

2011 Air Quality Progress Report for East Lothian Council

In fulfillment of Part IV of the Environment Act 1995 Local Air Quality Management

June 2011



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Executive Summary

This report presents the results of the Progress Report of local air quality within the East Lothian Council area. The Progress Report represents the final step in the current round of the management of local air quality, as required by Part IV of the Environment Act, 1995.

Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the Local Air Quality Management process. Although not intended to be as detailed as the Updating and Screening Assessments, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority should undertake a Detailed Assessment immediately.

The results of the Progress Report indicate that current Air Quality Objectives continue to be met.

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1. Introduction

1.1 Description of Local Authority Area

East Lothian is approximately 270 square miles in area and has 43 miles of coastline (photograph 1). Our boundaries extend from Musselburgh, immediately east of Edinburgh's suburban edge, eastwards to Dunbar and beyond to the Scottish Borders. From the coastline of the Firth of Forth, an agricultural plain extends southwards to the Lammermuir hills.

Photograph 1 – Yellowcraigs Beach



The population of East Lothian is circa 94,000. More than half the population live in its western sector, the main towns being Musselburgh (approximate population 22,000), Prestonpans (7,000), Tranent (9,000) and Cockenzie/Port Seton (5,500). The principal towns in the east are Haddington (9,000), North Berwick (6,000) and Dunbar (7,000). Although Musselburgh is the largest town, Haddington is the administrative centre for East Lothian Council.

The major sources of pollutants within the County are road traffic (photograph 2) although potential industrial sources are the coal-fired Cockenzie Power Station, Cockenzie (photograph 3) and also Lafarge Cement Works, Dunbar (photograph 4).

Photograph 2 – Buses on Musselburgh High Street



Council Name – East Lothian



Photograph 3 – Cockenzie Power Station:

Photograph 4 – Lafarge Cement Works, Dunbar:



1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management (LAQM) process as set out in Part IV of the Environment Act (1995) (Ref 1), the Air Quality Strategy for England, Scotland, Wales

and Northern Ireland 2007 (Ref 2) and the relevant Technical Guidance documents (Ref 3). The LAQM process places an obligation on all local authorities to regularly review and assesses air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved.

Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the Local Air Quality Management process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM in Scotland are set out in the Air Quality (Scotland) Regulations 2000 (Scottish SI 2000 No 97) (Ref 4) and the Air Quality (Scotland) (Amendment) Regulations 2002 (Scottish SI 2002 No 297) (Ref 5), and are shown in Table 1.1. This table shows the objectives in units of micrograms per cubic metre, $\mu g/m^3$ (milligram's per cubic metre, $mg'm^3$ for carbon monoxide) with the number of exceedence's in each year that are permitted (where applicable).

Table 1.1	Air Quality Objectives included in Regulations for the purpose of
Local Air Qu	ality Management in Scotland.

Pollutant	Concentration	Measured as	Date to be achieved by
Benzene	16.25 μg/m ³	Running annual mean	31.12.2003
	3.25 <i>µ</i> g/m ³	Running annual mean	31.12.2010
1,3-Butadiene	2.25 <i>µ</i> g/m ³	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m ³	Running 8-hour mean	31.12.2003
Lead	0.5 μg/m ³	Annual mean	31.12.2004
	0.25 <i>µ</i> g/m ³	Annual mean	31.12.2008
Nitrogen dioxide	200 μ g/m ³ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 <i>µ</i> g/m ³	Annual mean	31.12.2005
Particles (PM ₁₀) (gravimetric)	50 μ g/m ³ , not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	50 μ g/m ³ , not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
	40 μg/m ³	Annual mean	31.12.2004
	18 <i>µ</i> g/m ³	Annual mean	31.12.2010
Sulphur dioxide	350 μ g/m ³ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 μ g/m ³ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 μ g/m ³ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

1.4 Summary of Previous Review and Assessments

During the second round of review and assessment (Refs 6, 7 and 8)), which was due to be completed by April 2005, Carbon Monoxide, Benzene, Lead and 1,3-Butadiene were identified as not being likely to exceed the relevant Air Quality Objectives. The third round of review and assessment (Refs 9, 10 and 11), which was due to be completed by April 2008, indicated that the relevant Air Quality Objectives for these pollutants continued to be met.

