

Annual Progress Report (APR)



2017 Air Quality Annual Progress Report (APR) for

Shetland Islands Council

In fulfilment of Part IV of the
Environment Act 1995

Local Air Quality Management

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Executive Summary: Air Quality in Our Area

Air Quality in Shetland Islands Council Area

This report considers local air quality management in Shetland, taking into account relevant policy and technical guidance documents.

Since the councils annual progress report for 2016 there has been fulfilment of projects as detailed in table 2.1 that will have a positive impact on local air quality. New initiatives for 2017 are detailed in this table which will result in a positive impact on local air quality.

The continued downturn in major industry within the Local authority area and associated reductions in transport and infrastructure movement will further contribute to the lowering of pollutants impacting local air quality.

This annual progress report concludes that detailed assessments are not required for any pollutant at this time.

Actions to Improve Air Quality

Shetland Islands Council currently has no AQMA's or action plans and is not undertaking any other air quality related activities. This position is qualified by historic sampling data indicating no exceedences having occurred together with reductions in commercial sector operations due to the continued downturn in economic activity aligned with technical developments in existing industry leading to reduced levels of emissions.

Local Priorities and Challenges

Shetland Islands Council is committed to maintaining and improving local air quality within the local authority area. To achieve this goal the council aims to actively assess all new developments submitted to the local Authority Planning department to ensure they comply with national air quality objectives and maintaining Shetlands high standard of air quality.

How to Get Involved

The general public can contact the Shetland Island council Environmental Health and Trading Standards Department, Charlotte House, Commercial Road, Lerwick, ZE1 0LX, 01595 745 250, to get information on local air quality or to report any concerns they have.

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1. Local Air Quality Management

This report provides an overview of air quality in Shetland Islands Council during 2016/2017. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Progress Report (APR) summarises the work being undertaken by Shetland Islands Council to improve air quality and any progress that has been made.

Table 1.1 – Summary of Air Quality Objectives in Scotland

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Nitrogen dioxide (NO ₂)	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m ³	Annual mean	31.12.2005
Particulate Matter (PM ₁₀)	50 µg/m ³ , not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
	18 µg/m ³	Annual mean	31.12.2010
Particulate Matter (PM _{2.5})	10 µg/m ³	Annual mean	31.12.2020
Sulphur dioxide (SO ₂)	350 µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005
Benzene	3.25 µg/m ³	Running annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m ³	Running annual mean	31.12.2003
Carbon Monoxide	10.0 mg/m ³	Running 8-Hour mean	31.12.2003

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Lead	0.25 µg/m ³	Annual Mean	31.12.2008

2. Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority must prepare an Air Quality Action Plan (AQAP) within 12 months, setting out measures it intends to put in place in pursuit of the objectives.

Shetland Islands Council currently does not have any AQMAs. The Shetland Islands Council does not have a published air quality strategy document as past evidence indicates no exceedances exist within the local authority area. This situation may be reviewed in the future.

2.2 Progress and Impact of Measures to address Air Quality in Shetland Islands Council

Shetland Islands Council has taken forward a number of measures during the current reporting year of 2016/2017 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. More detail on these measures can be found in the Shetland Islands council Carbon Management Strategy, Carbon Management Plan 2015-2020.

Ongoing reduction measures are:

- Introduction of island wide Electric Vehicle (EV) Charging points, to encourage the uptake and use of EV's within the island group to reduce target emissions within the island group.
- Council investment in EV vehicles, both for pool transport and commercial uses to reduce target emissions.
- Replacement of lighting systems within council buildings to reduce consumption of oil fired generated electricity.

New carbon reduction measure implemented;

- Renewal of street lighting with low energy LED street lighting units to reduce target emissions
- Introduction of Council fleet vehicles tracking system, achieving substantial reduction in fuel usage and thus reductions in target emissions.
- Funding for Carbon Capture project to complete the restoration of peat lands

Shetland Islands Council is actively pursuing initiatives through their carbon management plan with perceivable benefits becoming apparent, with these being feed back into the councils carbon management to evaluate its efficacy in meeting the stated objectives. Although this management plan is not strictly focussed on Local Air quality the measures contained within the plan will have an impact on improving local air quality as it seeks to reduce the Councils reliance on fossil fuels, together with supporting the community in energy reduction initiatives, resulting in reductions in target emissions as detailed in table 1.1.

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
1	Development and introduction of Carbon Management Plan	Policy guidance and development control	Formal Adoption and embedding of local Carbon Management Plan for the SIC	Full Council	April 2015	To April 2020		Target reduction on CO2 tonnes equivalent with an potential reduction in AQM target emissions	Ratified and adopted with ongoing implementation	April 2020	
2	Investment and development of a Islands wide EV charging system	Promoting low emission transport	Introduction of island wide Electric Vehicle (EV) Charging points	Estate Operations	Financial year 2014-2015	Financial year 2015-2016		Targeted reduction on CO2 tonnes equivalent with an potential reduction in AQM target emissions	Completed	Year end 2016	Now Complete and in use, Evidence usage in population centres, but little remote area usage.
3	Investment and development of the local authority vehicle fleet to low emission vehicles	Vehicle fleet efficiency	Council investment in EV vehicles	Fleet Management Unit	Financial year 2014-2015	Rolling program till 2020		Targeted reduction on CO2 tonnes equivalent with an potential reduction in AQM target emissions	Implemented with option to expand, subject to ongoing review	Rolling program till 2020	Ongoing

