Annual Progress Report (APR)

2025 Air Quality Annual Progress Report (APR) for Shetland Islands Council

In fulfilment of Part IV of the Environment Act 1995, as amended by the Environment Act 2021

Local Air Quality Management

5th September 2025

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Executive Summary: Air Quality in Our Area

Air Quality in Shetland Islands Council

The Shetland Islands, located approximately 110 miles north of mainland Scotland and 140 miles west of Norway, benefit from consistently high air quality. This is largely due to the region's low population density, prevailing high wind conditions, the strongest in the UK, and ongoing efforts to reduce sources of air pollution.

The only notable new source of potential air pollution in the area this year is the development of the Saxa Vord Spaceport. According to the air quality assessment conducted for the site, "launch event emissions are predicted to have no perceptible impact at any identified receptors."

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 of national air quality objectives are likely to occur within the local authority area. Furthermore, overall reductions can be attributed to a continued progressions in economic activity focused on production of carbon free energy, combined with technical developments within existing local industry to reduced levels of emissions through effective carbon management. These factors combined support the Shetland Islands Council's current position on meeting the air quality objectives.

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 compliance with national air quality objectives and maintaining Shetland's high standard of air quality.

How to Get Involved

To receive information on air quality or to report any concerns, the public are encouraged to contact:

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1 Local Air Quality Management

This report provides an overview of air quality in Shetland Islands Council during 2024. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), 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 Concentration	Air Quality Objective Measured as	Date to be Achieved by
Nitrogen dioxide (NO_2)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
Nitrogen dioxide (NO_2)	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
Particulate Matter (PM_{10})	18 µg/m^3	Annual mean	31.12.2010
Particulate Matter ($PM_{2.5}$)	10 µg/m^3	Annual mean	31.12.2021
Sulphur dioxide (SO_2)	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
Sulphur dioxide (SO_2)	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
Sulphur dioxide (SO_2)	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

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 publish and implement an Air Quality Action Plan (AQAP) within the shortest possible time and no later than 12 months of the date of AQMA Designation Order. The AQAP must set out measures the local authority intends to put in place in pursuit of the objectives within the shortest possible time Measures should be provided with milestones and a final date for completion. The action plan itself should have a timescale for completion and for revocation of the AQMA. Where measures to reduce air pollution may require a longer timescale an action plan shall be reviewed and republished within five years of initial publication and then five-yearly thereafter.

Shetland Islands Council currently does not have any AQMAs. 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.

2.3 Implementation of Air Quality Action Plan(s) and/or measures to address air quality

In order to ensure that local authorities implement the measures within an action plan by the timescales stated within that plan, the Scottish Government expects authorities to submit updates on progress through the APR process. Shetland Islands Council has taken forward a number of measures within the action plan during the current reporting year of 2024 in pursuit of improving local air quality and meeting the air quality objectives within the shortest possible time. Details of all measures completed, in progress or planned are set out in Table 2.1.

Key completed measures for this reporting year are:

- The development of the Shetland Energy Strategy, a Shetland Islands Council-led plan to transition Shetland's energy system to a net-zero future by 2045.
- A ‘Car Club’ project has been initiated to review opening up a pool of vehicles for use by SIC, partnership organisations and to the community.

- A Shetland Climate Change Strategy Steering group was established, under the Shetland Partnership. Group members include HIE, UHI, Nature Scot, Visit Scotland, NHS, SIC.

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Expected/ Actual Completion year	Measure Status	Funding Status	Key Milestones	Progress	Barriers to implementation
1	Development and introduction of Carbon Management Plan	Policy guidance and development control	2022	Completed		Publication of SIC Net Zero Route-map, replacing the Carbon Management Plan	The Carbon Management Plan will now be superseded by the SIC Climate Change Strategy (due to go to Council for approval by the end of the year), the SIC Net Zero Route Map tool (approved by Council in November 2022) SIC Climate Change Strategy and Action Plan were approved and published in December 2023. It builds on from the SIC Net Zero Route Map and contains targets for SIC to work towards. An update on progress is provided annually in the SIC Annual Climate Change Report.	None
2	Investment and development of the local authority vehicle fleet to low emission vehicles	Vehicle fleet efficiency	Ongoing	Ongoing	Funded through council budgets	Aim to fully decarbonise the entire SIC fleet by 2045	Ongoing - Currently the business case for the greening of the SIC Fleet (including action plan) is being prepared and nearing completion. Greening the Fleet is an approved and funded SIC programme. Progress on greening the fleet is provided in the Annual Climate Change Report.	Funding and availability of the vehicle type.
3	Investment and development of low energy lighting systems within the local authority's estates infrastructure.	Policy guidance and development control	Rolling program till 2018	Ongoing	Funded through council budgets	Program extended – Ongoing till completed	Ongoing	No Significant Barriers
4	Investment and development of low energy street lighting	Policy guidance and development control	Year end 2023	Ongoing	Funded through council budgets	Aim to complete works by year end 2023	Ongoing - Replacement of street lighting nearing completion	No Significant Barriers