However, the second round of review and assessment (Refs 6, 7 and 8) did conclude that Nitrogen Dioxide and PM10 levels in Musselburgh, due to road traffic sources, and also Sulphur Dioxide levels in vicinity of Cockenzie Power Station, Cockenzie and Lafarge Cement Works, Dunbar would require to be subject of a Detailed Assessment. PM10 levels in vicinity of Cockenzie Power Station would also require Detailed Assessment.

The Detailed Assessment (Ref 7) and subsequent third round of review and assessment (Refs 9, 10 and 11) indicated that the relevant Air Quality Objectives for Nitrogen Dioxide levels in Musselburgh and throughout East Lothian continued to be met.

However, PM10 levels due to road traffic were forecast to exceed the annual mean objective for 2010 in Musselburgh, although these results were based on the application of correction factors and were obtained using Osiris light-scattering measurement equipment that has since been deemed as unsuitable for comparison against Objectives. The Osiris units were replaced with Tapered Element Oscillating Microbalance (TEOM) units in May 2005. The 2007 Progress Report (Ref 10) concluded, from results obtained using the TEOM unit, that the 24-hour mean Objective will be complied with. Furthermore, the Annual Mean Objective was being complied with using the local correction factor of 1.14. However, the Annual Mean was exceeded when the National correction factor of 1.3 was applied. Correspondence from the Scottish Executive (Ref 12) advised that where the predicted levels are below the Objective using the local correction factor but above the Objective when the National correction factor is applied, the local authority should carryout monitoring using a gravimetric sampler. East Lothian Council, however, did not feel that this approach could be justified at that time, especially having regard to the results of the Department for Environment Food and Rural Affairs (DEFRA) equivalence study (Ref 13) which concluded that TEOM units not fitted with Filter Dynamics Measurement Systems (FDMS) failed to meet equivalence criteria and, as such, cannot be considered equivalent to the European Reference method. As a consequence, in March 2008 East Lothian Council replaced the TEOM unit with a Beta Attenuation Monitor (BAM) unit, the results of which can be compared directly to the Objective levels as the BAM units met the equivalence criteria outlined by DEFRA.

The Detailed Assessment (Ref 7), and subsequent Updating and Screening Assessment (Ref 9) of PM10 levels in Cockenzie due to activities undertaken within the coal storage plant for Cockenzie Power Station concluded that the relevant Air Quality Objectives would be met by the target year.

The Detailed Assessment (Ref 7) of Sulphur Dioxide levels in vicinity of Cockenzie Power Station, Cockenzie concluded that there would be no exceedences of any Objectives, although the 15-minute mean in the vicinity of Lafarge Cement Work's, Dunbar was forecast to exceed the Objective. However the installation of abatement equipment and the subsequent reduction in Sulphur Dioxide emissions has been taken into account in the third round of Review and Assessment (Refs 9, 10 and 11) that concluded the relevant Air Quality Objectives would be met.

The current Round of Review and Assessment (Round 4) is due to be completed by April 2011. As with previous rounds of review and assessment, this round is also based on a phased approach. The first step of this round was the Updating and Screening Assessment (USA) (Ref 14), which was due to be completed by April 2009 and was subsequently completed in November 2009.

If sufficient risk is identified, then the local authority must complete a Detailed Assessment to provide an accurate estimate of the likelihood of an air quality objective being exceeded at the particular location with relevant public exposure. The results of the USA in 2009 (Ref 14) concluded that a Detailed Assessment of PM10 and Nitrogen Dioxide levels in Musselburgh was required due to the Biomass Combustion Plant located at the Queen Margaret University. This Detailed Assessment (Ref 15) was completed in October 2010 and concluded that the biomass emissions will not result in any exceedence of the relevant Air Quality Objectives and that the process contributions are typically a small percentage of the overall Air Quality Objectives.

