



# 2015 Updating and Screening Assessment for Comhairle nan Eilean Siar

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

16<sup>th</sup> April 2015

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## Executive Summary

This report considers local air quality management in the Western Isles, examining relevant policy and technical guidance documents.

As in previous submissions there are no significant changes and no new air pollution sources have been identified however there is some proposed future developments mentioned. Further information on these developments will be provided in the subsequent progress reports and updating and screening assessments as and when they take place.

There has been no air quality monitoring data gathered in the Western Isles for 2014. Previously the only pollutant that was tested for was Nitrogen Dioxide (NO<sub>2</sub>), as the reported levels were significantly lower than the action levels, monitoring was stopped.

This report concludes that detailed assessments are not required for any pollutant.

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# 1 Introduction

## 1.1 Description of Local Authority Area

Comhairle nan Eilean Siar is the local authority covering the chain of islands known as the Western Isles. The islands are situated off the North West coast of Scotland; the main islands in the chain are Lewis, Harris, North Uist, Benbecula, South Uist and Barra (Appendix 1). The Western Isles has a land area of 290, 000 hectares and a coastal line of 2, 700 km. The islands measure 210 km from the Butt of Lewis in the north to the uninhabited small islands of Berneray and Mingulay in the southern extremity. The islands are 60 km at their widest point and also include the archipelago of St. Kilda.

There are approximately 28, 000 people living within the Western Isles, the main population centres are Stornoway on Lewis, Tarbert in Harris, Balivanich in Benbecula and Castlebay in Barra. Stornoway is the largest town in the Western Isles with a population of around 6, 000. The islands are linked by ferry and causeways and travel to the mainland is achievable through sea and airport links.

The main economic sectors are public services, construction, fishing, fish farming and fish processing. There are over 6, 000 registered crofts in the islands with the majority of these in use. It is estimated that there are over 100, 000 livestock on the island.

## 1.2 Purpose of Report

This report fulfils the requirements of the Local Air Quality Management process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 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 exceedences are considered likely, the local authority must then 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.

The objective of this Updating and Screening Assessment is to identify any matters that have changed which may lead to risk of an air quality objective being exceeded. A checklist approach and screening tools are used to identify significant new sources or changes and whether there is a need for a Detailed Assessment. The USA report should provide an update of any outstanding information requested previously in Review and Assessment reports.

## 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), the Air Quality (Scotland) Amendment Regulations 2002 (Scottish SI 2002 No 297), and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre  $\mu\text{g}/\text{m}^3$  (milligrammes per cubic metre,  $\text{mg}/\text{m}^3$  for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

**Table 1.1 Air Quality Objectives included in Regulations for the purpose of LAQM in Scotland**

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	3.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010

<b>1,3-Butadiene</b>	2.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
<b>Carbon monoxide</b>	10.0 mg/m <sup>3</sup>	Running 8-hour mean	31.12.2003
<b>Lead</b>	0.5 µg/m <sup>3</sup>	Annual mean	31.12.2004
	0.25 µg/m <sup>3</sup>	Annual mean	31.12.2008
<b>Nitrogen dioxide</b>	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m <sup>3</sup>	Annual mean	31.12.2005
<b>Particles (PM<sub>10</sub>) (gravimetric)</b>	50 µg/m <sup>3</sup> , not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
	18 µg/m <sup>3</sup>	Annual mean	31.12.2010
<b>Sulphur dioxide</b>	350 µg/m <sup>3</sup> , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m <sup>3</sup> , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

## 1.4 Summary of Previous Review and Assessments

Previous rounds of review and assessment have not determined the need for a detailed assessment and no air quality management areas (AQMA~~s~~) have been declared in the Western Isles area.



## **2 New Monitoring Data**

### **2.1 Summary of Monitoring Undertaken**

#### **2.1.1 Automatic Monitoring Sites**

There was no air quality monitoring carried out in the Western Isles in 2014. There are no automatic monitoring sites situated within the Western Isles area.



### 2.1.2 Non-Automatic Monitoring Sites

There are no non-automatic monitoring sites situated within the Western Isles.

