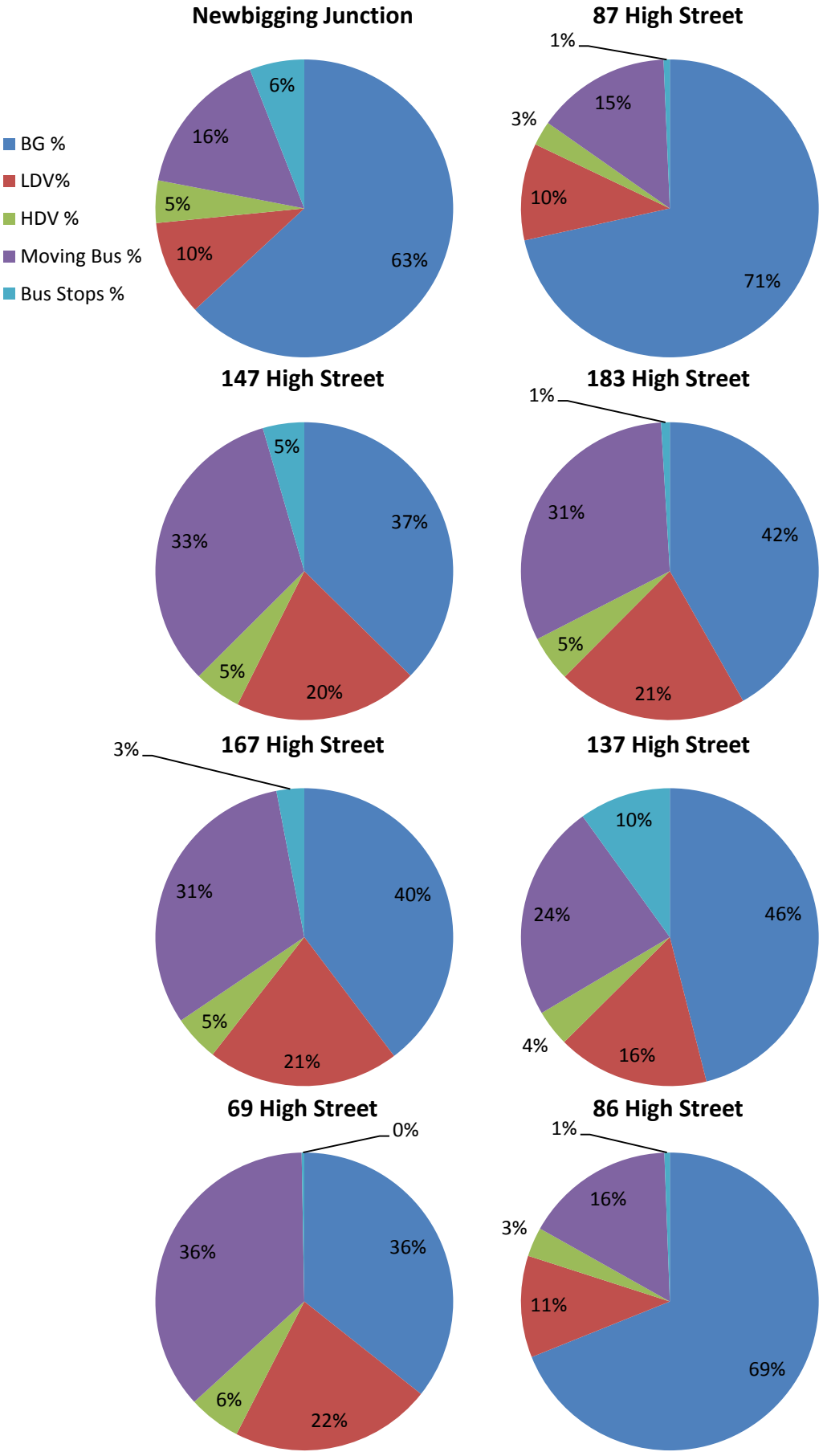
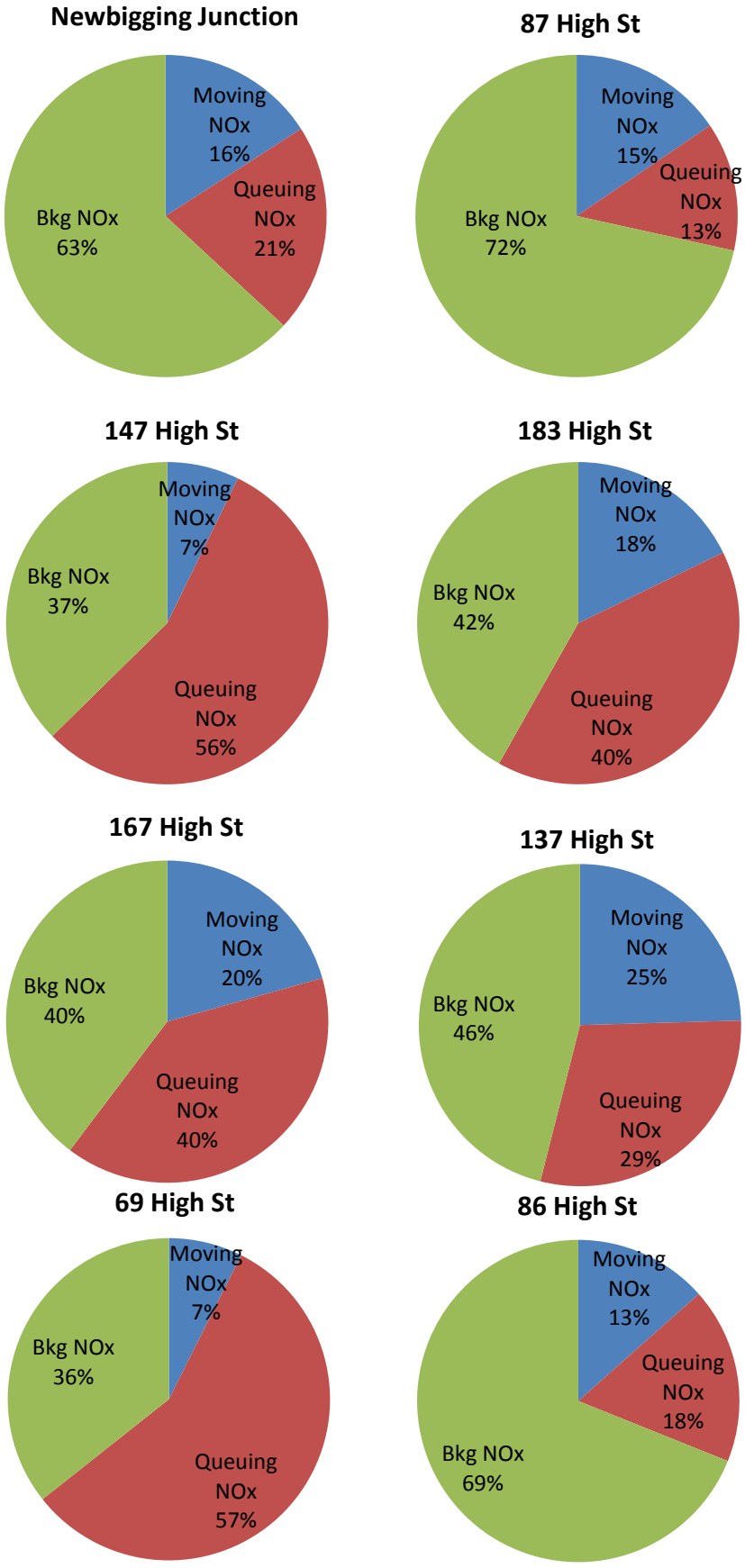


Figure 3.5 High St AQMA NOx Source Apportionment – Moving and Queuing Traffic Sources as % of Total *NOx*



Required Reduction in NOx Concentrations

At the time of carrying out this assessment, LAQM. PG(S) (09) stated that the further assessment must show that a local authority has calculated the reduction in emissions required to achieve the objectives of concern, as this will enable the authority to consider whether the measures proposed to achieve these reductions are proportionate and cost effective.

From the modelling undertaken in the Further Assessment it was found that the largest reduction is required at 69 High Street with a required Road-NOx concentration reduction of 26.5% in order to meet the NO_2 annual mean objective. However, Road-NOx emissions need to be reduced by 4.7% – 26.5% at all receptors between 69 High St and 147 High St. Calculation of the required Road-NOx reduction at the relevant monitoring locations is shown 3.4 below.

Table 3.4 Reductions Required in Total-NOx Concentrations to Achieve the NO_2 Annual Mean Objective

Receptor	Current Total NOx ($\mu g\ m^{-3}$)	Current Road-NOx ($\mu g\ m^{-3}$)	Required Road NOx ($\mu g\ m^{-3}$)	Road-NOx Reduction Required (%)
Newbigging_Jnct	53.4	19.7	44.7	0.0
87_High_St	47.1	13.4	44.7	0.0
147_High_St	90.2	56.5	44.7	-20.9
183_High_St	80.6	46.9	44.7	-4.7
167 High St	84.9	51.2	44.7	-12.7
137 High St	73.2	39.5	44.7	0.0
69 High St	94.5	60.8	44.7	-26.5
86 High St	48.9	15.2	44.7	0.0

Conclusions of Source Apportionment

On the basis of the findings of the source apportionment exercise, East Lothian Council have considered measures that will target reductions in emissions from road traffic in general, but with a particular focus on reducing emissions from LDV's and buses during the development of the draft action plan. This approach targets the principal sources of emissions that can be addressed through local measures.

3.2.2 Scenarios Analysis

Four sets of scenarios were investigated as part of the Further Assessment:

1. The addition of a second bus eastbound bus stop.
2. The reduction of queuing traffic within the AQMA by 10%, 20%, 30% and 40%.
3. The reduction of queuing traffic within the AQMA by 10%, 20%, 30% and 40% combined with the addition of a second eastbound bus stop (Sets 1 + 2).
4. The reduction of moving traffic within the AQMA by 5%, 10% and 20%).

Scenario 1: Addition of second eastbound bus stop

This scenario involved the addition of a second eastbound bus stop at 91 High Street, Musselburgh. The locations of the proposed bus stops are shown in Figure 3.6 (circled in green). It was proposed that the eastbound bus services would be split between the resulting two bus stops as follows:

Bus Stop 3 (Existing)
Lothian – 26 & 30
First – 124
Eve – 128
Horsburgh – T1

Bus Stop 11 (Proposed)
Lothian – 40, 44 & 44A
First – 108
Eve – 129
Horsburgh – T2

Figure 3.6 Bus stop locations – High Street, Musselburgh

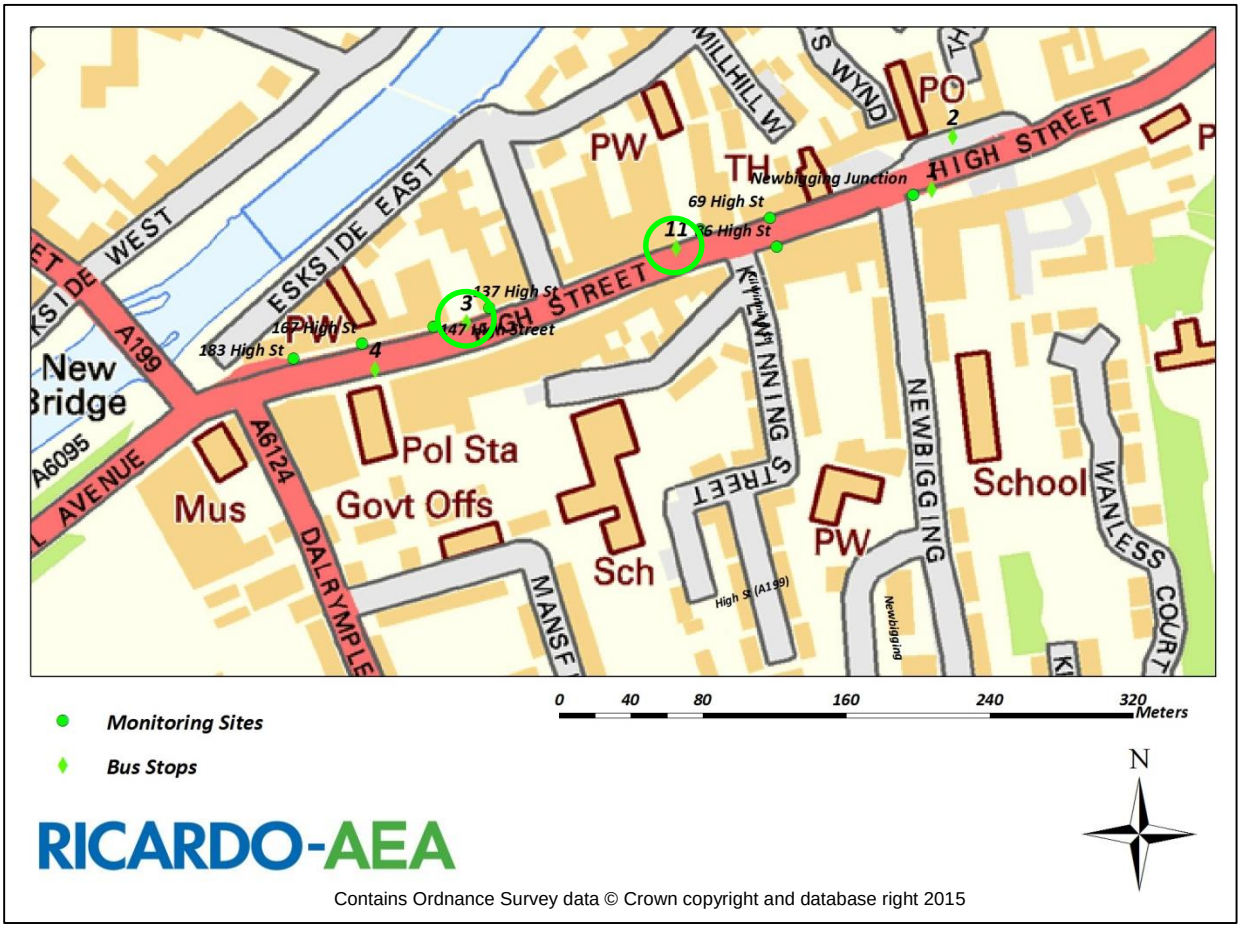


Table 3.5 details the predicted change in annual mean NO_2 concentrations at 8 receptors throughout High Street, Musselburgh. As can be seen, little or no change in NO_2 concentrations are predicted with concentrations predicted to rise by 1 μg m^{-3} at 69 and 183 High Street and predicted to fall by 1 μg m^{-3} at 137 High St. No information was available to support assumptions on how queuing would be affected so only the change in bus numbers at bus stops 3 and 11 have been modelled.