The Progress Report completed in 2010 (Ref 16) concluded that all Air Quality Objectives continue to be met within East Lothian.

A summary of all previous Review and Assessment Reports is provided in Appendix 1.

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

Figure 2.1 Map(s) of Automatic Monitoring Sites

It was proposed following completion of the USA 2009 (Ref 14) that the NOx analyser that was previously located in Musselburgh High Street would be replaced with a new analyser to be located at Musselburgh North High Street, beside the existing BAM PM_{10} monitor. This work was completed in February 2010 providing a single air quality automatic monitoring station for Musselburgh that will provide the backbone of LAQM in future years in East Lothian. The current locations are shown in Figure 2.1.a below:



Figure 2.1.a - Current Locations of NOx Analyser and BAM (PM₁₀) Monitor in Musselburgh

Council Name - East Lothian

Date June 2011

Table 2.1 Details of Automatic Monitoring Sites

Site Name	Site Name Site Type OS Grid F		id Ref	Pollutants Monitored	Monitoring Technique	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant	Distance to kerb of nearest road	Does this location represent worst-case exposure?
		X	Y				exposure)		
Musselburgh North High Street - BAM	Roadside	333 941	672837	PM ₁₀	BAM	N	Y (5m)	3m	Y
Musselburgh North High Street - NOx	Roadside	333 941	672837	NOx	Gas-phase chemilluminescence detection	N	Y (5m)	3m	Y

2.1.2 Non-Automatic Monitoring Sites

Following on from the completion of the USA 2009 (Ref 14) NO_2 Diffusion Tube numbers 1, 4, 6, 7, 8, 9 and 10 would continue to be used to monitor NO_2 in Musselburgh. Three new tubes, numbered 23, 24 and 25 have been co-located with the new NOx Analyser beside the BAM unit at North High Street, Musselburgh. Two additional tubes, numbered 26 and 27 have also been introduced in the vicinity of Salters Road, Wallyford to monitor NO_2 in order to assess any potential impact that may arise as a consequence of the proposed Wallyford Expansion and the likely increase in Road Traffic along Salters Road. The existing locations of all diffusion tubes are shown in Figures 2.1.b – 2.1.e. below:

