

Annual Progress Report (APR)



2019 Air Quality Annual Progress Report (APR) for

Shetland Islands Council

In fulfilment of Part IV of the
Environment Act 1995

Local Air Quality Management

June 2019

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Executive Summary: Air Quality in Our Area

Air Quality in Shetland Islands council

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

Since the council's annual progress report for 2018 there has been fulfilment of projects as detailed in table 2.2 that will have a positive impact on local air quality. New initiatives for 2019 are detailed in this table which will result in a positive impact on local air quality.

The continued slowdown in major industry within the Local authority area and absence of any major civil works within the islands will have a positive impact on local air quality. Air transport and infrastructure movements have seen little overall change in growth, resulting in minimal impact on local air quality.

Planning approval for major wind farm developments has given rise to significant potential reduction on fossil fuel generated electricity supplies throughout the islands. There are still further planning and national funding considerations that need to be completed before the developments can be progressed, resulting in an extended lead time before further reductions in target emissions can be considered.

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 exceedances 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, Old Anderson High School, Lovers Loan, Lerwick, Shetland, ZE1 0BA, 01595 745 250, to get information on local air quality or to report any concerns they have.

1. Local Air Quality Management

This report provides an overview of air quality in Shetland Islands council during 2018. 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 (NO₂)	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 (PM₁₀)	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 (SO₂)	350 µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005
Benzene	3.25 µg/m ³	Running annual mean	31.12.2010
1,3 Butadiene	2.25 µg/m ³	Running annual mean	31.12.2003
Carbon Monoxide	10.0 mg/m ³	Running 8-Hour mean	31.12.2003
Lead	0.25 µg/m ³	Annual Mean	31.12.2008

2. Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

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 2018 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. More detail on these measures can be found in the Shetland Islands council Carbon Management Strategy, Carbon Management Plan 2015-2020.

Shetland Island Council expects the following measures to be actioned over the course of the next reporting year:

Reduction measures which are complete:

- Funding for Carbon Capture project to complete the restoration of peat lands
- Introduction of Council fleet vehicles tracking system, achieving substantial reduction in fuel usage and thus reductions in target emissions.
- An extension of the primary introduction of EV charging points to greater extend the option of EV uptake throughout the islands group.

Ongoing reduction measures are:

- 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.
- Renewal of street lighting with low energy LED street lighting units to reduce target emissions
- Introduction of Kerbside recycling to reduce waste going to incineration and landfill being implemented through the summer of 2018
- Further investment in electric fleet vehicles, with options to provide electric pool vehicles for essential car users to reduce overall emissions

Shetland Islands Council is actively pursuing initiatives through their carbon management plan with perceivable benefits becoming apparent, with these being feed back into the council's carbon management strategy to evaluate its efficacy in meeting the stated objectives.

New reduction measure to be implemented:

- Development and implementation of a waste recycling facility to sort recyclables from the waste stream that would normally be incinerated or land filled, reducing target emissions associated with these forms of disposal.
- Implementation of a pool fleet of vehicles for council staff required to drive for their work. This will reduce the number of business mile driven using older less efficient vehicle through using a fleet of modern efficient vehicles, fitted with telematics tracking aiding improvements in driver performance, reducing target emissions

Finally the SIC has proactively promoted that Cycle to Work Scheme this year to encourage the reduced short journey use of staff vehicles when commuting to work.

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.

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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 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
3	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,
4	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	Financial 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

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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
5	Introduction of Islands wide kerbside recycling.	Policy guidance and Development Control	Implementing central Government policy for kerbside recycling. Intended reductions to Landfill and incineration of waste.	Waste management	Year end 2017	Year end 2018		Target reduction on CO2 tonnes equivalent with an potential reduction in AQM target emission	Complete	Year end 2018	Implemented on schedule, need for monitoring and reinforcement
6	Construction and commissioning of a waste recycling facility to sort recyclable materials removing them from the disposal routes including incineration and landfill.	Policy guidance and Development Control	To sort recyclable materials, removing them from the disposal routes normally including incineration and landfill.	Waste management	March 2018	2 nd & 3 rd Quarter 2019		Target reduction on CO2 tonnes equivalent with a potential reduction in AQM target emission through reductions in burning waste and production of landfill gasses.	Ongoing	Year end 2019	
7	Expansion of Councils fleet of pool vehicles for essential car users employed within the local authority.	Promoting low emission transport	Provision of pool transport for essential car users, with low emission vehicles	Fleet management	4 th Quarter 2018	1 st Quarter 2019		Target reduction on CO2 tonnes equivalent with a potential reduction in AQM target emission through reductions in business miles driven with older less efficient vehicles	Ongoing	Year end 2019	