Table 3.5 NO_2 concentrations at receptors for the do-nothing and Scenario 1

Receptor	NO_2 2012 do-nothing (μg m^{-3})	NO_2 2012 Scenario 1 (μg m^{-3})
Newbigging_Jnct	29	29
87_High_St	26	26
147_High_St	45	45
183_High_St	41	42
167 High St	43	43
137 High St	38	37
69 High St	46	47
86 High St	27	27

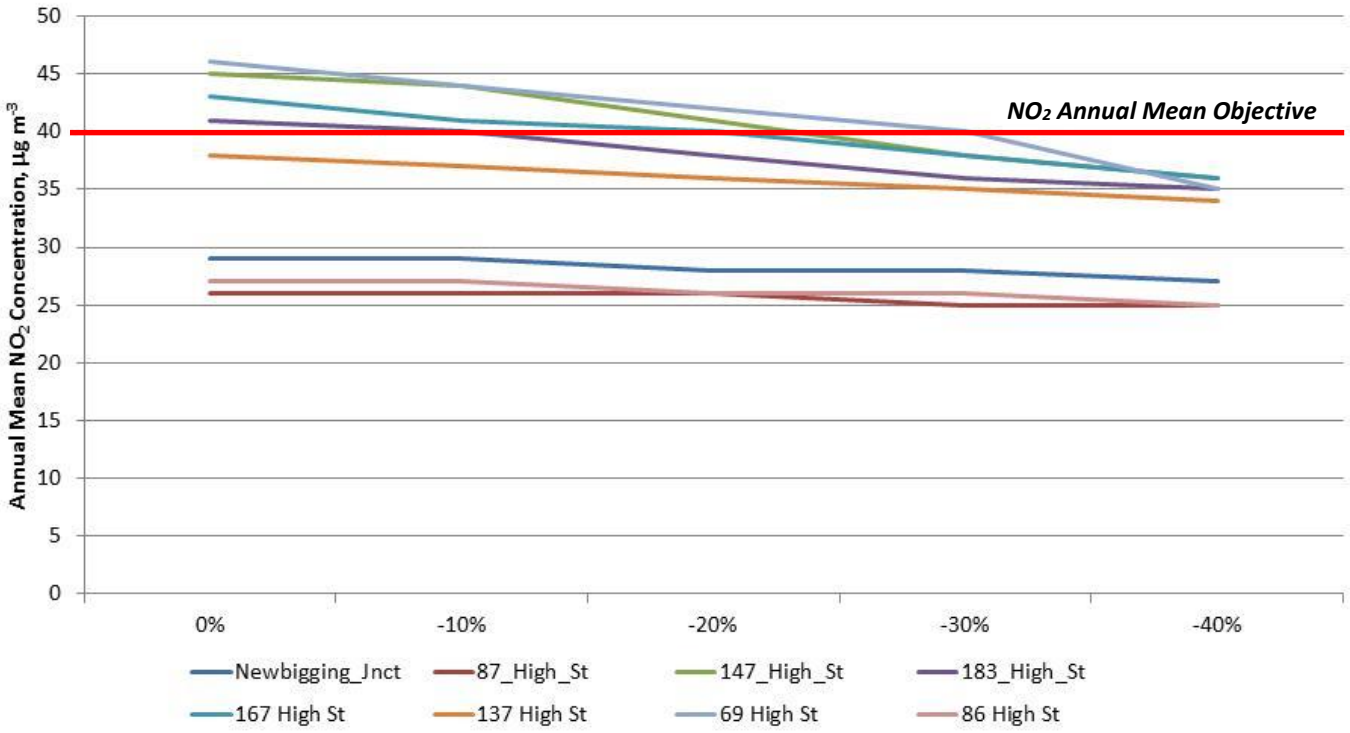
Scenario 2, 3, 4, 5: 10%, 20%, 30% and 40% reduction in queuing traffic

This scenario consisted of reducing the number of total number of vehicles queuing throughout the study area by a total of 10, 20, 30 and 40%. In this case both the queue lengths and the time that traffic is queuing was reduced by the same percentage (e.g. 10, 20, 30 and 40%). Table 3.6 and Figure 3.7 show the estimated reduction in annual mean NO_2 concentrations at the 8 receptors throughout High St, Musselburgh. It was found that a reduction in queuing traffic of 30% or greater would be needed to reduce annual mean NO_2 concentrations to below or equal to 40 μg m^{-3} at all receptors. The greatest reduction in NO_2 annual mean concentrations was predicted at 69 High St, with a reduction of 11 μg m^{-3} to 35 μg m^{-3}, if queuing is reduced by 40%.

Table 3.6 NO_2 concentrations at receptors for the do-nothing and Scenarios 2 - 5

Receptor	NO_2 2012 do-nothing (μg m^{-3})	NO_2 2012 Scenario 2 (μg m^{-3})	NO_2 2012 Scenario 3 (μg m^{-3})	NO_2 2012 Scenario 4 (μg m^{-3})	NO_2 2012 Scenario 5 (μg m^{-3})
Newbigging_Jnct	29	29	28	28	27
87_High_St	26	26	26	25	25
147_High_St	45	44	41	38	36
183_High_St	41	40	38	36	35
167 High St	43	41	40	38	36
137 High St	38	37	36	35	34
69 High St	46	44	42	40	35
86 High St	27	27	26	26	25

Figure 3.7 NO_2 concentrations at receptors for the do-nothing and Scenarios 2 - 5



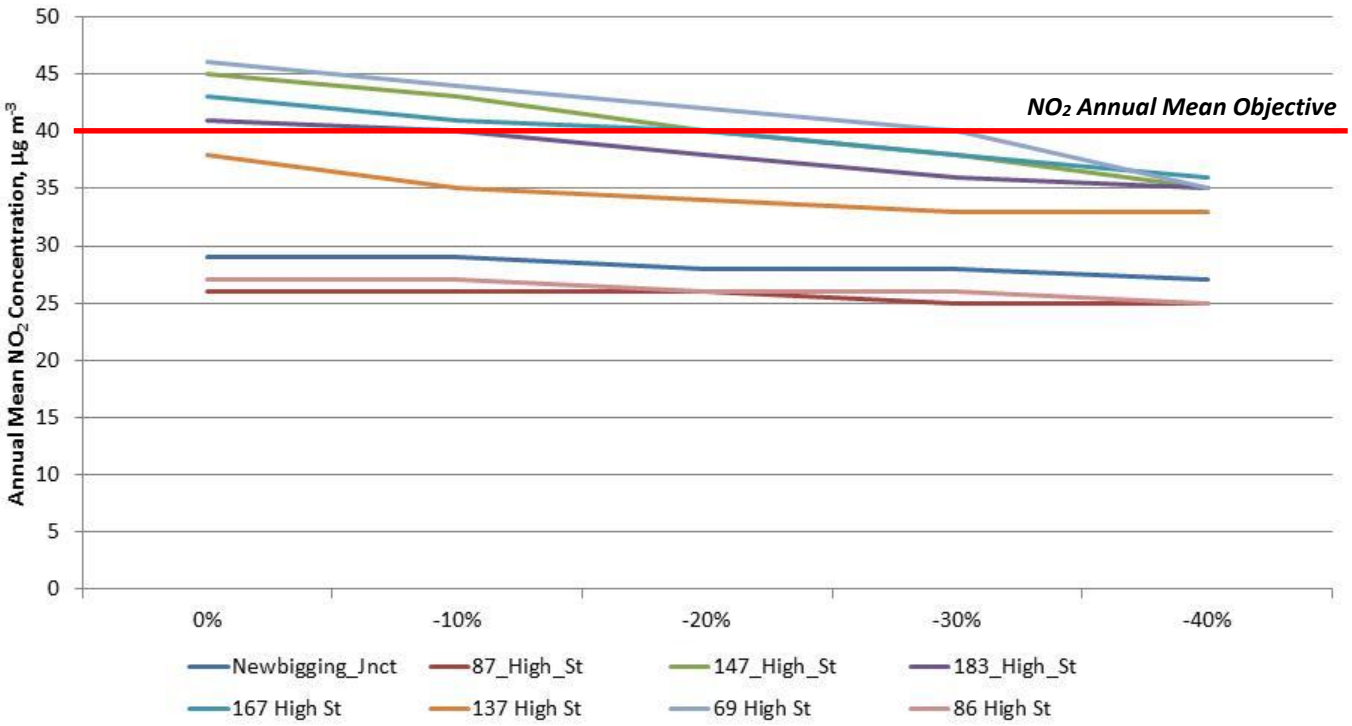
Scenario 6, 7, 8, 9: 10%, 20%, 30% and 40% reduction in queuing traffic in addition to second eastbound bus stop

This scenario involves reducing the number of total number of vehicles queuing throughout the study area by a total of 10, 20, 30 and 40% **combined** with Scenario 1. Table 3.7 and Figure 3.8 show the estimated reduction in annual mean NO_2 concentrations at the 8 receptors throughout High St, Musselburgh. It was calculated that a reduction in queuing traffic of 30% or greater combine with the addition of a further bus stop would be required to reduce annual mean NO_2 concentrations to below or equal to 40 μg m^{-3} at all receptors. The greatest reduction in NO_2 annual mean concentrations was predicted at 69 High St, with a reduction of 11 μg m^{-3} to 35 μg m^{-3}, if queuing is reduced by 40%.

Table 3.7 NO_2 concentrations at receptors for the do-nothing and Scenarios 6 - 9

Receptor	NO_2 2012 do-nothing (μg m^{-3})	NO_2 2012 Scenario 6 (μg m^{-3})	NO_2 2012 Scenario 7 (μg m^{-3})	NO_2 2012 Scenario 8 (μg m^{-3})	NO_2 2012 Scenario 9 (μg m^{-3})
Newbigging_Jnct	29	29	28	28	27
87_High_St	26	26	26	25	25
147_High_St	45	43	40	38	35
183_High_St	41	40	38	36	35
167 High St	43	41	40	38	36
137 High St	38	35	34	33	33
69 High St	46	44	42	40	35
86 High St	27	27	26	26	25

Figure 3.8 NO_2 concentrations at receptors for the do-nothing and Scenarios 6 - 9



Scenario 10, 11, 12: 5%, 10% and 20% reduction in moving traffic AADT

This scenario consisted of reducing the number of total number of vehicles travelling throughout the AQMA by a total of 5, 10 and 20%. In this case, it was assumed that there would be no reduction in bus numbers and therefore the relative percentage of buses in the traffic composition was increased. It should also be noted that the NO_2 reductions would likely be realised due to an obvious reduction in queuing that would occur with reduction in AADT. No information is available to support assumptions on how queuing would be affected so moving traffic reductions only have been modelled.

Table 3.8 shows the predicted changes in NO_2 annual mean concentrations were these reductions in moving traffic to be realised. It was found that reducing the total number of moving vehicles (excluding buses) within High St, Musselburgh by up to 20% would have no impact on predicted annual mean NO_2 concentrations. This confirmed that the dominating emission sources within the High Street AQMA is queuing traffic and buses.

Table 3.8 NO_2 concentrations at receptors for the do-nothing and Scenarios 10 - 12

Receptor	NO_2 2012 do-nothing ($\mu g\ m^{-3}$)	NO_2 2012 Scenario 10 ($\mu g\ m^{-3}$)	NO_2 2012 Scenario 11 ($\mu g\ m^{-3}$)	NO_2 2012 Scenario 12 ($\mu g\ m^{-3}$)
Newbigging_Jnct	29	29	29	29
87_High_St	26	26	26	26
147_High_St	45	45	45	45
183_High_St	41	41	41	41
167 High St	43	43	43	43
137 High St	38	38	38	38
69 High St	46	46	46	46
86 High St	27	27	27	27

3.2.3 Conclusions and Recommendations

The Musselburgh High Street AQMA has been declared on the basis of recognised exceedances of the annual mean objectives for NO_2, and thus, the action plan should be developed to focus on measures that effectively reduce emissions and concentrations of both this pollutant.

In summary, the findings of the Further Assessment for the High Street AQMA indicate the following:

- Road traffic represents the predominant source of NOx within the Musselburgh AQMA, with LDV's and buses representing the principal source of road-traffic based emissions of NO_x.
- Queuing traffic represents a more significant source of emissions of NOx than moving traffic, although moving traffic is estimated to contribute up to 25% of emissions of both pollutants.

From consideration of these findings and the findings of the scenario analyses, it is recommended that the action plan should include measures aimed at:

- Reducing the impacts of LDV's and buses within the High Street AQMA.
- Minimising the impacts of congestion within Musselburgh High St.
- Encouraging a reduction in traffic volumes.

4 Action Plan Measures and their Assessment

During the development of the Action Plan, East Lothian Council has considered a full range of relevant measures aimed at reducing ambient concentrations of NO_2 within the Musselburgh High Street AQMA. The process has consisted of a gradual refinement of the range of potential measures under consideration, to enable the focus to be centered on measures that directly address the principal problem (road traffic emissions), are feasible and cost-effective compared to others. This section describes how this was achieved. It should be noted that although reducing particulate matter (PM_{10} and $PM_{2.5}$) concentrations is not the aim of this AQAP, it is envisaged that any measures put in place to reduce NO_2 concentrations will also have a positive impact on PM_{10} and $PM_{2.5}$ concentrations.

This chapter provides more information on the measures and their assessment. The measures in the Action Plan are presented in the next chapter.

4.1 Initial Assessment Measures

This section reports on the work undertaken to consider the full range of Air Quality Action Plan measures available in line with the requirements outlined in LAQM.PG(S) (16), to enable the identification of feasible and effective measures that can be developed in the Action Plan.