	systems within the local authority's area.							
5	Introduction of Islands wide kerbside recycling.	Policy guidance and developme nt control	Year end 2018	Completed	Funded through council budgets	Completed year end 2018	Implemented on schedule, need for ongoing monitoring and re-enforcement	None
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 developme nt control	March 2018	Completed	Funded through council budgets	Completed year end 2018	Building and plant in place, commissioning complete. Site fully operational	None
7	Expansion of Councils fleet of pool vehicles for essential car users employed within the local authority.	Promoting low emission transport	2045	Ongoing	Funded through council budget. We currently have a bid in with UKRI Innovate UK scheme for funding to supplement council budget.	Aim to complete full transition by 2045	Further expansion of this initiative through 2021 A 'Car Club' project has been initiated to review opening up a pool of vehicles for use by SIC, partnership organisations and to the community. An objective for community use is to reduce the number of second cars, and the number of petrol/diesel cars in operation.	Continued central government funding commitment, availability of suitable plant and operators to complete the volume of work planned
8.	Planning, development and implementation of new Net Zero Route Maps for the local authority area	Policy guidance and developme nt control	2022	Completed	Funded through council budget	Establish local GHG Baseline. Proposed 3 pathways ahead to reach Net Zero	The Shetland and SIC Net Zero Route Maps were approved by Council in November 2022. The SIC Climate Change Strategy and Action Plan were approved by Full Council in December 2023. A Shetland Climate Change Strategy Steering group was established, under the Shetland Partnership. Group members include HIE, UHI, Nature Scot, Visit Scotland, NHS, SIC. An overarching Shetland Climate Change Strategy has been	Restricted access to online learning material for some staff groups, varied forms of content delivery to be investigated

							development and approved by Shetland Partnership Management and Leadership Team. It is now going through the process of being adopted by all Shetland Partnership organisations and will be presented to SIC Committee in September. Organisational strategies and action plans will deliver against the wider Shetland Climate Change Strategy objectives.	
9.	Devising of locally focused carbon use modelling. Focusing on establishing baseline data collection, analysis and reporting	Policy guidance and developme nt control	2022	Complete	Funded through council budgets	Baseline data used in the completion of the Net Zero Route-map	Report complete, see measure No.8 above. Progress is reported annually through the SIC Annual Climate Change Report.	
10.	Local participation of Scottish government peatland restoration scheme	Policy guidance and developme nt control	2030	Ongoing	Council participation is funded through council budget	Projected 4,500ha of peatland restoration to be completed in a calendar year	Ten year rolling application program. A Shetland Peatland Partnership has been set up with the aim to accelerate action on peatland restoration in Shetland. The Net Zero Route Maps have highlighted the extent on carbon emissions from degraded peatland in Shetland and the rate at which peatland restoration needs to take place	
11.	Development of locally focused carbon literacy training, for local businesses and the general public	Policy guidance and developme nt control	2022	Complete	Funded through council budget	Online Carbon training available via council's online training platform. Regular carbon literacy, training workshops now available to SIC staff.	E-Learning module developed and available to all staff online. A programme of regular carbon literacy training workshops are now available to SIC staff. This has now been opened up, and is now also offered to all Shetland Partnership employees.	No Significant Barriers
12	Development and implementation of the	Policy guidance and	2045	Ongoing		The implementation of several projects including:	This is a Shetland Islands Council-led plan to transition Shetland's energy system to a net-zero future	

	Shetland Energy Strategy.	developme nt control				The Energy Hub and Hydrogen Backbone investigations being done by the Net Zero Technology Centre that include Shetland based case studies; The power studies and socio-economic research being done by the University of Strathclyde; Statkraft UK's ambitions for onshore wind development and green hydrogen production; Veri Energy's ambitions for Carbon Capture and Storage, onshore wind production, and green hydrogen production at SVT; 2.8 GW potential offshore wind production; Shetland Aerogenerators Ltd's 50+ MW Neshion onshore wind production adjacent to SVT; and, Various community level renewable energy initiatives.	by 2045. The redrafted strategy will be presented to council this year.	
13	Develop a high-level timed and costed sequence of island connectivity investments which, taken together, will form an agreed Network Strategy to meet the needs of Shetland's island communities.	Transport planning and infrastructu re	To be determined	Ongoing		The draft Network Strategy Strategic Outline Case was approved by Shetland Islands Council in June 2025. Also at this meeting, Shetland Islands Council approved budget for the new Fixed Link Model development work. The work will include design, buildability, future operations and maintenance of tunnels, together with a commercial and financial model.	Work on the Network Strategy Outline Business Case is the next stage. Options will be assessed with respect to their impact on air quality at OBC stage.	Funding sources

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 authority's 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 objective pollutants within the authority's area. This is due to past monitoring results indicating that concentrations were all below the national objectives, thus negating the need for further monitoring.