Figure 2.2 Maps of Non-Automatic Monitoring Sites



Figure 2.1.b - Current Locations of NO2 Diffusion Tubes in Musselburgh

Figure 2.1.c - Current Locations of NO2 Diffusion Tubes in Wallyford

Figure 2.1.d - Current Locations of NO2 Diffusion Tubes in Tranent

Figure 2.1.e - Current Locations of NO2 Diffusion Tubes in Haddington

Cito Nome	014 7 7 7 7 7	OS Grid Ref		Pollutants	In	Relevant Exposure? (Y/N with	Distance to kerb of nearest	Worst- case
Site Name	Site Type	х	Y	Monitored	AQMA ?	(m) to relevant exposure)	road (N/A if not applicable)	Location ?
1. M'Iburgh – Newbigging Junction	Roadside	334659	672720	NO ₂	N	Y (15m)	2m	Y
4. M'burgh - 87 High St	Roadside	334526	672700	NO ₂	N	Y (15m)	4m	Y
 6. M'burgh – 147 High Street 	Roadside	334392	672652	NO ₂	N	N 20m)	3m	Y
7. M'burgh – 183 High St	Roadside	334301	672632	NO ₂	N	N 20m)	3m	Y
8. M'burgh - Mall Av	Roadside	334172	672524	NO ₂	N	Y (25m)	4m	Y
 M'burgh – 45 Bridge Street 	Roadside	334105	672750	NO ₂	N	Y (3m)	4m	Y
10 M'burgh – 150 North High St	Roadside	333800	672822	NO ₂	N	Y (3m)	4m	Y
11. Tranent – 89 High St	Roadside	340686	672692	NO ₂	N	Y (3m)	3m	Y
12. Tranent – 82 High St	Roadside	370738	672687	NO ₂	N	Y (4m)	3m	Y
13. Tranent – 55 High Street	Roadside	340608	672738	NO ₂	N	Y (4m)	3m	Y
14. Tranent – 26 High St	Roadside	340570	672780	NO ₂	N	Y (2m)	2m	Y
15. Tranent – 58 Bridge St	Roadside	340112	672905	NO ₂	N	Y (5m)	2m	Y
16. Haddington - Lyn Lea	Urban Background	352249	673631	NO ₂	N	Y 8m)	3m	Y
23 – Co-located 133 N High St	Roadside	333941	672837	NO ₂	N	Y (5m)	3m	Y
24 – Co-located 133 N High St	Roadside	333941	672837	NO ₂	N	Y (5m)	3m	Y
25 – Co-located 133 N High St	Roadside	333941	672837	NO ₂	N	Y (5m)	3m	Y
26 – 116 Salters Rd	Roadside	336691	672055	NO ₂	N	Y (5m)	2m	Y
27 – 71 Salters Rd	Roadside	336769	672127	NO ₂	N	Y (5m)	2m	Y

Table 2.2Details of Non- Automatic Monitoring Sites for NO2

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide

Automatic Monitoring Data

Table 2.3a Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with Annual Mean Objective

Site ID	Location		Relevant	Data Capture	Data Capture for	Annual mean concentrations (μg/m³)			
		Within AQMA?	Relevant public exposure? Y/N	for monitoring period %	full calendar year 2010 %	2008	2009	2010	
	North High Street								
NOx	Musselburgh	N	Y	73.4	73.4	25.9	*NO DATA	29	

Following on from East Lothian Council's Progress Report in 2010 (Ref 16) and previous Review of Passive and Automatic Monitoring of Nitrogen Dioxide in East Lothian that was undertaken in 2009 (Ref 17) as described in Section 2.1.2 above, the monitoring data for nitrogen dioxide for 2009 is incomplete and, as such, there is insufficient data to report.

Table 2.3b Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1-hour Mean Objective

Site ID	Location	Within	Relevant	Data Capture for	Data Capture for full	Number of Exceedences of hourly mean (200 μg/m³)		
		AQMA?	exposure? Y/N	monitoring period ^a %	calendar year 2010 ^b %	2008 °	2009 °	2010
	North High Street							
NOx	Musselburgh	N	Y	73.4	73.4	0	*NO DATA	0

Following on from East Lothian Council's Progress Report in 2010 (Ref 16) and previous Review of Passive and Automatic Monitoring of Nitrogen Dioxide in East Lothian that was undertaken in 2009 (Ref 17) as described in Section 2.1.2 above, the monitoring data for nitrogen dioxide for 2009 is incomplete and, as such, there is insufficient data to report.