Range of Possible Measures

The Policy Guidance LAQM.PG(S) 16 states that Air quality action plans must focus on effective, feasible, proportionate and, quantifiable measures; and provide evidence that all available measures have been considered on the grounds of cost effectiveness and feasibility.

A wide range of potential measures may be available to East Lothian Council and other stakeholders to improve local air quality within the Musselburgh High St AQMA, and the surrounding area. Therefore, at the onset of the action planning process it is appropriate to consider all potential measures. The identification of potential measures for the consideration East Lothian Council was undertaken through a review of existing local and regional plans, consideration of measures referenced in LAQM.PG(S) (16) and relevant guidance documents. Whilst East Lothian Council may not have the necessary powers to implement all such measures, they may work with, or encourage other organisations and agencies that have the capacity to take such measures forward.

Table 4.1 presents a list of six 'Option Categories' available to East Lothian Council.

Table 4.1 Air Quality Action Plan Option Categories

Type	Description	Notes
1	Strategic measures	Road transport emissions constitute a significant source of air pollution across the UK, and have contributed to the declaration of numerous Air Quality Management Areas. Due to the prevalence of road transport, a local long-term strategy is required to bring about a progressive reduction in emissions from the road transport sector in future years and encourage improvements in local air quality as a result. Furthermore, in Scotland, a more stringent annual mean objective for PM_{10} is in place. Consequently, background concentrations of particulate matter make a significant contribution to local PM_{10} concentrations. A long-term strategy aimed at reducing pollutant concentrations from these sources might include: • Building the capacity to better assess and manage the environmental impacts from road transport. • Specific commitments or targets within local development and transport planning policy to significantly reduce the impacts of new development.

Type	Description	Notes
2	Move sources away from the AQMA	Road transport emissions have been shown to represent the principle source of NOx within the AQMA and make a significant contribution to local PM_{10} concentrations. The construction of new roads could divert traffic away from the roads in the AQMAs. Less traffic on these roads results in lower pollution levels in the AQMAs. However, the opportunity to build such roads is frequently absent. In cases where such roads can be built, care needs to be exercised that the locations where the new roads are built do not become AQMAs in turn. **Note that this option moves emissions from one location to another with no requirement to reduce them. Overall emissions may be increased by such actions.**
3	Traffic Management – optimisation of traffic movement through AQMA	Changes in how the roads in the AQMA are signed or otherwise managed may reduce emissions from road transport a) by diverting some traffic onto better routes for them, or b) by reducing congestion/ stationary traffic. **Note that the opportunity to take such action is frequently limited.**
4	Reduce emissions from sources by technical means	The majority of vehicles using roads in the AQMA are conventional petrol or diesel powered vehicles with a range of ages. There are many technical options to convert such vehicles into ones using cleaner engine and fuel technology. By accelerating the uptake of these technologies the emissions in the AQMAs would be reduced. Note that technology does not always work in a positive sense for all emissions. They sometimes trade benefits for one pollutant against negative aspects for another one.
5	Reduce emissions from sources by reducing the demand for travel or achieving better travel choices	An important way to reduce emissions from transport is to reduce the number of journeys made through the AQMA. This could be achieved either through reducing the need to make some journeys, or by ensuring that these journeys are made via a less polluting form of transport. The success of such measures depends on policies that influence how people make travel choices. Note that there is increasing emphasis placed on such policies and that they work holistically by reducing emissions of all pollutants and greenhouse gases.
6	Other	May include a variety of measures e.g. targeting reduced emissions from domestic sources, industry or statutory nuisance.

4.1.1 Initial Responses to the Measures

For each of the provisional measures considered, a decision has been made to eliminate several measures from further consideration, or to consider the option further. Taking into consideration the situation in Musselburgh High St the findings of the source apportionment exercise (Section 3) and existing council policy, several of the measures included within the provisional list of measures were eliminated from further consideration at this time. These measures are presented in Table 4.2.

As it has been identified that road traffic is the main source of air pollution within the Musselburgh AQMA, a number of traffic management scenarios were investigated. Some of traffic management measures listed below could result in an indirect improvement in air quality with the AQMA and may be implemented. However, others (e.g. Open Electricity Bridge in Musselburgh) have a high cost and are likely to experience a high level of opposition in the local area.

Table 4.2 Measures eliminated from further consideration in the Musselburgh High St AQMA

Move receptors away from AQMA
Create alternative accommodation for the residents of Musselburgh High St area
Move sources away from AQMA
Local ban on freight, car or bus traffic
Pedestrianisation of Musselburgh High St
Traffic Management – optimisation of traffic movement through AQMA
Urban Clearway
Open Electricity Bridge in Musselburgh + Signalise A199 / New St Junction
Open Dalrymple Loan (Caprice / Bus Station) Link to Mall Avenue. With Bus only access from Mall Avenue to High St and Dalrymple Loan closed at Caprice (apart from emergency access)
Open Inveresk Rd & Electricity Bridge in Musselburgh
Open Dalrymple Loan /Mall Ave Link & Electricity Bridge in Musselburgh
QMU Interchange completion + option 1,2,3,4 or 5
Trunk Road Interchange improvements at Dolphinstone (roundabouts), Salter Rd (Signalisation)
Monktonhall Terrace Widening
Open up Bus only link from Whitehill Farm Rd to QMU + Signalise over bridge
Goosebay Distributor Road & Salters Rd Improvements
Inveresk Rd – Mall Avenue Link, Musselburgh
Open Inveresk Rd in Musselburgh
Town Centre One-Way Gyratory, Musselburgh
Reduce the emissions from sources by technical means
Road User/ Work Place Charging
Retrofitting Council Fleet
Development of infrastructure for cleaner vehicle fuels
Vehicle scrappage incentives
Speed Controls
Investigate potential development of a Taxi Quality Partnership
Reduce the emissions from sources by means of encouraging better travel choices/ behaviour change
Bus lanes
Other
Home Energy Efficiency
Environmental Nuisance (including bonfires)

The measures listed in Table 4.2 have been excluded from further consideration at this time, as they were either not considered feasible, or were not believed to have an appropriately targeted impact on the predominant sources of emissions identified in the further assessment. Note that further studies, including modelling of traffic and air dispersion modelling, will be carried out to assess the feasibility of a selection of traffic management measures. This is likely to result in the adoption of one or more such measures, following further consultation.

East Lothian Council intends to develop all of the remaining measures for inclusion within the Air Quality Action Plan. These measures include several new measures that will require to be developed further and assessed prior to implementation. Also included, are numerous measures that are in the process

of being implemented by East Lothian Council but which may require some modification or supplementation in order to make a more significant contribution to improving local air quality in the Musselburgh High St AQMA, and also meet future reporting requirements.

Figure 4.1. Overview of measures included within the plan

Therefore, the approach adopted in this action plan to enable the assessment of new measures differs from that utilised to assess measures that have already been implemented. Most significantly, for measures that have already been implemented through existing plans and programmes, it is clear that these measures have previously been determined to be **acceptable.** As such, the assessment of existing measures undertaken within this plan is restricted to the assessment of their potential impact on air quality within the AQMA, plus any additional costs/ benefits associated with any modification/ supplementation of these measures.

A summary of the remaining **new** and **existing** measures proposed for inclusion in the Plan are presented in Tables 4.3 and 4.4 respectively. Further details of the measures and their assessment are presented in the following sections.

Table 4.3 New measures selected for further assessment and potential inclusion in the Musselburgh AQAP

1 Strategic Measures
a) Improving links with Local Transport Strategy
b) Improving links with Local Development Plan
2 Traffic Management – optimisation of traffic movement through AQMA
a) Construction of micro-simulation traffic model of the strategic and local road network
b) Modelling of traffic-related mitigation measures
c) Bus stop relocations on High St, Musselburgh
d) Enforcement of idling provisions of The Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003
3 Reduce the emissions from sources by technical means
a) Electrification of Lothian Buses in Musselburgh
b) Eco Stars
4 Reduce the emissions from sources by means of encouraging better travel choices/ behavioural change
a) Longer Trains and Platforms at Musselburgh Rail Station
b) Improved signage – AQMA signs

Table 4.3 Existing measures selected for further assessment and potential inclusion in the Musselburgh AQAP

1 Strategic Measures
a) Local Development Plan (LDP)
2 Traffic Management – optimisation of traffic movement through AQMA
g) SCOOT - Split Cycle Offset Optimisation Technique
4 Reduce the emissions from sources by means of encouraging better travel choices/ behavioural change
b) East Central Scotland Vehicle Emissions Partnership
b) Provision of information regarding air quality and travel options – includes awareness raising
b) Promotion of alternative modes (cycling + walking)
b) Green Travel Plans for large institutions and businesses.

4.2 Development of proposed measures

Each of the measures short-listed for inclusion in the plan are discussed in more detail below, together with a summary of potential sub-measures, the relevant authorities responsible for implementation, and the powers available to implement the given measures. Measures were identified as being within the responsibility of the following authorities:

1. From East Lothian Council
   a. Environmental Health;
   b. Development Management;
   c. Road Services;

2. Vehicle Emissions Officer, East Central Scotland Vehicle Emissions Partnership at West Lothian Council

The assessment of the measures including their perceived cost-effectiveness and wider impacts together with the methodology utilised to undertake the assessment are discussed in Section 6**.** The proposed measures have been broken into relevant categories as presented in Table 5.1, and discussed in further detail below.

4.2.1 Strategic Measures

It is important that Air Quality Action Plans support and consider existing or forthcoming transport and development plans, and vice versa. Therefore, some integration of the AQAP with the local transport strategy and the development plan is considered essential and represents a strategic and integrated approach to local air quality management. This strategic approach is outlined in proposed measures 1 and 2.

4.2.1.1 Improving links to Local Transport Strategy

Road transport has been identified as the principal source of NO_x the Musselburgh AQMA. Consequently, East Lothian Council's Local Transport Strategy (LTS) present a key platform for delivering initiatives aimed at improving local air quality. Including air quality as a key consideration within the LTS will ensure that any proposed changes to the East Lothian transport network will be assessed in terms of potential air quality impacts. This forms part of a wider holistic approach that will help ensure that air quality continues to improve in Musselburgh and the wider East Lothian area.

Measure	**Title**	
1	Improving links with Local Transport Strategy (LTS)	
Definition		Key Intervention
Future versions of LTS to be revised to include: a. Reference to Musselburgh AQMA and measures included in Air Quality Action Plan. Integration of plan. b. Develop action plan measures that will be implemented via the local transport strategy		Measures to ensure the current poor air quality in the AQMA is improved where possible and to avoid future problems are implemented via the Local Transport Strategy.
Responsible authority and other partners		Powers to be used
East Lothian Council – Road Services and Environmental Health		Voluntary

4.2.1.2 Improving links with Local Development Plan

Planning and development control play an important role in minimising the potential detrimental impacts that new developments may have on local air quality. This strategic measure is intended to minimise the potential impact of future developments on local air quality across East Lothian. Whilst, air quality is already considered in East Lothian Council during the development planning process, the declaration of the AQMA in Musselburgh presents the opportunity to refocus on the potential impacts of new developments on local air quality during construction and operational phases. Whilst it is important that all large-scale developments are considered in terms of their potential impact on local air quality, it is particularly important that proposed developments that may exert an impact on the Musselburgh AQMA should be subject to particular consideration in terms of their potential impact on local air quality, and that all practicable mitigation measures are implemented. Again, this forms part of a wider approach that will help ensure that air quality continues to improve in Musselburgh and the wider East Lothian area.

Measure	Title
2	Improving links with Local Development Plan (LDP)
Definition	Key Intervention
This measure incorporates measure 1b from the provisional assessment. Sub-measures to include: a. Integration of AQAP with future versions of Local Plan. b. Ensure that development proposals with the potential to exert an impact on the Musselburgh AQMA are assessed for air quality impacts and where necessary, appropriate mitigation measures considered. c. Continue to promote sustainable developments by using the planning process to maximise commitment from developers to minimise air quality impacts.	Local planning considerations aim to mitigate the cumulative negative air quality impacts of new development
Responsible authority and other partners	Powers to be used
East Lothian Council – Development, Planning and Policy, and Environmental Health	Voluntary

4.2.2 Traffic Management – optimisation of traffic movement through AQMA

It is generally recognised that traffic management measures are likely to have the greatest impact on air quality within an AQMA in a relatively short space of time. This is due to the fact that the primary source of emissions (traffic) is being moved away from, reduced within, or is flowing more easily through the AQMA.

The following measures describe proposed changes to road layouts that could improve the flow of traffic or reduced traffic numbers through the AQMA. In order to assess the viability of the proposed changes, models are being developed to simulate the likely change in traffic flows in the Musselburgh area and predict the corresponding impacts on air quality. It is important to note that any changes in road layout could move the air quality problem to other areas of Musselburgh and therefore it is important to model the air quality impacts in the wider area and not just the High St AQMA.

4.2.2.1 Traffic and Air Dispersion Modelling

Table 4.4 outlines proposed road layout changes that could have an impact on traffic travelling through the Musselburgh AQMA. Both traffic modelling and air dispersion modelling is being carried out to identify which options are most feasible in terms of traffic flows in the wider East Lothian area and air quality. Please note that this list is not exhaustive and other options may be identified during the traffic modelling phase. In addition, air dispersion modelling will be carried out for the most feasible options in terms of traffic flows. For example, if the traffic modelling identifies that there will be excessive congestion in other areas of East Lothian as a result of a proposed change in Musselburgh, then this option will be excluded from the dispersion modelling study.