There was no air quality monitoring carried out in the Western Isles during 2014. In previous years sampling was carried out using diffusion tubes at 4 locations in Stornoway. The tubes were collected at 4 weekly intervals and sent to Glasgow Scientific Services for analysis. There has been no air quality monitoring carried out since 2007.

There has been no monitoring carried out on any pollutants since 2007. The subsequent Updating and Screening Assessments and Progress Reports have not shown the need for air quality monitoring to continue however, as no monitoring has been done for a number of years the Local Authority propose to carry out a year's monitoring of NO<sub>2</sub> starting in May 2015 to verify that levels are still well below the action levels.



## **2.2 Comparison of Monitoring Results with Air Quality Objectives**

There have been no exceedances identified as Comhairle nan Eilean Siar have not undertaken any automatic or non-automatic monitoring in the Western Isles.

### **2.2.1 Nitrogen Dioxide**

The last round of monitoring data for Nitrogen Dioxide was carried out in 2007 by using diffusion tubes at four different locations within Stornoway. The annual mean concentrations were adjusted for bias and there were no results exceeding  $40 \text{ g/m}^3$ .

There has been no monitoring carried out on any pollutants since 2007. The subsequent Updating and Screening Assessments and Progress Reports have not shown the need for air quality monitoring to continue however, as no monitoring has been done for a number of years the Local Authority propose to carry out a year~~s~~ monitoring of  $\text{NO}_2$  starting in May 2015 to verify that levels are still well below the action levels.



**Diffusion Tube Monitoring Data**

The last round of monitoring data for Nitrogen Dioxide was carried out in 2007 by using diffusion tubes at four different locations within Stornoway. The annual mean concentrations were adjusted for bias and there were no results exceeding 40  $\mu\text{g}/\text{m}^3$

There has been no monitoring carried out on any pollutants since 2007. The subsequent Updating and Screening Assessments and Progress Reports have not shown the need for air quality monitoring to continue however, as no monitoring has been done for a number of years the Local Authority propose to carry out a year's monitoring of  $\text{NO}_2$  starting in May 2015 to verify that levels are still well below the action levels.





**2.2.2 PM<sub>10</sub>**

There are currently no monitoring site locations for measuring particulate matter (PM<sub>10</sub>) in the Western Isles. However it is a pollutant that may be considered for monitoring in the future.



### 2.2.3 Sulphur Dioxide

There are no monitoring results for SO<sub>2</sub> for 2014.



**2.2.4 Benzene**

There are no monitoring results for benzene for 2014.

**2.2.5 Summary of Compliance with AQS Objectives**

Comhairle nan Eilean Siar has examined the results from monitoring in the Western Isles. Concentrations are all below the objectives, therefore there is no need to proceed to a Detailed Assessment.

### **3 Road Traffic Sources**

#### **3.1 Narrow Congested Streets with Residential Properties Close to the Kerb**

Comhairle nan Eilean Siar confirms that there are no new/newly identified congested streets with a flow above 5,000 vehicles per day and residential properties close to the kerb, that have not been adequately considered in previous rounds of Review and Assessment.

#### **3.2 Busy Streets Where People May Spend 1-hour or More Close to Traffic**

Comhairle nan Eilean Siar confirms that there are no new/newly identified busy streets where people may spend 1 hour or more close to traffic.

#### **3.3 Roads with a High Flow of Buses and/or HGVs.**

Comhairle nan Eilean Siar confirms that there are no new/newly identified roads with high flows of buses/HDVs.

#### **3.4 Junctions**

Comhairle nan Eilean Siar confirms that there are no new/newly identified busy junctions/busy roads.

### **3.5 New Roads Constructed or Proposed Since the Last Round of Review and Assessment**

Comhairle nan Eilean Siar confirms that there are no new/proposed roads.

### **3.6 Roads with Significantly Changed Traffic Flows**

Comhairle nan Eilean Siar confirms that there are no new/newly identified roads with significantly changed traffic flows.

### **3.7 Bus and Coach Stations**

Comhairle nan Eilean Siar confirms that there are no relevant bus stations in the Local Authority area.