Diffusion Tube Monitoring Data

Table 2.4 Results of Nitrogen Dioxide Diffusion Tubes

		Relevant Data				Annual mean concentrations (µg/m³)		
Site ID	Location	Within AQMA?	public exposure? Y/N	Capture for monitoring period %	for full calendar year 2010 %	2008	2009	2010
1	Muss - Newbigging	Ν	Y (15m)	75	75	25	No Data	32
4	Muss - 87 High St	Ν	Y (15m)	75	75	35	No Data	28
6	Muss - 147 High St	Ν	N 20m)	83	83	42	No Data	49*
7	Muss - 183 High St	Ν	N 20m)	83	83	38	No Data	40*
8	Muss - Mall Av	Ν	Y (25m)	58	58	30	No Data	26
9	Muss - 45 Bridge St	Ν	Y (3m)	91	91	35	No Data	33
10	Muss - 150 North High St	N	Y (3m)	91	91	32	No Data	34
11	Tranent - 89 High St	Ν	Y (3m)	91	91	34	No Data	33
12	Tranent - 82 High St (Crolla's)	Ν	Y (4m)	91	91	33	No Data	32
13	Tranent - 55 High St	Ν	Y (4m)	83	83	31	No Data	34
14	Tranent - 26 High St (P.O)	Ν	Y (2m)	83	83	33	No Data	33
15	Tranent - 58 Bridge St	Ν	Y (5m)	91	91	24	No Data	27
16	Haddington - Lynn Lea	N	Y 8m)	91	91	9	No Data	11
23	Muss - Co-located 133 N High St	N	Y (5m)	66	66	No Data**	No Data	28
24	Muss - Co-located 133 N High St	N	Y (5m)	75	75	No Data**	No Data	30
25	Muss - Co-located 133 N High St	N	Y (5m)	75	75	No Data**	No Data	30
26	Wallyford - 116 Salters Rd	N	Y (5m)	83	83	No Data**	No Data	31
27	Wallyford - 71 Salters Rd	Ν	Y (5m)	83	83	No Data**	No Data	28

* No relevant exposure at this location

** New tubes introduced. No previous data to report prior to 2010

Diffusion Tube Bias Adjustment Factor

Three of the diffusion tubes are co-located with the continuous analyser on Musselburgh North High Street (Tube Numbers 23, 24 and 25). The bias adjustment factor has been calculated from the comparison of the diffusion tubes and continuous analyser measurements during 2010. The average for the co-located tubes was $30 \ \mu g/m^3$. The average for the continuous analyser was $29 \ \mu g/m^3$. This provided a diffusion tube bias adjustment factor is only specific to one location. Its use on diffusion tube data from other locations should therefore be treated with caution.

2.2.2 PM₁₀

Table 2.5a Results of PM_{10} Automatic Monitoring: Comparison with Annual Mean Objective

			Data	Data Capture	Annual m	nean concentrations (μg/m³)	
Site ID	Location	Within AQMA?	Capture for monitoring period %	for full calendar year 2010 %	2008	2009	2010
PM ₁₀	North High St Musselburgh	N	77.8	77.8	14	14	12

Table 2.5b Results of PM_{10} Automatic Monitoring: Comparison with 24-hour Mean Objective

Site ID	Location	Within AQMA?	Data Capture for monitoring period ^a	Data Capture 2010 ^b	Number of Exceedences of daily mean objective (50 μg/m ³)			
			%	70	2008 °	2009 °	2010 °	
PM ₁₀	North High St Musselburgh	Ν	77.8	77.8	0	2	0	

2.2.3 Sulphur Dioxide

East Lothian Council do not carry out any monitoring of sulphur dioxide.

2.2.4 Benzene

East Lothian Council do not carry out any monitoring of benzene.

2.2.5 Other pollutants monitored

East Lothian Council do not carry out monitoring of any other pollutants.

2.2.6 Summary of Compliance with AQS Objectives

East Lothian Council has examined the results from monitoring in the County. There are forecast exceedence's of the nitrogen dioxide annual mean objective in the vicinity of 147 High Street, Musselburgh. Accordingly, a Detailed Assessment of Nitrogen dioxide is required for High Street, Musselburgh. Concentrations for all other pollutants are below the objectives, therefore there is no need to proceed to a Detailed Assessment for any other pollutant.

3 New Local Developments

3.1 Road Traffic Sources

East Lothian Council can confirm that there are no new:

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

since the last Progress Report (Ref 16)

3.2 Other Transport Sources

East Lothian Council can confirm that there are no new:

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

since the last Progress Report (Ref 16)

3.3 Industrial Sources

East Lothian Council can confirm that there are no new:

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

since the last Progress Report (Ref 16).

3.4 Commercial and Domestic Sources

East Lothian Council can confirm that there are no new:

- Biomass combustion plant individual installations.
- Areas where the combined impact of several biomass combustion sources may be relevant.
- Areas where domestic solid fuel burning may be relevant.

since the last Progress Report (Ref 16).