Table 4.4 Possible road layout changes - Musselburgh

Traffic Management – optimisation of traffic movement through AQMA
Open Electricity Bridge in Musselburgh + Signalise A199 / New St Junction
Open Dalrymple Loan (Caprice / Bus Station) Link to Mall Avenue. With Bus only access from Mall Avenue to High St and Dalrymple Loan closed at Caprice (apart from emergency access)
Open Inveresk Rd & Electricity Bridge in Musselburgh
Open Dalrymple Loan /Mall Ave Link & Electricity Bridge in Musselburgh

Traffic Management – optimisation of traffic movement through AQMA
Open up Bus only link from Whitehill Farm Rd to QMU + Signalise over bridge
Inveresk Rd – Mall Avenue Link, Musselburgh
Open Inveresk Rd in Musselburgh
Town Centre One-Way Gyratory, Musselburgh

4.2.2.2 Bus Stop Relocations on High St, Musselburgh

There are currently four bus stops located within the High St AQMA with regular services from Lothian Buses, East Coat Buses and other independent bus companies. The large number of buses passing through the High St AQMA results in congestion at the current bus stops. In order to try and relieve this congestion it is proposed that additional bus stops are added along High St with bus services being split between the additional stops. Although the initial scenario testing for the Further Assessment (Section 3.2.2, Scenario 1) showed that splitting the bus stops is unlikely to result in a reduction in NO_2 annual mean concentrations, it is likely that splitting the bus stops will relieve some of the congestion caused by buses queuing at the stops. The initial dispersion modelling did not take account of any changes in queuing as a result of this measure and due to the relatively low cost and ease of implementing this measure, it has been included within the Plan.

Measure	Title
3	Bus Stop Relocations on High St, Musselburgh
Definition	**Key Intervention**
a. Split bus services between two or more additional bus stops along High Street, Musselburgh.	Reduce traffic congestion due to bus drop-off and pick-up, reducing emissions within the Musselburgh AQMA.
Responsible authority and other partners	**Powers to be used**
East Lothian Council – Road Services, Development, Planning and Policy, and Environmental Health	Voluntary

4.2.2.3 Enforcement of Idling Vehicle Fines

Although not directly modelled in the Further Assessment, idling traffic is likely to have a detrimental impact on air quality within the AQMA. Enforcing fixed penalties is likely to reduce emissions from idling traffic as well as raise awareness of the air quality issues within Musselburgh.

Measure	Title
4	Enforcement of idling provisions of The Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003
Definition	**Key Intervention**
b. Enforcement of idling provisions of The Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003	Reduce emissions within the AQMA due to unnecessary idling and raise awareness of local air quality issues.
Responsible authority and other partners	**Powers to be used**
East Lothian Council – Road Services	Statutory

4.2.3 Reduce the Emissions from Sources by Technical Means

4.2.3.1 Electrification of Lothian Buses in Musselburgh

Lothian Buses will begin to use hybrid single-decker buses in mid to late 2017 that switch to electric operation automatically within the Edinburgh and Musselburgh AQMAs. Initially, this will consist of 25 vehicles operating on the number 30 service. In order to facilitate this, East Lothian Council propose to install an electric charging facility in Musselburgh.

Measure	Title
5	Electrification of Lothian Buses in Musselburgh
Definition	Key Intervention
a. Lothian buses to switch to electric operation within Musselburgh AQMA.	Reduce emissions from buses within the AQMA.
Responsible authority and other partners	Powers to be used
East Lothian Council – Road Services	Voluntary

4.2.3.2 Eco Stars

East Lothian Council have secured funding from the Scottish Government and are in process of establishing 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 will be formally launched in February 2017.

Measure	Title
6	Eco Stars
Definition	Key Intervention
a. The establishment of an Eco Stars Fleet Recognition Scheme within East Lothian.	Reduce emissions from East Lothian Council fleet vehicles and commercial fleet operators within the Musselburgh AQMA and wider region.
Responsible authority and other partners	Powers to be used
East Lothian Council – Environmental Health	Voluntary

4.2.3.3 SCOOT Traffic Management

Queuing of traffic can result in elevated concentrations of air pollution, creating localised hot spots. These may be reduced by the phasing of traffic signals to facilitate the smooth flow of traffic along a given street. During 2013, East Lothian Council implementing a SCOOT (Split Cycle Offset Optimisation Technique) in Musselburgh High St with synchronised fixed time signals in order to address peak hour congestion and queuing at key junctions.

Measure	Title
7	SCOOT Traffic Management
Definition	Key Intervention
a. Implementation of new SCOOT in High St, Musselburgh with synchronised fixed time signals.	Improve efficiency of transit through Musselburgh High St
Responsible authority and other partners	Powers to be used
East Lothian Council – Road Services	Voluntary

4.2.4 Reduce emissions from sources by means of encouraging better travel choices/behavioural change

4.2.4.1 Longer Trains and Platforms at Musselburgh Rail Station

Improving public transport links is one measure that can encourage better travel choices for commuters. East Lothian Council propose to increase the capacity of the trains and platforms at Musselburgh train station. This intervention may have an impact on traffic volumes moving through the High St AQMA.

Measure	Title
8	Longer Trains and Platforms at Musselburgh Rail Station
Definition	Key Intervention
This measure incorporates measures 2b and 2c from the assessment: a. Construction of micro-simulation traffic model of the strategic and local road network b. Air quality dispersion modelling of traffic-related mitigation measures c. Increase the capacity of the train and train station at Musselburgh.	Encourage use of public transport to and from Musselburgh resulting in a reduction of road traffic within the Musselburgh AQMA.
Responsible authority and other partners	Powers to be used
East Lothian Council – Road Services, Development, Planning and Policy, Abellio, Network Rail, Scottish Government	Voluntary

4.2.4.2 Improved Signage – AQMA Signage

In order to raise the awareness of the AQMA, the Council will consider erecting signs at various locations within Musselburgh Town Centre to alert drivers to the presence of the AQMA and encouraging behavioural change e.g. reduce vehicle idling. The content of the sign should incorporate the positive approach that the council is taking to improving local air quality within Musselburgh.

Measure	Title
9	AQMA Signage
Definition	Key Intervention
d. Design and install AQMA signage within the Musselburgh AQMA	Raise awareness of the air quality issues within Musselburgh, resulting in behaviour change and a reduction of road traffic within the Musselburgh AQMA.
Responsible authority and other partners	Powers to be used
East Lothian Council – Road Services, Environmental Health	Voluntary

4.2.4.3 East Central Scotland Vehicle Emissions Partnership

East Lothian Council currently work in partnership with Midlothian, West Lothian and Falkirk Councils to provide a voluntary Vehicle Emissions Testing Programme aimed at raising awareness of vehicle emissions and impacts on air quality amongst the general public.

Measure	Title
10	East Central Scotland Vehicle Emissions Partnership
Definition	Key Intervention
e. East Lothian Council work in partnership with Midlothian, West Lothian and Falkirk Councils to provide a voluntary Vehicle Emissions Testing Programme	Raise awareness of vehicle emissions and the impacts on air quality amongst the general public.
Responsible authority and other partners	Powers to be used
East Lothian Council _ Environmental Health, East Central Scotland Vehicle Emissions Partnership	Voluntary

4.2.4.4 Development of Travel Plans

Travel Plans for Large Institutions and Businesses

Travel plans aim to address the negative impacts of car travel, notably single occupancy vehicles, by encouraging car sharing, or a shift to more sustainable forms of transport, such as walking, cycling and public transport; or reducing the need for travel. Such plans typically recognise that one solution is unlikely to be suitable for everyone and thus focus on encouraging the consideration of alternative forms of travel through the provision of incentives such as improved cycle facilities, flexible working arrangements and discounted public transport.

Travel plans have been widely adopted across the UK and have been shown to be cost-effective at reducing car usage in numerous situations. As a result, the adoption of Travel Plans is now widely promoted by the UK Government[25].

In order to encourage a reduction in car dependency for commuting to and from work and whilst at work, East Lothian Council has developed a Council Travel Plan (2010). The Plan was based on a Council Travel Survey undertaken in 2007 and 2009, and identified the following objectives:

- Reduce the need to travel for both commuting and business needs.
- Reduce the percentage of single occupancy car journeys to work.
- Increase the use of more sustainable forms of travel such as walking, cycling and public transport by staff and visitors to council offices and facilities.
- To make the management of our workplace car parking effective, efficient and equitable.

[25] Good Practice Guidelines. Delivering Travel Plans through the planning Process. DfT (2009)

- To maximise the efficiency of our fleet.
- Increase staff and visitor's awareness of the Travel Plan.
- Ensure that the Travel Plan is embedded into corporate and departmental policies and processes, costed and monitored on a regular basis.
- Reduce CO_2 emissions related to commuter and business travel.
- Realise cost savings associated with business travel.

In order to achieve this, the plan outlined numerous actions covering walking and cycling, public transport, car use and reducing the need to travel.

Measures promoted through the East Lothian Council Travel Plan include:

- Introduction of a car share scheme – www.tripshareeastlothian.com;
- Cycle parking;
- Appointment of a School Travel Plan Coordinator.

Encouraging External Organisations to Develop Travel Plans

The adoption of travel plans by local businesses is a crucial component of promoting sustainable travel and requires the cooperation of numerous stakeholders including businesses and employees.

Measure	Title	
11	Development of Travel Plans	
Definition		Key Intervention
To encourage and assist large organisations to develop and implement green travel plans, including: a. Continue the implementation of East Lothian Council's travel plan; b. Continue to support the implementation of School travel plans; c. Work with local businesses/organisations to encourage the development and implementation of travel plans.		To increase awareness of local air quality issues and encourage changes in behaviour that will contribute to improving local air quality.
Responsible authority and other partners		Powers to be used
East Lothian Council – Road Services, Carbon Management Team		Voluntary

4.2.4.5 Promotion of Cycling and Walking

Promoting cycling and walking represents a key objective of East Lothian Council's Local Transport Strategy. East Lothian Council aims to encourage members of the public to consider walking or cycling instead of using their car, and as a consequence, promote healthy lifestyle choices and environmental improvement by reducing the number of cars on the road. The proposed vision for the strategy is:

"East Lothian will have well-connected communities with increased use of sustainable transport modes to access services and amenities."

Encouraging walking is also important in terms of promoting transport choices and behavioural change. It is not only the main choice for short trips, but it is also the way we start and end the larger ones.

Measure	Title
12	Promotion of Cycling and Walking

Definition	Key Intervention
To encourage members of the community to adopt cycling and walking as alternatives to using private vehicles. a. Ensure cycle networks and facilities are provided, as a matter of course, within existing and new networks and developments. b. To improve integration between cycling, walking and public transport. c. Increase cycling trips to employment, education and leisure facilities. d. Improve pedestrian facilities such as new footpaths and crossings.	To encourage a shift away from the use of private motor vehicles for travelling more sustainable forms of transport, or reducing the need for travel.
Responsible authority and other partners	**Powers to be used**
East Lothian Council – Road Services and SEStran	Roads (Scotland) Act 1984, the Road Traffic Regulation Act 1984; the Road Traffic Act 1988 and the Planning etc. (Scotland) Act 2006

4.2.4.6 Provision of Information Relating to Air Quality and Travel Options

East Lothian Council aims to provide information and undertake marketing initiatives targeting increasing the public's awareness of air pollution issues in East Lothian and to encourage members of the public to participate in improving the situation. This measure is intrinsically linked to the promotion of cycling and walking and the development of travel plans but focuses on the provision of information relating to air quality within East Lothian and public transport.

Air Quality Information

East Lothian Council operates an air quality monitoring network, with data from these sites made available to the public through the Scottish Air Quality Archive. In addition, the most recent air quality management reports prepared by the council are available through the council website.

Public Transport Information

Public transport is a key priority for East Lothian Council and Road Services work closely with the commercial operators of taxis, buses and trains. In order to encourage members of the public to utilise public transport instead of private vehicles, East Lothian Council provides information on public transport services operating within East Lothian through the Council website, and links to external organisations such as Traveline Scotland. The Council in partnership with Traveline also operates mobile phone texting service for information on bus times for any bus stop (charged service).

Measure	Title
13	Provision of Information relating to Air Quality and Travel options

Definition	Key Intervention
To increase awareness of local air quality issues and public transport information. a. Continue to make information relating to local air quality management available through the Council website. b. Undertake a publicity campaign to raise awareness of the Musselburgh AQMA. c. Continue to provide information of public transport services through the council website.	To increase awareness of local air quality issues and encourage changes in behaviour that will contribute to improving local air quality.
Responsible authority and other partners	**Powers to be used**
East Lothian Council – Road Services, Environmental Health	Voluntary

5 Methodology Utilised to Assess Shortlisted Measures

In accordance with the government guidance, the measures short-listed for inclusion within the action plan have been assessed against a wide range of criteria in order to assess their suitability for inclusion within the plan and enable suitable measures to be prioritised. At this stage a number of measures are still in development, and it is likely that as these measures are further defined their contribution to the plan will require to be assessed in further detail. The criteria against which measures were assessed were:

- Potential air quality impact;
- Implementation costs;
- Cost-effectiveness;
- Potential co-environmental benefits, risk factors, social impacts and economic impacts;
- Feasibility and Acceptability.

The following paragraphs outline how the assessment has been undertaken.

5.1 Potential Air Quality Impact

This is a key assessment in that the AQAP must focus on prioritising measures that improve air quality most effectively. The assessment is complex in that the detailed assessment of any given option could normally be subject to a study of its own requiring significant resources.

A semi-quantitative assessment relying on a level of judgement has been adopted. The method used is outlined below:

1. The description of the option and the proposed change to be brought about by the option is used alongside the source apportionment analysis (Chapter 3) to define what proportion of road transport emissions would potentially be affected by the option.
2. A view is then expressed on how much of the traffic would actually be changed by the option.
3. The proportion of emissions potentially affected by the option and the view on how far they could be changed by the option are combined to express a view on how much transport emissions may be reduced in the AQMA due to the option.
4. A view is then expressed on how significant this change in emissions would be in terms of making progress towards the air quality standard in the AQMA.

For the purpose of the AQ assessment the result of the realistic intervention has been assessed as having a potentially:

- Zero local AQ benefit if the realistic intervention is 0% or worse;
- Small local AQ benefit if the realistic intervention is 1%;
- Medium local AQ benefit if the realistic intervention is 2-5%;
- Large local AQ benefit if the realistic intervention is >5%.

5.2 Implementation Costs

The potential implementation costs of each option are assessed as follows:

- **Cost neutral** (measure already implemented through existing plans/ programmes)
- **Low costs** (up to £20k annually e.g. for small surveys or campaigns or other options using current resources)
- **Medium costs** (up to £60k annually e.g. for a full time officer and resources)

- **High costs** (up to £200k annually e.g. for small traffic management schemes)
- **Very high costs** (above £200k annually e.g. for new infrastructure)

The assessed costs attempt to include the costs to vehicle operators as well as to East Lothian Council. These cost bandings may be subject to revision depending on comments received from those consulted.