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Measure No.	Measure	Category	Focus	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
4	Investment and development of low energy lighting systems within the local authority's estates infrastructure.	Policy guidance and development control	Replacement of lighting systems within council buildings	Building Services	Financial year 2014-2015	Rolling program till 2018		Target reduction on CO2 tonnes equivalent with an potential reduction in AQM target emissions	Partially complete	Year end 2020	Ongoing,
5	Investment and development of low energy street lighting systems within the local authority's area.	Policy guidance and development control	Replacement of old inefficient street lighting throughout the local authority area	Building Services	Fanatical Year 2016-2017	Rolling program till completed		Target reduction on CO2 tonnes equivalent with an potential reduction in AQM target emissions	Works Underway	Year end 2020	Ongoing
6	Introduction of GPS vehicle tracking and telemetry system to the whole of the councils vehicle fleet	Vehicle fleet efficiency	Installing of tracking and telemetry systems to monitor usage and driver efficiency	Fleet management Unit	Fanatical Year 2017	By summer 2017		Target reduction on CO2 tonnes equivalent with an potential reduction in AQM target emissions	Completed and operational by May 2017		Early indications show perceivable fleet fuel use reduction and improved driver efficiency ratings
7	Provide funding to external agency for the restoration of peat lands for carbon capture	Policy guidance and development control	Re instatement of peatlands as a carbon sink together with local environmental improvements	External Agency for Scottish Water	Financial Year 2017	Spring 2017			Completed Spring 2017		Completed with an option to investigate further areas for reinstatement.

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

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

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

Shetland Islands Council does not undertake any automatic (continuous) monitoring within the authorities area. This is due to past monitoring results indicating that concentrations were all below the national objectives, thus negating the need for further monitoring.

3.1.2 Non-Automatic Monitoring Sites

Shetland Islands Council does not undertake any non-automatic (passive) monitoring of NO₂ within the authorities area. This is due to past monitoring results indicated that concentrations were all below the national objectives, thus negating the need for further monitoring.

3.2 Individual pollutants

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

3.2.1 Nitrogen Dioxide (NO₂)

Shetland Island Council does not currently carry out non- automatic (passive) monitoring of NO₂ due to past monitoring results indicated that concentrations were all below the national objectives, thus negating the need for further monitoring.

3.2.2 Particulate Matter (PM₁₀)

Shetland Island Council does not currently carry out monitoring of PM₁₀ due to past monitoring results indicated that concentrations were all below the national objectives, thus negating the need for further monitoring.

3.2.3 Particulate Matter (PM_{2.5})

Shetland Island Council does not currently carry out monitoring of PM_{2.5} and has no plans for future monitoring.

3.2.4 Sulphur Dioxide (SO₂)

Shetland Islands Council does not undertake any monitoring of SO₂ within the authorities area. This is due to past monitoring results indicated that concentrations were all below the national objectives, thus negating the need for further monitoring.

3.2.5 Carbon Monoxide, Lead and 1,3-Butadiene

Shetland Islands Council does not undertake any monitoring for CO, Lead and 1,3-Butadiene within the authorities area.

4. New Local Developments

4.1 Road Traffic Sources

There are no new/newly identified road traffic sources within the local authority area.

4.2 Other Transport Sources

Shetland has no new transport sources within the local authority area.

With continued down turn in oil related business within the North Sea sector both of Shetland main airports have reported year end movement figure for 2016 confirming a significant drop in terminal passenger numbers and freight throughput. Sumburgh has an overall reduction of 20% for the 2016 and Scatsta has a reduction of 35% for 2016.

It can be noted that this fall has slowed, increased traffic resulting from developments in the West of Shetland oil fields and strong passenger movements reported for the beginning of 2017 show signs that the moment figures for the airports have stabilised at this time.

Airports in Shetland have never come close to the specified criteria indicating that a detailed assessment would be necessary and with the continued reduce movement levels the need for further consideration remains unnecessary.

4.3 Industrial Sources

Shetland has no new industrial sources within the local area.

4.4 Commercial and Domestic Sources

Shetland has no new commercial and domestic sources within the local authority area.

4.5 New Developments with Fugitive or Uncontrolled Sources

Shetland has no new developments with fugitive or uncontrolled sources within the local authority area.

5. Conclusions and Proposed Actions

5.1 Conclusions from New Monitoring Data

Shetland Island council does not conduct active or passive monitoring, historic monitoring data confirms the local Authority area does not have any exceedences and as such negates the need for further monitoring. Therefore no new data has been collected and no new AQMAs can be considered.

5.2 Conclusions relating to New Local Developments

Shetland Island Council has no new developments in the local authority area that impact on local air quality.

5.3 Proposed Actions

The next course of action will be to submit the 2018 Annual Progress Report.

No Detailed Assessment for any pollutant is required and no further monitoring will be carried out.

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the LA intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
APR	Air quality Annual Progress Report
AURN	Automatic Urban and Rural Network (UK air quality monitoring network)
Defra	Department for Environment, Food and Rural Affairs
EV	Electric Vehicles
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO ₂	Sulphur Dioxide

References

Shetland Islands Council, Carbon Management Strategy, Carbon Management Plan 2015-2020, April 2015- Revision 1.6,