3.5 New Developments with Fugitive or Uncontrolled Sources

East Lothian Council can confirm that there are no new:

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

since the last Progress Report (Ref 16).

East Lothian Council confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

East Lothian Council confirms that all the following have been considered -

- Road traffic sources
- Other transport sources
- Industrial sources
- Commercial and domestic sources
- New developments with fugitive or uncontrolled sources.

4 Planning Applications

4.1 Millerhill Zero Waste Facility

In April 2011 Zero Waste: Edinburgh and Midlothian lodged an application for planning permission in principle (Ref 18) with the neighbouring authority at Midlothian Council for the construction of a waste recycling and treatment facility including combined heat and power plant facility at a site at the former Millerhill Marshalling Yards, Millerhill, Midlothian. The proposed facility will be capable of accepting 230, 000 tonnes per annum of mainly, but not exclusively, Council collected municipal solid waste.

An Environmental Statement has been submitted as part of the application (Ref 19). This includes an assessment of the impacts of the proposal, both during the construction and operational phases of the development. Nearby sensitive receptors within East Lothian have been identified as being the Queen Margaret University campus and the small village of Old Craighall, Musselburgh.-

Pollutant Emissions generated during construction operations

Construction of the proposed development has the potential to impact on local air quality principally through the generation and deposition of dust. However, as sensitive receptors within East Lothian are in excess of 500m from the site boundary of the proposed site, the short term impacts on dust are classed to be of minor significance as these particles will tend to be deposited at distances less than this.

Possible impacts on air quality during the construction phase due to potential increased traffic have also been considered. However, changes in traffic volumes are less than 5% on any road and any impact on air quality is deemed to be insignificant.

Pollutant Emissions arising during Operation of the development

The results of detailed dispersion modelling carried out for when the proposed development is operational predict that the concentrations of all pollutants are within air quality objectives.

4.2 Proposed Mixed-use Development at former Blindwells Surface Mining Coal Mine site

In March 2011 the Scottish Resources Group lodged an application for Planning Permission in Principle for a mixed use development at the former Blindwells Open Cast Site, Tranent, East Lothian (Ref 20) comprising of 1600 houses, education, retail, employment, community uses, park and ride and associated open space and infrastructure. This application process involved the submission of an Environmental Statement (Ref 21) which included an assessment of potential impacts on Air Quality. The assessment concluded that the Air Quality Objectives will not be exceeded at any new sensitive receptor locations.

5 Air Quality Planning Policies

East Lothian Council do not have a general land use planning policy controlling the air quality impacts of development. However, the East Lothian Local Plan 2008, which was adopted in October 2008 (Ref 22), does contain various Policies under which Air Quality impacts are considered. The potential air quality effects of proposals for opencast coal extraction are recognised as one of a number of environmental considerations that must be addressed when considering such proposals and Council Policy is contained in Policy MIN4 (Ref 23). Furthermore, policy which guides development in the countryside, Policy DC1, (Ref 24) recognises that any development proposal must have no significant adverse impact on nearby uses, which would include air quality. Similarly, Council Policies for guiding development in built-up areas, Policies ENV1 (Ref 25) and ENV2 (Ref 26) require that the amenity impacts of development proposals be considered, particularly on existing residential uses. Again this would include considerations of air quality.

6 Local Transport Plans and Strategies

East Lothian Council has started on the process of producing a successor to the current Local Transport Strategy (LTS) which was published in 2001 AND will be consulting shortly on an issues paper both internally and externally.

7 Climate Change Strategies

The East Lothian Environment Strategy (2010-15) (Ref 27) was published by East Lothian Community Planning Partnership (ELCPP) in December 2010 and formally adopted by East Lothian Council in January 2011.

In terms of mitigation the Strategy includes a long-term objective to reduce our ecological and carbon footprints by 80% by 2050 and to address adaptation the Strategy aims to build local resilience and pro-actively manage climate change impacts. The Strategy contains an Action Plan to facilitate the delivery of these objectives and an annual review of this Plan will be conducted to monitor progress. The first of these annual reviews will be undertaken in early 2012.