5.3 Cost-Effectiveness

The effectiveness of each measure in improving air quality is compared to the implementation costs in the following matrix:

AQ benefit / Cost	Score	Zero	Small	Medium	Large
Score		0	1	2	3
Neutral	4	0	4	8	12
Low	3	0	3	6	9
Medium	2	0	2	4	6
High	1	0	1	2	3
Very High	0	0	0	0	0

In this table the assessed implementation costs and potential air quality impacts have been given a weighted score. The product of the weighted scores for each option is calculated. The results can be interpreted as follows:

- If the product is **high** (8 or more) then the measure is more cost-effective (significant impacts for the cost involved) and perhaps favourably cost-effective;
- If the product is **medium** (between 3-7) then the measure is in the medium range of cost-effectiveness;
- If the product is **low** (2 or less) then the measure is less cost-effective (small impacts for the cost involved) and perhaps unacceptably poor in cost-effectiveness terms.

This method only estimates the relative cost-effectiveness of measures rather than their absolute values. The method is useful during discussions of the relative priority of different measures. The final cost-effectiveness value is sensitive to changes in the assumptions of how effective a measure might be in reducing emissions and how costly it is.

5.4 Potential Co-Environment Benefits

In this assessment other environmental benefits are highlighted:

- Greenhouse gases: The likely effect on greenhouse gas emissions is assessed as being an overall reduction or a local reduction perhaps with emissions being relocated elsewhere.
- Noise.
- Other air quality benefits such as reduction in PM_{10} and $PM_{2.5}$ambient concentrations.

Without detailed information on the true impacts of the measures, these assessments rely on judgement.

5.5 Potential Risk Factors

In this assessment risk factors are highlighted. These may be looked at more closely within a Strategic Environmental Assessment of any measure implemented. At this stage it is simply highlighted whether or not it is likely that the measure would:

- Relocate emissions and hence lead to worsening air quality elsewhere;
- Require a change in land use;
- Place limits on pace of development, or increase costs of development significantly.

Without detailed information on the true impacts of the measures, these assessments rely on judgement.

5.6 Potential Social Impacts

Potential social impacts are highlighted. These may need to be examined more closely when developing the measures further. At this stage it is simply highlighted whether or not it is likely that the option would potentially:

- Provide health benefits in terms of lower exposure to pollutants or increased mobility;
- Increase road safety;
- Improve accessibility.

Without detailed information on the true impacts of the measures these assessments rely on judgement.

5.7 Potential Economic Impacts

Potential economic impacts are highlighted. These may need to be examined more closely when developing the measures further. At this stage it is simply highlighted whether or not it is likely that the option would potentially:

- Improve sustainable development or accessibility in Musselburgh;
- Reduce or increase overall travel time.

5.8 Feasibility and Acceptability

Each option has been assessed for its feasibility against three simple criteria. These are whether the authority has:

- The executive powers under existing legislation to implement and enforce a measure. Alternatively, whether the authority has an existing mechanism to influence other agencies to implement a measure;
- Secured funding for the measure or a straightforward route for securing funding;
- Characterised the potential positive and negative impacts of the measure with sufficient evidence or confidence to make a decision to implement the measure.

Table 5.1 below sets out the criteria adopted for defining the option as being feasible over the short, medium or long term, or as being unfeasible. Each option is assessed against each criterion. The final feasibility timeframe is defined according to which of the three assessments results in the longest of the four possible terms (short, medium, long or unfeasible). For example, an option for which powers are clear and for which impacts are well characterised but for which funding will be difficult to obtain would be assessed as feasible over the long term.

Table 5.1 Feasibility criteria used for AQAP measures

Feasible in the:	Authority has the powers	Funding secured	Potential positive and negative impacts are well characterised
Short term (1-2 years)	Yes, clearly defined and already exercised	Yes, potentially straightforward	Yes
Medium term (3-6 years)	Yes, but novel or with an element of uncertainty	Yes, with forward planning	Not without further study
Long term (>6 years)	Highly uncertain	No or extremely difficult	Not without further study
Unfeasible	No	Will never attract funding	Hard to characterise and with high risks

In relation to the acceptability, a preliminary judgement is expressed on how acceptable each option might be to stakeholders according to the following criteria:

- The option is considered potentially acceptable if: the option is unlikely to compel people to change behaviour or increase their costs significantly or at least some level of behaviour-change or personal costs are required but the scheme is overall consistent with community policies;
- The option is considered potentially unacceptable if: unacceptably intrusive changes in behaviour or large personal costs would be incurred.

Final judgements on acceptability will necessarily rest with the elected Council members.
A summary of the results of the assessment is presented in Table 5.2 below. In addition, a summary of the progress so far on the corresponding measures are provided in Table 5.3. This Table can be updated an included within the air quality Annual Progress report, as required.

Table 5.2 Summary of Proposed Measures and Timeframes

Measure Title	Potential Air Quality Impact	Estimated Costs	Cost Effectiveness	Potential Co-environmental Impacts	Risk Factors	Potential Social Impacts	Potential Economic Impacts	Lead Authority	Feasibility/ Acceptability
Strategic Measures									
Improving links with Local Transport Strategy	M-L	L	Medium-High	GHG - positive Other AQ pollutants – positive	Care to avoid relocating pollution	None Identified	May influence development and associated aims	ELC Road Services and Environmental Health	Short-term/ acceptable
Improving links with Local Development Plan	M-L	L	Medium-High	GHG - positive Other AQ - positive	Care to avoid relocating pollution	None Identified	May influence development and associated aims	ELC Development, Planning and Policy and Environmental Health	Medium-term/ acceptable
Measures aimed at optimising how road traffic sources transit AQMA									
Bus stop relocations on High St, Musselburgh	S	L	Medium	Other AQ – positive	Relocate a proportion of emissions.	Improved road safety.	None identified	ELC Road Services	Short-term/ acceptable
Enforcement of idling provisions of The Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003	S	M	Medium	GHG - positive Other AQ - positive	None identified	Improved road safety.	None identified	ELC Road Services	Short-term/ acceptable
SCOOT - Split Cycle Offset Optimisation Technique	M	L	Medium	GHG - positive Other AQ - positive	Relocate a proportion of emissions.	Improved road safety.	None identified.	ELC Road Services	Short-term/ acceptable

Reduce the emissions from sources by technical means									
Electrification of Lothian Buses in Musselburgh	To be confirmed from dispersion modelling	H	TBC	GHG - positive Other AQ - positive	None identified.	Noise	None identified.	ELC Road Services	TBC
Eco Stars	M	L	Medium	GHG - positive Other AQ - positive	None identified.	Noise	Savings on running fleet due to increased fuel economy or change in fuel (e.g. electric)	ELC Environmental Health	Short-term/ acceptable
Reduce the emissions from sources by means of encouraging better travel choices/ behavioural change									
Longer Trains and Platforms at Musselburgh Rail Station	To be confirmed from dispersion modelling	H	TBC	GHG - positive Other AQ - positive	None identified.	Improved road safety.	None identified	ELC Road Services, Development, Planning and Policy, and Environmental Health	TBC and dependent on outcome of feasibility studies
AQMA Signage	S	L	Medium	GHG - positive Other AQ - positive	None identified.	None identified.	None identified.	ELC Road Services, Environmental Health	Short-term/ acceptable
East Central Scotland Vehicle Emissions Partnership	S	N	Medium	GHG - positive Other AQ - positive	None identified.	Noise	Fuel saving	ELC Environmental Health / East Central Scotland Vehicle Emissions Partnership	Short-term/ acceptable

Provision of information regarding air quality and travel options	S	N	Medium	GHG - positive Other AQ - positive	None identified.	None identified.	None identified.	ELC Environmental Health / Road Services	Short-term/ acceptable
Promotion of alternative modes (cycling + walking)	S	N	Medium	GHG - positive Other AQ - positive	Potential road safety issues.	Improved fitness	Potential benefits	ELC Road Services	Short-term/ acceptable
Green Travel Plans for large institutions and businesses.	M	M	Medium	GHG - positive Other AQ – positive Noise - positive	None identified	Health benefits	Potential financial benefits to employees	ELC Road Services	Short-term/ acceptable

Table 5.3 Progress on Measures to Improve Air Quality

Meas. 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	Policy Guidance and Development Control	East Lothian Council are in process of finalising the latest Local Transport Strategy (LTS). A key aim of the Strategy is to reduce the overall dependence on the car and the environmental impact of traffic.	ELC Road Services	Ongoing	Ongoing	Reference to the importance of air quality defined within the LTS	n/a		2017	
2	Improving links with Local Development Plan	Policy Guidance and Development Control	East Lothian Council are in process of finalising the latest Local Development Plan (LDP). The LDP will seek to	ELC Development Management	Ongoing	Ongoing	Reference to the importance of air quality defined within the LDP	n/a		2017	Where development of sites identified in the LDP indicates impacts on air quality,

Meas. 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
			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.								developers may be required to put in place mitigation measures to off-set these impacts from the development.
3	Bus stop relocations on High St, Musselburgh	Transport planning and infrastructure	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.	ELC Road Services/	Complete	Ongoing	Annual mean NO_2 concentrations.	21% NO_2	To be completed.	2017	

Meas. 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
			Modelling of traffic related mitigation measures to be carried out to identify those measures to be included within the Action Plan. Implementation of measures that modelling has confirmed for inclusion in the Action Plan.								
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 and other busy town centres within the County.	ELC Road Services	Ongoing		Number of fixed penalties/ warnings issued.		Parking attendants have been employed Winter 2016/Spring 2017	Summer 2017	It is intended to educate motorists and make them aware of idling impacts on the local environment. Fixed penalties will assist to enforce message and to deter idling.
7	SCOOT - Split Cycle Offset Optimisation Technique	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	ELC Road Services	Complete	2013	Annual mean NO_2 concentrations within AQMA.		Ongoing	Ongoing	The use of SCOOT can reasonably be expected to achieve savings in delay of 20% or more with associated reductions in emissions

Meas. 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
			120 seconds and although monitored by East Lothian Council is controlled by the City of Edinburgh Council through their Traffic Control Room.								within the AQMA.
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 Road Services	Ongoing	TBC	Installation of electric charge points and number of electric buses passing through AQMA.			2017	
6	Eco Stars	Vehicle Fleet Efficiency	East Lothian Council have secured funding from the Scottish Government and are in process of establishing 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	ELC Environmental Health	Complete	June – September 2016	Number of operators signed up to the scheme.			Launched Feb 2017	Currently being established with assistance from Transport and Travel Research (Scotland) Ltd and it is hoped to officially launch the scheme in October 2016.

Meas. 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
			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.								
8	Longer Trains and Platforms at Musselburgh Rail Station	Transport planning and infrastructure	Increase capacity of trains at Musselburgh train station to encourage people to use public transport.	ELC Road Services			Number of people using service.			TBC and dependent on outcome of feasibility studies	
9	AQMA Signage	Public Information	In order to raise the awareness of the AQMA, the Council will consider erecting signs at various locations within Musselburgh Town Centre to alert drivers to the presence of the AQMA and encouraging behavioural change e.g. reduce vehicle idling.	ELC Environmental Health / Road Services			Installation of signs within AQMA.			2017	

Meas. 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	East Central Scotland Vehicle Emissions Partnership	Public Information	East Lothian Council work in partnership with Midlothian, West Lothian and Falkirk Councils to provide a voluntary Vehicle Emissions Testing Programme aimed at raising awareness of vehicle emissions and impacts on air quality amongst the general public.	ELC Environmental Health / East Central Scotland Vehicle Emissions Partnership at West Lothian Council	Complete	2003	Number of vehicles tested.		Ongoing	Ongoing	
13	Provision of information regarding air quality and travel options	Public Information	Raising awareness of air quality within the Musselburgh area and the actions the general public can take to improve air quality.	ELC Environmental Health/ Road Services	Complete	Ongoing				Ongoing	
	Promotion of alternative modes (cycling + walking)	Promoting Travel Alternatives	Promoting cycling and walking represents a key objective of East Lothian Council's Local Transport Strategy. East Lothian Council aims to encourage members of the public to consider walking or cycling instead of using their car, and as a consequence, promote healthy	ELC Road Services	Ongoing	Ongoing	Number of people using alternative modes of transport.			Ongoing	

Meas. 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
			lifestyle choices and environmental improvement by3reducing the number of cars on the road.								
11	Green Travel Plans for large institutions and businesses.	Promoting Travel Alternatives	Travel plans aim to address the negative impacts of car travel, notably single occupancy vehicles, by encouraging car sharing, or a shift to more sustainable forms of transport, such as walking, cycling and public transport; or reducing the need for travel.	ELC Road Services			Number of institutions/ businesses with a Travel Plan.			2017	

6 Action Plan

East Lothian Council has already introduced several measures that will contribute to improving air quality within the Musselburgh High St AQMA in future years. They are now seeking to implement further measures to bring about a greater improvement in local air quality and make progress towards meeting all of the respective national air quality strategy objectives. This Chapter presents the measures that have been identified as being the most appropriate in addressing the local air quality problem identified within the Musselburgh High AQMA and therefore the priority measures for inclusion within the Action Plan.

The measures identified via assessment as priorities and therefore included within the Action Plan can be understood as comprising two lists:

1. Strategic measures aimed at integrating air quality into all relevant areas of decision making within East Lothian Council.
2. Specific measures aimed at reducing congestion within the Musselburgh High St AQMA, reducing emissions from principal sources, promoting greater awareness of local air quality and encouraging more sustainable travel choices within East Lothian in general.

6.1 Prioritisation of Measures

Based on the assessment undertaken for each measure, a prioritised list of measures has been produced. It is potentially complex to decide on priorities from such a wide range of criteria. However, for the purpose of the AQAP we have put particular weight on those measures which provide good potential AQ benefits (with appropriate consideration of cost-effectiveness and the wider environmental benefits or risks). Due to their overarching nature, it is anticipated that the strategic measures will provide some of the frameworks by which measures 4-13 will be successfully implemented. Therefore, they are not assessed in the same way and are regarded as overall priorities for implementation.