3.1.3 Other Monitoring Activities

Shetland Islands Council does not undertake any other forms of air quality monitoring within the authority's area.

3.2 Individual Pollutants

3.2.1 Nitrogen Dioxide (NO_2)

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

3.2.2 Particulate Matter (PM_{10})

Shetland Island Council does not currently carry out monitoring of PM10 due to past monitoring results indicating 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 PM2.5 and has no plans for future monitoring.

3.2.4 Sulphur Dioxide (SO_2)

Shetland Islands Council does not undertake any monitoring of SO2 within the authority's 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 authority's area and has no plans for future monitoring

4 New Local Developments

4.1 Road Traffic Sources

A new road has been approved to upgrade the B9082 Gutcher to Cullivoe road in North Yell from a single track to a single carriageway (2024/114/PPF). Work is expected to start in Summer 2025 and take two years to develop. It is expected the traffic flow will remain the same.

An upgrade to the B9075 has been completed from the A970 junction to the Kergord junction. The road was previously used for the development of Viking wind farm and the associated Shetland HCDC Converter Station located in Kergord. This upgrade the road from a single track to a single carriageway. It is expected the traffic flow will remain the same.

4.2 Other Transport Sources

There are no new or planned airports, trainlines or ports for shipping within the local area.

4.3 Industrial Sources

Rocket testing has commenced at SaxaVord Spaceport in Unst. It is expected the first rocket launch will be autumn 2025. From the Air Quality Assessment (2021/005/PPF)

11.11.6 Operational phase launch event emissions are predicted to have no perceptible impact at any identified receptors under prevailing wind directions. The maximum predicted impact at a sensitive receptor is predicted to occur with north-easterly winds which occur typically for less than 10 % of ITPEnergised | Shetland Space Centre | 2021-01-04 11-17 the year. The maximum predicted 8-hour concentration of CO is 28% of the AQS. Emissions from launch events are therefore considered to have an effect of negligible significance on air quality.

The Viking Energy Wind Farm development, (2009/191/ECU) & (2018/335/ECUCON) as well as the associated electricity converter station and interconnector cable facilities (2009/224/PCO) & (2015/302/VCON) has been completed and has begun generating electricity.

The development of the Lerwick Greener Grid Park and associated Battery Energy Storage System (BESS) in Gremista, Lerwick is progressing. A cable from the Sullum Voe gas-fired power station to the Gremista substation is also being developed. Once these works have been completed, the diesel power station in Lerwick and gas power station Brae will be decommissioned resulting in an improvement in local air quality.

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

A planning application has been lodged for the development of the Neshion Energy Park, a 10 turbine wind farm and BESS to be located east of Sullom Voe (2025/113/ECUCON). This would result in an improvement to local air quality.

6 Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

Shetland Island Council does not currently conduct active or passive air quality monitoring. Historic monitoring data confirms that this local authority area does not have any exceedances and so this negates the need for further monitoring. Therefore, as no new data has been collected, no new AQMAs are being considered.

6.2 Conclusions relating to New Local Developments

As detailed in last year's report there are a number of ongoing large scale wind farm developments that have the potential to impact local air quality in the short term during the construction phases. These impacts should be mitigated by the implementation of effective construction environmental management plans together with ongoing compliance monitoring by Council officers and external auditors. Further to these current and planned developments this trend is planned to be supported and enhanced with current and future reductions in the use and reliance on fossil fuel for local transport and power generation, with the eventual generation of cleaner electricity by large wind farm developments currently under construction in the central mainland.

6.3 Proposed Actions

Shetland Islands Council's continues to work on its development strategies and internal efficiency and carbon reduction initiatives. It seeks to further develop the whole islands holistic view to achieving a net zero carbon economy. There will be ongoing monitoring of the identified activities in Table 2.2. This will enable feedback into the Council's efficiency savings process and to ensure that key performance indicators are being achieved. Initiatives will also be continually reviewed and refocussed, where necessary, so that the Council delivers on planned outcomes. Meanwhile, the Council has no plans to introduce any active monitoring of airborne pollutants at this time. Our next course of action will be to submit the next Annual Progress Report by June 2026.

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	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
DT	Diffusion Tube
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

N/A