The Single Outcome Agreement (SOA) signals the beginning of a new relationship between the Scottish Government and the wider public sector. The purpose of the Single Outcome Agreement is to identify areas for improvement and to deliver better outcomes for the people of East Lothian and Scotland, through specific commitments made by community planning partners and the Scottish Government. Unlike many previous approaches, the SOA focuses upon outcomes (i.e. the results for / impact on the community) rather than specific processes or initiatives. Fundamentally the SOA is an agreement between the East Lothian Community Planning Partnership (ELCPP) and Scottish Government establishing what needs to be achieved, rather than how to achieve it.

One of the key local outcomes in the East Lothian Single Outcome Agreement (SOA) (2009-11) (Ref 28) is: East Lothian will be a less resource intensive, oil dependent county, by reducing its ecological and carbon footprints by 80% by 2050. Progress towards this outcome is monitored annually and can be viewed on the East Lothian Performs section of the ELCCP website at http://www.eastlothiancommunityplanning.org.uk/

Air Quality is also used as a performance indicator for the Local Outcome related to National Outcome 12 of the SOA: East Lothian has an attractive and healthy environment with a rich diversity of wildlife, habitats and distinctive historic built environments, which enhances peoples' lives. To date, the target to ensure that pollutant concentrations comply with National Air Quality Objectives continues to be met

8 Conclusions and Proposed Actions

8.1 Conclusions from New Monitoring Data

The results of automatic and passive monitoring of Nitrogen dioxide confirm that both the annual and 1-hour objectives continue to be met. However, passive monitoring of Nitrogen dioxide in Musselburgh High Street has indicated exceedences at 2 locations (tube numbers 6 and 7 in vicinity of 147 and 183 High Street respectively). Accordingly, a Detailed Assessment of NO2 at these locations is required..

The results of automatic monitoring of PM_{10} confirm that both the annual and 24-hour mean objectives continue to be met. There is no need to proceed to a detailed assessment.

8.2 Conclusions relating to New Local Developments

East Lothian Council confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

East Lothian Council confirms that all the following have been considered -

- Road traffic sources
- Other transport sources
- Industrial sources
- Commercial and domestic sources
- New developments with fugitive or uncontrolled sources.

8.3 **Proposed Actions**

There is no need to proceed to a Detailed Assessment of any pollutants. East Lothian Council will continue to monitor nitrogen dioxide and PM_{10} levels within the county and submit their Updating and Screening Assessment on or around April 2012.

9 References

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- 13. UK Equivalence Programme for Monitoring of Particulate Matter, Final Report for DEFRA and the Devolved Administrations, Bureau Veritas, June 2006.
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- 23. East Lothian Council, Planning Policy MIN4 Surface Mineral Extraction Criteria
- 24. East Lothian Council, Planning Policy DC1 Development in the Countryside & Undeveloped Coast
- 25. East Lothian Council, Planning Policy ENV1 Residential Character and Amenity
- 26. East Lothian Council, Planning Policy ENV2 Town and Village Centres, Other Retail or Mixed use Areas
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- 28. East Lothian Community Planning Partnership, East Lothian Single Outcome Agreement, May 2009.

Appendices

Appendix 1: Summary of Previous Rounds of Review and

Assessments

Council Name – East Lothian

Date June 2011

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

Date June 2011

Council Name – East Lothian

	Summary of Previous Review and Assessment Reports								
Round	Report Type	Report Due Date	Report Completion Date	Conclusions					
4	Updating & Screening Assessment	April 2009	November 2009	 PM10 and Nitrogen Dioxide levels in Musselburgh will require to be subject of a Detailed Assessment due to the Biomass Unit located at Queen Margaret University. The results of the Updating and Screening Assessment carried out for all other pollutants indicates that current Air Quality Objectives are being complied with. 					
4-1.1	Detailed Assessment	2010	October 2010	PM10 and Nitrogen Dioxide levels continue to be met					
4-1	Progress Report	April 2010	October 2010	All AQO's being complied with					