To enable the prioritisation of measures, the score (0-3) assigned to the air quality impact has been multiplied by the score assigned to the anticipated cost implications (0-5). This approach provides a basic cost-effectiveness analysis which together with consideration of other factors and timescales has enabled the prioritisation of the measure included within the plan. This has identified the following ranking of measures (Table 6.1):

Table 6.1 Prioritisation of Musselburgh High St AQAP Measures

Priority	Measure No	Measure	Timescale
		Strategic Measures	
A	1	Improving links with Local Transport Strategy	Ongoing
B	2	Improving links with Local Development Plan	Ongoing
		Direct Measures	
C	9	AQMA Signage	Short Term
D	4	Enforcement of idling provisions of The Road Traffic (Vehicle Emission) (Fixed Penalty) (Scotland) Regulations 2003	Short Term
E	6	Eco Stars	Short-Medium Term
F	10	East Central Scotland Vehicle Emissions Partnership	Ongoing

Priority	Measure No	Measure	Timescale
G	13	Provision of information regarding air quality and travel options	Ongoing
H	12	Promotion of alternative modes (cycling + walking)	Ongoing
I	11	Green Travel Plans for large institutions and businesses.	Short-Medium Term
J	7	SCOOT - Split Cycle Offset Optimisation Technique	Ongoing
K	3	Bus stop relocations on High St, Musselburgh	Short-Medium Term
L	8	Larger Trains and Platforms at Musselburgh Rail Station	Short-Medium Term
M	5	Electrification of Lothian Buses in Musselburgh	Short-Medium Term

Further feasibility studies are also being carried out for a number of traffic management schemes in the Musselburgh Area (Section 4.2.2.1). The studies consist of both traffic modelling and air dispersion modelling which will help inform which schemes to adopt. Further consultation will also be carried out on any proposed measures, in addition to those measures defined within this AQAP.

6.2 Funding Implementation of the Action Plan

The capacity to successfully implement an Air Quality Action Plan is heavily dependent upon obtaining adequate funding and resources to deliver the proposed measures. Many of the measures included within the plan are already supported through existing strategies (e.g. local transport strategy) but may require some additional funding to facilitate modification in line with the requirements of this action plan. For other measures, other sources of funding will require to be secured. Other potential sources of funding include:

- Scottish Government Air Quality Funding;
- Transport Scotland;
- Transport Fund;
- Developer contributions.

The availability of such funding is likely to determine the progress of the Action Plan.

The action plan will have to be approved by East Lothian Council and by the Scottish Government before it can become a fully adopted plan. Once it has been adopted, East Lothian Council will collaborate with relevant stakeholders regarding the implementation of identified measures and monitor the progress of their implementation. This information will be reported annually to the Scottish Government and SEPA in the statutory progress report.

Throughout the period that the plan is implemented East Lothian Council will:

- Continue to monitor and review air quality to assess whether the AQMA should be revised or revoked;
- Include details of progress within the air quality Annual Progress Report that sets out new information on air quality in East Lothian, which will also report on progress made with implementing the action plan;

- Continue to work closely with other stakeholders and partner organisations in implementing the action plan measures and in assessing whether the plan needs to be revised in the light of the findings from air quality review and assessments.

6.3 The Musselburgh High St AQAP and CAFS

Policy Guidance LAQM.PG(S) (16) was published by the Scottish Government in March 2016 and provides statutory guidance on the development of air quality action plans. As a minimum, the AQAP is expected to include an explanation of how the action plan will help to deliver the aims and objectives of Cleaner Air for Scotland Strategy (CAFS). Table 6.2 details the relevant AQAP measures that are likely to have a positive impact on the six main CAFS objectives.

Table 6.2 Musselburgh High St AQAP measures relevant to CAFS

CAFS Objectives	Relevant AQAP Measures
Transport: promoting active travel and reduced emission technologies	1, 4, 5, 6, 8, 9
Legislation and Policy: all EU and Scottish legal requirements achieved for air quality.	All measures
Communication: a Scotland where all citizens are well informed and engaged	3, 7, 8, 9
Health: protect citizens from harmful effects of air pollution.	All measures
Placemaking: air quality not to be compromised by new or existing developments.	1, 2
Climate Change: reduction in greenhouse gas emissions.	All measures

Appendices

Appendix 1: Musselburgh High St AQMA Order

Appendix 2: Public Consultation Responses

A.1 Musselburgh High St AQMA Order

ENVIRONMENT ACT 1995 PART IV SECTION 83 (1)

EAST LOTHIAN COUNCIL HIGH STREET, MUSSELBURGH (AIR QUALITY MANAGEMENT ORDER 2013)

East Lothian Council hereby gives notice that on the 13th day of November 2013, in exercise of the powers conferred upon it by Section 83 (1) of the Environment Act 1995, the Council resolved that an area incorporating High Street, Musselburgh (A199) from its junction with Newbigging and extending westwards to the junction with Bridge Street and Mall Avenue is designated as an Air Quality Management Area. The Order shall remain in force until it is varied or revoked by a subsequent order.

The area is designated in relation to breaches of the Nitrogen Dioxide annual main objective as specified in Air Quality (Scotland) Regulations 2000, as amended.

Copies of the Order and the map may be inspected at East Lothian local offices, John Muir House, Haddington, at The Brunton Hall, Ladywell Way, Musselburgh at Aldhammer House, High Street, Prestonpans, at The Bleachingfield Centre, Countess Crescent, Dunbar, at The George Johnstone Centre, Winton Way, Tranent, at The North Berwick Area Office, School Road, North Berwick and on the Council website http://www.eastlothian.gov.uk

MORAG FERGUSON
Corporate Legal Advisor

26th November 2013

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East Lothian Council

REPORT TO: Cabinet

MEETING DATE: 14 June 2016

BY: Depute Chief Executive (Partnerships and Community Services)

SUBJECT: Air Quality Management Area: Action Plan Update

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1 PURPOSE

1.1 This report informs Cabinet of the updated position of the development of an Action Plan, as required by the Environment Act 1995, with regards to the designated Air Quality Management Area (AQMA) of Musselburgh High Street.

2 RECOMMENDATIONS

2.1 Cabinet is asked to note the ongoing work that is being undertaken to develop the AQMA Action Plan in conjunction with road traffic modelling work that is being undertaken in relation to the Local Development Plan (LDP).

3 BACKGROUND

3.1 The Environment Act 1995 requires the UK Government and devolved administrations to publish a National Air Quality Strategy.

3.2 A set of air quality standards and objectives has been developed for several pollutants of concern for human health. Standards are concentrations of pollutants that are considered safe for humans and the environment. Objectives are derived from the standards and are a compromise between what is desirable purely on health grounds and what is practical in terms of feasibility and costs. Each objective has a date by when it must be achieved.

3.3 The objectives adopted in Scotland for the purpose of Local Air Quality Management are set out in the Air Quality (Scotland) Regulations 2000, the Air Quality (Scotland) Amendment Regulations 2002 and the Air Quality (Scotland) Amendment Regulations 2016. Similar targets are set

at EU level, where there are called limit or target values. These are set out in the European 2008 Ambient Air Quality Directive (2008/50/EC) and transposed into Scottish legislation by the Air Quality Standards (Scotland) Regulations 2010. It is the responsibility of EU Member States to achieve the limit and target values. A summary of the current UK Air Quality Objectives is provided in Appendix 1.

3.4 Since December 1997 each local authority in the UK has a statutory duty to review and assess air quality in their area on an annual basis.

3.5 Whenever it appears that one or more of the air quality objectives is unlikely to be met, the local authority concerned must declare an Air Quality Management Area (AQMA), covering the area of concern. The authority must then prepare and implement an Action Plan outlining how it intends to tackle the issues identified. The Plan will include timescales to indicate when the measures will be implemented.

3.6 The Environment Act 1995 does not prescribe any timescale for preparing an Action Plan but the Scottish Government expects Plans to be completed within 12-18 months following the designation of any AQMAs.

3.7 In March 2016, Scottish Government published revised Policy Guidance (PG(S)(16)) on Local Air Quality Management. The Scottish Government accepts that there will often be legitimate reasons for late submission of AQMA Action Plans. In such cases, a revised submission date can be agreed. Where no such contact is made (and in cases where the revised deadline is missed with no further contact) SEPA, with the support of the Scottish Government, is to introduce a new system of reminder and warning letters.

East Lothian Council Air Quality Management Area and Action Plan

3.8 The outcome of prescribed assessments and monitoring data in East Lothian indicate that the Objectives for all pollutants (particulates (PM_{10}), carbon monoxide, benzene, 1.3-butadiene, lead and sulphur dioxide), with the exception of nitrogen dioxide, are being met.

3.9 It was identified through passive diffusion tube monitoring, that in two sections of the High Street in Musselburgh, concentrations of nitrogen dioxide exceeded the respective annual mean air quality objectives. Results of diffusion tube monitoring along Musselburgh High street is shown in Appendix 2. The exceedences were consistent with emissions from local traffic congestion, with bus emissions arising from diesel fleet and particularly older fleet vehicles coupled with waiting and accelerating vehicles having significant impact.

3.10 In 2013 East Lothian Council designated and declared an Air Quality Management Area covering Musselburgh High Street, from its junction with Newbigging and extending westwards to the junction with Bridge Street, as illustrated in Appendix 3.

3.11 Following the declaration of the AQMA, East Lothian Council commissioned a Further Assessment of Air Quality in Musselburgh and this was completed in September 2014. This confirmed that the initial decision to declare an AQMA remained valid and more detailed information to contribute to the Action Plan was obtained.

3.12 East Lothian Council is required to prepare and publish an Action Plan focusing on effective, feasible, proportionate and quantifiable measures as the top priority in ensuring improvement in local air quality and future compliance with air quality objectives. Work remains ongoing to produce the Action Plan.

Development of the Action Plan

3.13 An Action Plan has to include quantification of the source contributions to allow measures to be effectively targeted; quantification of the expected impacts of the proposed measures and an indication if these measures will be sufficient. We must also ensure and evidence that all options have been considered on the grounds of cost effectiveness and feasibility.

3.14 It is important, that notwithstanding the current situation, the AQMA action plan must consider Local Development Plan (LDP) impact too. In order to effectively capture and assess the consequential impacts of housing and economic allocations on the AQMA, the Council must finalise technical work to assess the cumulative impacts of proposed growth and the impact of interventions designed to address transportation issues within the LDP itself. The traffic planning studies on impacts and interventions are forecasted for completion in July 2016.

3.15 Mitigation interventions identified as part of the technical transport work undertaken for the proposed plan will also be modelled by Scottish Government grant funded air quality consultants, Ricardo EE. This will identify the most effective collective measures for implementation and inclusion in the Action Plan.

Ongoing Monitoring

3.16 Ongoing studies confirm the exceedences of the annual mean nitrogen dioxide objective, where relevant exposure exists but that these levels are not rising.

3.17 The data from source apportionment studies provides statistics which identify and quantify extant sources of the specific air pollutant.

3.18 Data will be used to devise and deliver an effective policy and regulatory framework, with identified control strategies formulated from various mitigation scenarios, to reduce nitrogen dioxide levels in the AQMA to below Objective Levels.

Ongoing AQMA Positive Impact Work

3.19 Considerable work has been undertaken within the Council, in partnership with Scottish Government grant funded consultants, to address the air quality issue in Musselburgh High Street whilst awaiting the development of the LDP and the consequential modelling exercises.

3.20 A list of possible actions, ranging from strategic to practical measures has been devised for assessment of suitability and impact for inclusion in the Action Plan.

3.21 Sections 3.25 – 3.32 of this report outline practical initiatives currently in place and/or being developed within East Lothian Council that contribute to a positive impact on air quality and will constitute fundamental components of the final Action Plan, in addition to the specific measures realised from modelling outcomes.

Scottish Government Acknowledgement & Grant Funding

3.22 On 4 April 2016 the Air Quality Policy Manager of the Scottish Government acknowledged a progress update provided by East Lothian Council into the delay of finalising an Action Plan based upon the LDP modelling outcomes.

3.23 A submission date of 31 October 2016 has been set and agreed with Scottish Government for the Action Plan in recognition of the outstanding modelling work to be undertaken in relation to the LDP and associated development impact, together with a stakeholder consultation period that will follow on from the submission date.

3.24 On 23 May 2016 East Lothian Council was notified by the Air Quality Policy Manager of the Scottish Government of successful grant funding applications with regards to Local Air Quality Management (£10,000) and for Air Quality Management Area work (£21,000) in 2016-17.

Vehicle Emissions Partnership

3.25 Since 2003, East Lothian, Falkirk, Midlothian and West Lothian Councils have worked in partnership to provide a voluntary Vehicle Emission Testing Programme, aimed at raising awareness of vehicle emissions and air quality among the general public. The East Central Scotland Vehicle Emissions Partnership provides a service between March and October at sites in Musselburgh, Haddington and Dunbar. Last year, there were 36 full days of free emissions testing within East Lothian.

3.26 Together with the educational element to emissions, air quality and idling, this proactive programme helps East Lothian residents ensure that their cars will pass the MOT emissions test and be road legal. As opposed to serving Fixed Penalty Notices, the Partnership has been sending, where appropriate, advisory letters based on reports from members of the public who identify vehicles which are excessively smoky and also stationary vehicles which idle their engines for long periods.

3.27 Greater signposting and profile to the Vehicle Emissions Partnership has commenced, particularly within the Musselburgh area, for the coming year to enhance awareness of emissions from vehicles. An enforcement strategy for idling offences is currently being explored.

ECO Stars Fleet Recognition Scheme

3.28 The ECO Stars Fleet Recognition Scheme aims to help fleet operators improve efficiency, reduce fuel consumption and emissions and make cost savings.

3.29 The scheme provides recognition for best operational practices, and guidance for making improvements. The ultimate aim is to reduce fuel consumption which naturally leads to fewer vehicle emissions and has the added benefit of saving money.