## **4 Other Transport Sources**

### **4.1 Airports**

There are no airports, as described in Section B.1 of Box 5.4 of TG(09), within the Western Isles.

Comhairle nan Eilean Siar confirms that there are no airports in the Local Authority area.

### **4.2 Railways (Diesel and Steam Trains)**

#### **4.2.1 Stationary Trains**

Comhairle nan Eilean Siar confirms that there are no locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.

#### **4.2.2 Moving Trains**

Comhairle nan Eilean Siar confirms that there are no locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.

### **4.3 Ports (Shipping)**

Comhairle nan Eilean Siar confirms that there are no ports or shipping that meet the specified criteria within the Local Authority area.



## **5 Industrial Sources**

### **5.1 Industrial Installations**

#### **5.1.1 New or Proposed Installations for which an Air Quality Assessment has been Carried Out**

Comhairle nan Eilean Siar confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

#### **5.1.2 Existing Installations where Emissions have Increased Substantially or New Relevant Exposure has been Introduced**

Comhairle nan Eilean Siar confirms that there are no industrial installations with substantially increased emissions or new relevant exposure in their vicinity within its area or nearby in a neighbouring authority.

#### **5.1.3 New or Significantly Changed Installations with No Previous Air Quality Assessment**

Comhairle nan Eilean Siar confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

### **5.2 Major Fuel (Petrol) Storage Depots**

There are no major fuel (petrol) storage depots within the Local Authority area.

### **5.3 Petrol Stations**

Comhairle nan Eilean Siar confirms that there are no petrol stations meeting the specified criteria.

### **5.4 Poultry Farms**

Comhairle nan Eilean Siar confirms that there are no poultry farms meeting the specified criteria.

## **6 Commercial and Domestic Sources**

### **6.1 Biomass Combustion – Individual Installations**

Comhairle nan Eilean Siar has identified a biomass combustion plant in a new assisted living hostel and centre that is currently under construction. The new Ardsheilach Centre will be situated on the outskirts of the town of Stornoway in the Isle of Lewis. The wood pellet boiler has a maximum output of 240kW and has been assessed under the Clean Air Act.

Comhairle nan Eilean Siar has assessed the biomass combustion plant, and concluded that it will not be necessary to proceed to a Detailed Assessment.

### **6.2 Biomass Combustion – Combined Impacts**

There are no combined impacts within the Western Isles. All new housing developments in 2014 have been fitted with air source heat pumps.

Comhairle nan Eilean Siar has assessed the biomass combustion plant, and concluded that it will not be necessary to proceed to a Detailed Assessment.

### **6.3 Domestic Solid-Fuel Burning**

Comhairle nan Eilean Siar has not identified any significant areas where coal burning/smokeless fuel burning is the primary source of heating.

Comhairle nan Eilean Siar confirms that there are no areas of significant domestic fuel use in the Local Authority area.

## 7 Fugitive or Uncontrolled Sources

Comhairle nan Eilean Siar confirms that there are no potential sources of fugitive particulate matter emissions in the Local Authority area.

## **8 Conclusions and Proposed Actions**

### **8.1 Conclusions from New Monitoring Data**

Comhairle nan Eilean Siar does not have any new monitoring data for 2014.

### **8.2 Conclusions from Assessment of Sources**

Comhairle nan Eilean Siar intends to carry out NO<sub>2</sub> monitoring in 2015 to verify that the pollutant is well below the action level. There are no new developments anticipated to impact on the air quality in the Western Isles.

### **8.3 Proposed Actions**

The Updating and Screening Assessment has not identified the need to proceed to a detailed assessment for any pollutant. However Comhairle nan Eilean Siar intends to monitor for NO<sub>2</sub> during 2015 to verify that the pollutant levels are not being exceeded.

The next course of action will be to submit the 2016 Progress Report which will detail the findings from the NO<sub>2</sub> monitoring carried out in 2015.

## 9 References

Map provided by Comhairle nan Eilean Siar MSA Licence Agreement Number 100229965.

# Appendices

## Appendix 1: Map of the Western Isles