Appendix 2: Ratified Data for 2010

Produced by AEA on behalf of the Scottish Government

EAST LOTHIAN MUSSELBURGH N HIGH ST 1st January to 31st December 2010

These data have been fully ratified by AEA

POLLUTANT	PM ₁₀ *	NO ₂	NO _x	
Number Very High	0	0	-	
Number High	0	0	-	
Number Moderate	0	0	-	
Number Low	6740	6428	-	
Maximum 15-minute mean	150 µg m ⁻³	151 µg m ⁻³	735 µg m ⁻³	
Maximum hourly mean	97 µg m⁻³	134 µg m ⁻³	598 µg m ⁻³	
Maximum running 8-hour mean	49 µg m ⁻³	117 µg m⁻³	442 µg m ⁻³	
Maximum running 24-hour mean	41 µg m⁻³	95 µg m⁻³	286 µg m ⁻³	
Maximum daily mean	40 µg m ⁻³	86 µg m ⁻³	247 µg m ⁻³	
Average	12 µg m ⁻³	29 µg m ⁻³	66 µg m ⁻³	
Data capture	77.8 %	73.4 %	73.4 %	

 * PM₁₀ as measured by a BAM using a gravimetric factor of 0.83333 for Gravimetric Equivalent All mass units are at 20°C and 1013 mb NO_X mass units are NO_X as NO₂ µg m⁻³

Pollutant	Air Quality Regulations (2000) and Air Quality (Scotland) Amendment Regulations 2002	Exceedences	Days
PM ₁₀ Particulate Matter (Gravimetric)	Daily mean > 50 µg m ⁻³	0	0
PM ₁₀ Particulate Matter (Gravimetric)	Annual mean > 18 μg m ⁻³	0	-
Nitrogen Dioxide	Annual mean > 40 μ g m ⁻³	0	-
Nitrogen Dioxide	Hourly mean > 200 μ g m ⁻³	0	0

Produced by AEA on behalf of the Scottish Government

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Appendix 3: NO₂ Results and Bias Adjustment Calculation

Council Name – East Lothian

Date June 2011

Location	Jan	Feb	Mar	1 Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average Unadjusted for period where data available	Bias adjusted	Data Capture for 2008 (%)
1	37	40	45	26	26	28	25	-	39	-	37	-	33	32	75
4	-	35	33	25	26	22	21	-	28	-	37	37	29	28	75
6	42	51	61	36	58	62	41	-	52	-	51	57	51	49	83
7	-	52	53	36	39	51	33	-	45	12	49	51	42	40	83
8	30	45	32	19	20	26	20	-	-	-	-	-	27	26	58
9	34	44	33	35	36	39	26	-	35	33	37	43	35	33	91
10	38	41	35	18	33	30	34	-	41	45	40	49	36	34	91
11	33	41	39	31	38	35	31	-	36	27	36	41	35	33	91
12	34	50	36	29	39	35	27	-	32	30	33	39	34	32	91
13	34	51	40	28	31	-	29	-	33	30	41	43	36	34	83
14	26	47	29	-	30	27	24	-	30	40	44	57	35	33	83
15	29	40	30	35	21	21	18	-	22	26	28	41	28	27	91
16	15	19	14	8	8	8	7	-	8	10	16	26	12	11	91
23	-	34	27	-	35	27	24	-	28	28	-	34	29	28	66
24	-	31	41	30	32	28	24	-	30	30	-	41	31	30	75
25	-	36	36	27	35	33	23	-	29	25	-	35	31	30	75
26	-	42	27	29	35	33	26	-	27	28	35	41	32	31	83
27	-	37	34	23	24	24	20	-	25	30	34	44	29	28	83

Method	Average for period (µg/m ³)
Analyser	29
Tubes	30
	0.97