3.30 The Council's own fleet, together with commercial transport companies will be encouraged to engage with the scheme which will have a positive impact on emissions throughout the area, with particular attention specifically targeting Musselburgh High Street.

3.31 The Environmental Health Service has been successful in applying to the Scottish Government for grant funding to initiate the Scheme within the East Lothian Council area from 2016/17.

Cleaner Vehicles

3.32 The Council's own fleet, as well as transport companies, particularly bus operators, contribute to improvements continually with newer, cleaner vehicles being programmed for phased commission and novel methods of reducing emissions being implemented, which will include the electrification of Lothian Buses travelling through Musselburgh High Street.

4 POLICY IMPLICATIONS

4.1 There is a direct correlation between the work being undertaken on air quality management and the development of the proposed LDP particularly in regard to traffic modelling and traffic flow interventions in the context of housing and economic land allocations.

5 INTEGRATED IMPACT ASSESSMENT

5.1 The update position of this report does not affect the wellbeing of the community or have a significant impact on equality, the environment or economy although the development of an Air Quality Action Plan may require more detailed consideration of the integrated impact assessment process.

6 RESOURCE IMPLICATIONS

6.1 Financial – there are no direct financial implications related to this report, although development and consultation on an Air Quality Action Plan will incur some administrative costs. These costs will be assessed during preparation of the Air Quality Action Plan and a further report submitted if necessary. Scottish Government grant funding has been awarded for financial year 2016/17 to assist the Council with the development and implementation of its Air Quality Action Plan and initiation of the ECO Stars Fleet Recognition Scheme. Further funding may be available for future financial years

6.2 Personnel – there will be no immediate impacts upon personnel resources as a consequence of this report.

6.3 Other – none

7 BACKGROUND PAPERS

7.1 Cabinet Report – Local Air Quality Management – Air Quality Management Area (AQMA) in Musselburgh: Update (October 2014)

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DATE	30th May 2016

APPENDIX 1

SUMMARY OF OBJECTIVES OF THE NATIONAL AIR QUALITY STRATEGY

Pollutant	Air Quality Objective		To be achieved by
	Concentration	Measured as	
Benzene			
All UK authorities	16.25 µg m^{-3}	Running annual mean	31 December 2003
Authorities in Scotland and N. Ireland	3.25 µg m^{-3}	Running annual mean	31 December 2010
1,3-Butadiene	2.25 µg m^{-3}	Running annual mean	31 December 2003
Carbon Monoxide			
Authorities in Scotland Only	10.0 mg m^{-3}	Running 8-hour mean	31 December 2003
Lead	0.5 µg m^{-3}	Annual mean	31 December 2004
	0.25 µg m^{-3}	Annual mean	31 December 2008
Nitrogen Dioxide	200 µg m^{-3} not to be exceeded more than 18 times a year	1-hour mean	31 December 2005
	40 µg m^{-3}	Annual mean	31 December 2005
Particles (PM10) (gravimetric)			
All authorities	50 µg m^{-3}, not to be exceeded more than 35 times a year	24 Hour mean	31 December 2004
	40 µg m^{-3}	Annual mean	31 December 2004
Scotland Only	50 µg m^{-3}, not to be exceeded more than 7 times a year	24 Hour mean	31 December 2010
	18 µg m^{-3}	Annual mean	31 December 2010
Particles (PM2.5) (gravimetric) *	25 µg m^{-3} (target)	Annual mean	2020
All UK authorities	15% cut in urban background exposure	Annual mean	2010 - 2020
Authorities in Scotland Only	10 µg m^{-3} (limit)	Annual mean	2020
Sulphur dioxide	350 µg m^{-3}, not to be exceeded more than 24 times a year	1-hour mean	31 December 2004
	125 µg m^{-3}, not to be exceeded more than 3 times a year	24-hour mean	31 December 2004
	266 µg m^{-3}, not to be exceeded more than 35 times a year	15-minute mean	31 December 2005

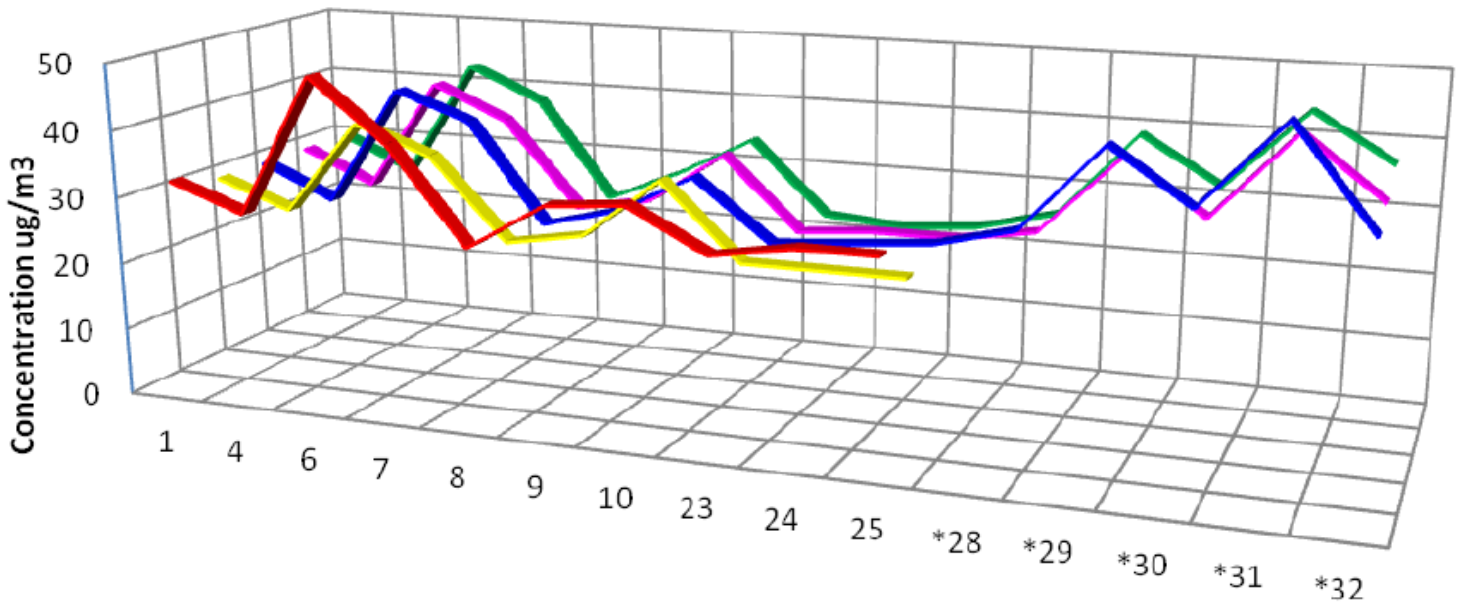
APPENDIX 2

RESULTS & TRENDS OF NITROGEN DIOXIDE DIFFUSION TUBE MONITORING

Table 2.6 Results of NO_2 Diffusion Tubes (2010 to 2014)

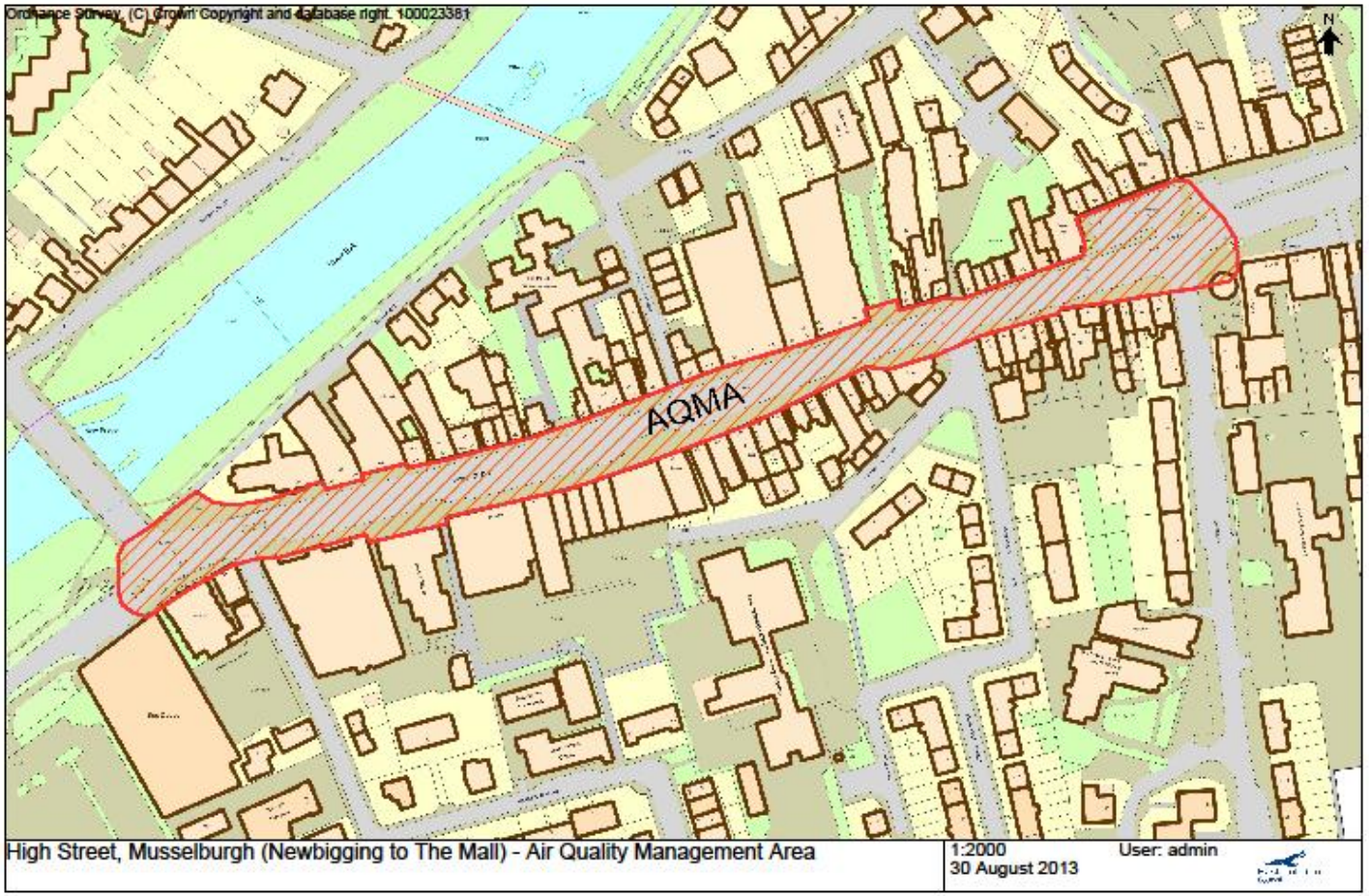
Site ID	Location	Site Type	Within AQMA?	Annual Mean Concentration (µg/m³) - Adjusted for Bias [a]				
				2010 (Bias Adjustment Factor = 0.97)	2011 (Bias Adjustment Factor = 0.8)	2012 (Bias Adjustment Factor = 0.8)	2013 (Bias Adjustment Factor = 0.8)	2014 (Bias Adjustment Factor = 0.86)
1	Musselburgh – Newbigging Junction	Roadside	Y	32	30	30	30	30
4	Musselburgh - 87 High St	Roadside	Y	28	26	25	25	25
6	**Musselburgh – 147 High Street**	**Roadside**	**Y**	**49**	**40**	**43**	**42**	**43**
7	Musselburgh – 183 High St	Roadside	Y	**40**	36	39	37	38
8	Musselburgh - Mall Av	Roadside	N	26	24	24	24	23
9	Musselburgh – 45 Bridge Street	Roadside	N	33	26	27	26	28
10	Musselburgh – 150 North High St	Roadside	N	34	35	33	34	34
11	Tranent – 89 High St	Roadside	N	33	22	30	32	33
12	Tranent – 82 High St	Roadside	N	32	24	28	28	25
13	Tranent – 55 High Street	Roadside	N	34	29	28	28	29
14	Tranent – 26 High St	Roadside	N	33	33	26	24	24
15	Tranent – 58 Bridge St	Roadside	N	27	19	19	19	17
16	Haddington - Lyn Lea	Urban	N	11	12	8	8	8
23	Musselburgh - 133 N High St	Roadside	N	28	24	24	23	23
24	Musselburgh - 133 N High St	Roadside	N	30	24	25	24	22
25	Musselburgh - 133 N High St	Roadside	N	30	24	26	24	23
26	Wallyford - 116 Salters Rd	Roadside	N	31	26	23	23	24
27	Wallyford - 71 Salters Rd	Roadside	N	28	20	23	24	22
*28	Musselburgh - 15 Bridge Street	Roadside	N	N/A	N/A	29	26	26
*29	Musselburgh - 167 High Street	Roadside	Y	N/A	N/A	**42**	38	39
*30	Musselburgh - 137 High Street	Roadside	Y	N/A	N/A	34	30	32
*31	**Musselburgh - 69 High Street**	**Roadside**	**Y**	N/A	N/A	**47**	**43**	**44**
*32	Musselburgh - 86 High Street	Roadside	Y	N/A	N/A	32	34	37

Figure 2.6 Trends in Annual Mean Nitrogen Dioxide Concentrations measured at Diffusion Tube Monitoring Sites in Musselburgh 2010-2014



	1	4	6	7	8	9	10	23	24	25	*28	*29	*30	*31	*32
2010	32	28	49	40	26	33	34	28	30	30					
2011	30	26	40	36	24	26	35	24	24	24					
2012	30	25	43	39	24	27	33	24	25	26	29	42	34	47	32
2013	30	25	42	37	24	26	34	23	24	24	26	38	30	43	34
2014	30	25	43	38	23	28	34	23	22	23	26	39	32	44	37

APPENDIX 3
EXISTING AIR QUALITY MANAGEMENT AREA, HIGH STREET, MUSSELBURGH



East Lothian Council

REPORT TO: Cabinet

MEETING DATE: 21 October 2014

BY: Depute Chief Executive (Partnerships and Community Services)

SUBJECT: Local Air Quality Management – Air Quality Management Area (AQMA) in Musselburgh: Update

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1. PURPOSE

1.1. This report informs Cabinet of the outcomes of a Further Assessment of local air quality in Musselburgh in fulfilment of the Council's obligations under Section 84(2)(a) of the Environment Act 1995, the UK National Air Quality Strategy and Scottish Air Quality Regulations.