2.3 Cleaner Air for Scotland

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

2.3.1 Transport – Avoiding travel – T1

All local authorities should ensure that they have a corporate travel plan (perhaps within a carbon management plan) which is consistent with any local air quality action plan. Shetland Islands Council has a carbon management plan, available on line at; http://www.shetland.gov.uk/energy_advice/documents/CarbonManagementPlan.pdf and has a recently reviewed transport strategy, also available on line at; https://www.zettrans.org.uk/site/assets/files/1100/shetland_transport_strategy_refresh_2018_final-1.pdfinsert

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

Scottish Government expects any Scottish local authority which has or is currently developing a Sustainable Energy Action Plan to ensure that air quality considerations are covered. Shetland Islands Council fulfils the need to develop a sustainable energy action plan through the council's Economic Development Strategy 2018-2022. This strategy document details strategies for the development of renewable energy technologies, together with reducing the reliance on fossil fuels to lower the overall CO2 emissions for the local authority area. These strategies will have the effect of reducing the already minimal impacts on local air quality, in keeping with national air quality objectives.

http://www.shetland.gov.uk/economic_development/documents/EconomicDevelopmentDraftStrategy2018-2022.pdf

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.

3.2.1 Nitrogen Dioxide (NO₂)

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.

3.2.2 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 and has no plans for future monitoring.

4. New Local Developments

4.1 Road Traffic Sources

Shetland has no new transport sources within the local authority area

4.2 Other Transport Sources

During 2018/2019 reporting period, one of the competing carriers has withdrawn from the routes flying from Sumburgh airport. This has resulted in a halt to the decreases in air fares and a drop in passenger numbers flying from Sumburgh airport.

This decrease in passenger numbers at Sumburgh has not been replicated at Scatsta, due to it being a dedicated oil industry airport. An upturn in the price of crude oil and renewed exploration with the West of Shetland and North Sea oil fields has given rise to continued growth in passenger numbers going through Scatsta.

Both of Shetland main airports have reported year end movement figure for 2018 confirming a decrease in terminal passenger at Sumburgh numbers of 4% and small increase in freight throughput of 1.2%. This is opposed to Scatsta which reported a 2% increase in oil related passenger numbers and an 8.4% decrease in freight for 2018.

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.

4.2 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. Planning Applications

Shetland Island Council has processed 1 planning application for a large scale wind farm on land outside the main town of Lerwick, planning number 2018/186/PPF. This consist of a wind farm with a capacity of 50MW, consisting of 12 145m high turbines with associated infrastructure.

Further to this application the Shetland Islands Council has also approved a variation of the Viking wind farms planning application to increase the hub height of the turbines together with considering a number of associated applications for upgrading areas of local road ways plus construction of a number of laydown areas for the development.

Although these developments will have little impact on local air quality during the construction and commissioning phase, there is a significant potential for the developments to reduce target emissions in the long term within Shetland and beyond due to the reduced reliance on fossil fuel generated electricity.

6. Conclusions and Proposed Actions

6.1 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 exceedances and as such negates the need for further monitoring. Therefore as no new data has been collected no new AQMAs can be considered.

6.2 Conclusions relating to New Local Developments

Shetland Island Council has two new developments in the local authority area that will impact on local air quality. There is a significant potential for these developments reducing target emissions in the long term within Shetland and beyond due to the reduced reliance on fossil fuel generated electricity.

6.3 Proposed Actions

As a part of the Shetland Islands Councils development strategy and its own internal efficiency and reductions initiatives there will be ongoing monitoring of the identified activities in table 2.2. This monitoring will be feed back into the councils efficiency savings process ensuring key performance indicators are being achieved and where necessary a refocussing the initiative to deliver the planned outcomes.

With regards to the active monitoring form air bourn pollutants, the council has no plans for a detailed assessment of any pollutant, therefore no further monitoring will be carried out.

The next course of action will be to submit the 2019 Annual Progress Report.

Glossary of Terms

Please add a description of any abbreviation included in the APR – An example is provided below.

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

References

Please provide a list of all documents referred to in the report.

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