1.2. The report seeks approval to progress the development of an Air Quality Action Plan required by section 84(2)(b) of the Environment Act 1995 to work towards compliance with air quality objectives and relevant Regulations.

2. RECOMMENDATIONS

2.1. It is recommended that Cabinet:

a) Note the conclusions of the 2014 Further Assessment and 2014 Air Quality Progress Report;

b) Acknowledge that further actions through developing an Air Quality Action Plan are required in order that air quality objectives are achieved in Musselburgh; and

c) Acknowledge that Environmental Protection will liaise with colleagues in Transportation to develop options that will be considered for inclusion within the Air Quality Action Plan, with a further report being submitted for consideration by Cabinet in 2015.

3. BACKGROUND

3.1 Legislation

3.1.1 Part IV of the Environment Act 1995 requires the UK Government and devolved administrations to publish a National Air Quality Strategy. The air quality objectives in Scotland are set out in the Air Quality (Scotland) Regulations 2000 and the Air Quality (Scotland) (Amendment) Regulations 2002. These objectives provide the statutory basis for the system of Local Air Quality Management (LAQM) to protect public health.

3.1.2 The regulations define air quality standards for a number of pollutants: lead; benzene; 1,3 butadiene; carbon monoxide, sulphur dioxide; nitrogen dioxide and small particulate matter (PM_{10}). These pollutants are primarily related to thermal combustion processes including road traffic emissions.

3.1.3 Section 82 of the 1995 Act places an obligation on all local authorities to regularly review and assess air quality in their areas and to consider the current and likely future air quality in their areas. Under the LAQM process local authorities also have a duty to continue to work towards meeting the objectives beyond the deadlines set out in the regulations. This review and assessment work is reported to Scottish Government & the Scottish Environment Protection Agency (SEPA) annually.

3.1.4 Where exceedences are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) through issuing a formal order and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. In November 2013, East Lothian Council declared an Air Quality Management Area (AQMA) in Musselburgh in relation to breaches and likely breaches of the nitrogen dioxide annual mean air quality objective. The extent of the AQMA covers High Street, Musselburgh from the junction with Newbigging to the junction at Bridge Street as delineated on the map shown in Appendix 1.

3.1.5 Currently there are 34 AQMAs in Scotland within 14 local authority areas, with the vast majority of these having been declared for transport related emissions of nitrogen dioxide and/or particles (PM_{10}). The actions outlined in the Air Quality Action Plans vary for each authority, depending on the local air quality issues and the air quality objectives exceeded. AQMA's can be revoked at a future time if air quality within an AQMA is brought back within the air quality objective limits.

3.2 Assessment of Air Quality in East Lothian

3.2.1 The Council has been annually reviewing and assessing local air quality since 2003. The majority of pollutants (benzene, 1,3-butadiene, carbon monoxide, sulphur dioxide and lead) have been screened out in previous assessments and exceedences of air quality objectives for these pollutants across East Lothian are not considered likely.

3.2.2 The pollutants of greatest concern are particulate material (PM_{10}) and nitrogen dioxide (NO_2), principally from road traffic sources. For both of these pollutants air quality objectives are unlikely to be exceeded outwith the existing AQMA. PM_{10} levels are not considered likely to breach the air quality objectives at this time but monitoring continues in Musselburgh.

3.2.3 The main issue relates to nitrogen dioxide (NO_2). In June 2012, the air quality Detailed Assessment for Musselburgh was completed. It concluded that the highest annual average NO_2 concentrations, using monitoring data from 2011 and also computer modelling, were predicted at receptors located on High Street and Bridge Street close to bus stops and that the majority of the predicted annual mean exceedences were marginal.

3.2.4 Additional monitoring of NO_2 levels took place in 2012-13 to verify the computer modelling. The results have confirmed that parts of the High Street are exceeding the nitrogen dioxide annual mean objective, which is a measure of longer term exposure. The 1-hour mean objective for NO_2 (a measure of short term exposure) is unlikely to be breached.

3.2.5 Monitoring of NO_2 outwith the Musselburgh AQMA does not indicate any exceedence of the air quality objectives at this time, however monitoring of NO_2 levels will continue at locations both within and outwith the AQMA.

3.3 Air Quality and Transportation

3.3.1 Town centre improvement works are currently ongoing and due for completion late November 2014. Included within this work is the upgrading of the traffic signals at the High Street / Newbigging junction and removal of the car park access arm from the junction. This will improve the operation and reduce the average cycle time under SCOOT (Split Cycle Offset Optimisation Technique) operation and reduce the overall delay to pedestrians by lowering the maximum waiting times.

3.3.2 Queue length reductions are expected to be achieved and the traffic modelling undertaken confirms this, however, in order to effectively measure this, a post installation survey will be carried out.

3.3.3 At this time, East Lothian Council has engaged a Transport Planning Consultant (SYSTRA) to enhance the SESTRAN Regional Saturn traffic model to provide increased detail within East Lothian. This exercise is running in conjunction with Transport Scotland – Cross Boundary modelling exercise to identify key strategic routes and junctions which will be placed under stress due to future demand.

3.3.4 A further contract will be let (mid November 2014) for a transport consultant to develop a more detailed traffic model of Musselburgh and the Tranent area based on the model currently being developed by SYSTRA, representative of the current traffic volumes, public transport

routes, travel patterns and behaviour so an accurate picture of traffic issues and problems can be understood.

3.3.5 The base model will then be used to test the effect of increased traffic volumes on the road network as a consequence of the current housing and business land allocations. The model will also be able to forecast future demands and examine potential solutions to achieve compliance with the annual mean nitrogen dioxide objective.

3.4 2013 Air Quality assessment report and next steps

3.4.1 The results of the 2013 and 2014 Air Quality Progress Reports, 2014 Further Assessment and monitoring data from 2012-13 indicate that the objectives for all other pollutants are being met across East Lothian. However, monitoring of nitrogen dioxide in Musselburgh continues to show concentrations at various locations in Musselburgh High Street have been exceeded, or are very close to, the annual mean objective. The results of automatic monitoring of PM_{10} confirm that both the annual and 24-hour mean objectives continue to be met in Musselburgh.

3.4.2 The Further Assessment in 2014 concluded that:

- Ambient NOx reductions of up to 27% are required within the AQMA to achieve compliance with the annual mean NO_2 Objective.
- Emissions from buses form the largest contribution of NOx emissions with 29% attributed to bus activity.
- Queuing traffic is more of an issue than numbers of moving vehicles.
- A 30% reduction or greater in queuing traffic is required to bring NO_2 levels to below or equal to the annual mean objective.
- An integrated package of interventions that reduce overall traffic, reduce queuing and reduce bus numbers will provide the best NOx reductions.
- The boundaries of the current AQMA do not require amendment or revocation at this time and were sufficient to include all relevant sources and receptors.

3.4.3 An Air Quality Action Plan has to be developed which must focus on effective, feasible, proportionate and quantifiable measures as the top priority in ensuring improvement in local air quality and future compliance with air quality objectives. These measures may be radical in nature if the Council is to meet the annual mean air quality objective for NO_2 in Musselburgh. The Air Quality Action Plan should include:

- quantification of the source contributions to allow measures to be effectively targeted
- evidence that all options have been considered on the grounds of cost effectiveness and feasibility
- how the local authority will use its powers and work with other

organisations in pursuit of air quality objectives
- clear timescales in which the authority and other organisations propose to implement the measures identified
- quantification of the expected impacts of the proposed measures and an indication if these measures will be sufficient
- how the local authority proposes to monitor and evaluate the effectiveness of the action plan

3.4.4 The 1995 Act does not specify any timescales for preparation of an Air Quality Action Plan but the Scottish Government would normally expect this to be completed within 12-18 months following AQMA declaration. Consultation should take place during the preparation of an Air Quality Action Plan to ensure consultees can make known their preliminary views about what the plan should include.

3.4.5 The types of measures that may feature in an Air Quality Action Plan are:

- Liaison with transport operators about vehicle emission levels in Musselburgh
- Reviewing traffic management arrangements in the town centre
- Measures to reduce engine idling
- Air quality monitoring
- In the longer term there may be considerations around roads infrastructure and public transport routes.

3.4.6 A further report will be prepared for Cabinet in 2015 detailing the measures to be considered for adoption within the proposed Air Quality Action Plan.

4. POLICY IMPLICATIONS

4.1. Assessment of local air quality is a statutory obligation on the Council.

4.2. Air quality is a key performance measure of East Lothian's environmental quality in the East Lothian Environment Strategy 2010-15 and in the East Lothian Single Outcome Agreement 2013

4.3. The existence of an Air Quality Management Area and the conclusions of the Further Assessment may have implications for development proposals in the Musselburgh area particularly any development which may generate significant additional traffic movement or involve thermal combustion processes.

4.4. Meeting air quality standards will have implications for traffic management through Musselburgh town centre.

5. EQUALITIES IMPACT ASSESSMENT

5.1. This report is not applicable to the well being of equality groups and an Equality Impact Assessment is not required although the development of an Air Quality Action Plan may require more detailed consideration of equalities related issues.

6. RESOURCE IMPLICATIONS

6.1. Financial - There are no direct financial implications related to this report, although development and consultation on an Air Quality Action Plan will incur some administrative costs. These costs will be assessed during preparation of the Air Quality Action Plan and a further report submitted if necessary. Scottish Government grant funding has been awarded for financial year 2014/15 to assist the Council with the development and implementation of its Air Quality Action Plan. Further funding may be available for future financial years.

6.2. Personnel - There will be no immediate impacts upon personnel resources as a consequence of this report

6.3. Other - None

7. BACKGROUND PAPERS

7.1. 2013 Air Quality Progress Report for East Lothian Council, August

7.2. 2014 Air Quality Further Assessment for Musselburgh, Ricardo-AEA for East Lothian Council, September 2014

7.3. 2014 Air Quality Progress Report for East Lothian Council, September 2014

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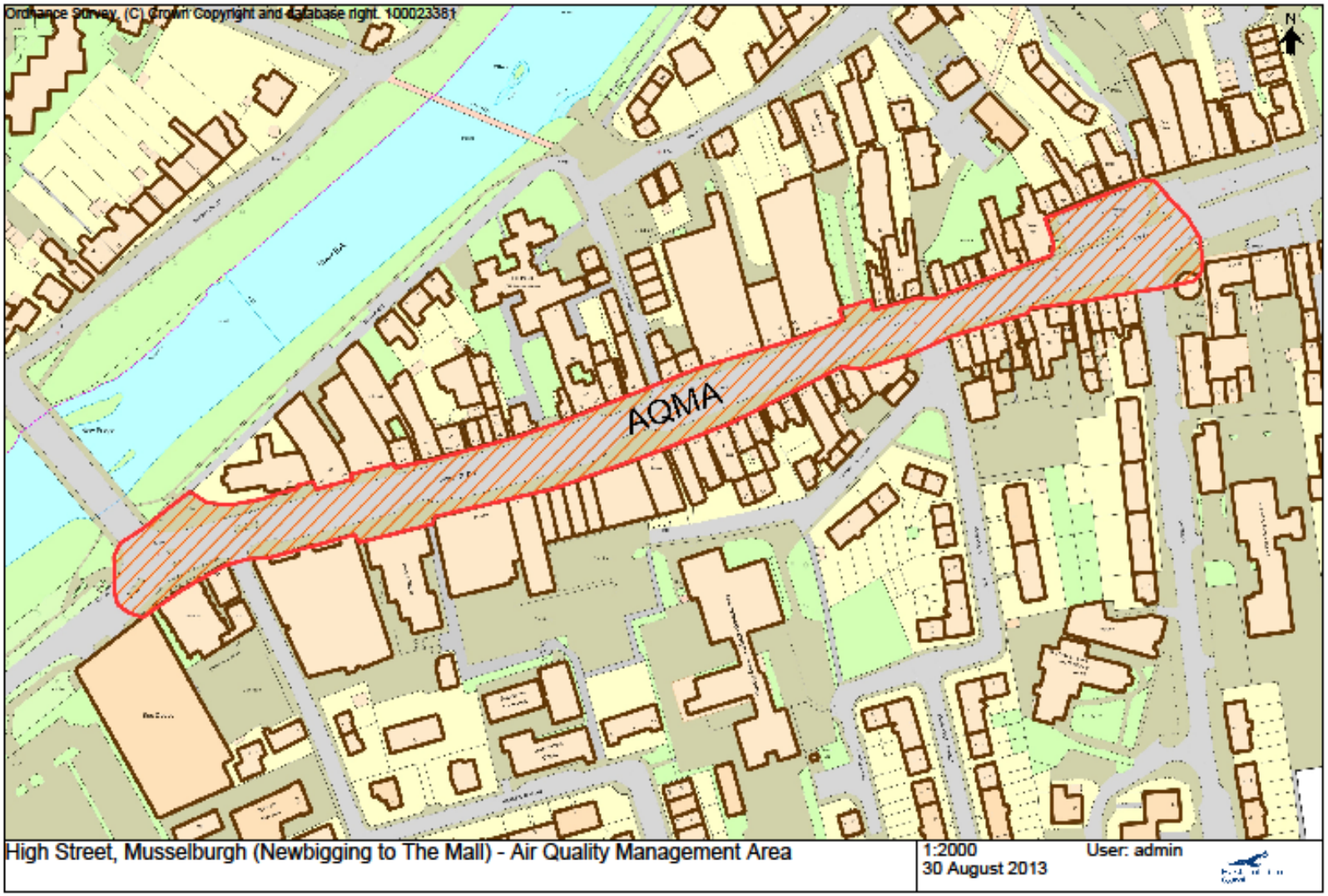
DATE	08th October 2014

APPENDIX 1:

EXISTING AIR QUALITY MANAGEMENT AREA, HIGH STREET, MUSSELBURGH



High Street, Musselburgh (Newbigging to The Mall) - Air Quality Management Area

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30 August 2013
User: admin