



2013 Air Quality Progress Report for *Isle of Wight Council*

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

Date March 2013

Isle of Wight Council

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Executive Summary

Monitoring for NO₂ continued at 2 sites throughout 2012. Results are reported in this report.

Environmental Health continues to provide advice relevant to air quality issues, to the Local Planning Authority. A list of such applications is listed in this report.

The conclusion of this report is that the Air Quality Standards are unlikely to be exceeded on the Isle of Wight, and there is therefore no requirement to proceed to a Detailed Assessment, neither is there any justification for declaring an Air Quality Action Area.

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1 Introduction

1.1 Description of Local Authority Areas

The Isle of Wight has well-defined boundaries, formed by the coast which is diamond shaped, the Island has a population in the region of 140,000 with the main areas of population concentrated within a number of towns, predominately located within the eastern half.

The two largest towns are Newport and Ryde. Newport, the County town, is the centre with Ryde situated on the north east coast. The remaining towns Sandown, Shanklin, Lake and Ventnor are located along north east coast, with Cowes and East Cowes at the northern most tip.

The western part of the island is more thinly populated, with the towns of Yarmouth, Totland and Freshwater.

The Island is linked to the mainland by a number of cross Solent ferries between the Ryde area and Portsmouth, Cowes and East Cowes and the Yarmouth to Lymington. The Island's 8 mile rail line links the principal stations at Ryde to the coastal towns of Ryde, Sandown and Shanklin.

Industry is concentrated along the river Medina, at Newport, Cowes and East Cowes.

1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management Regulations 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 Guidance documents. The LAQM process places an obligation on local authorities to regularly review and assess air quality in their areas, and to determine whether the air quality objectives are likely to be achieved. Where exceedances occur, the authority must take action to reduce the level of pollution.

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 to be put in place in pursuit of the objectives.

Progress Reports are required in the intervening years between Updating and Screening Assessment reports. Their purpose is to monitor 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 an exceedance of an Air Quality Objective, the Local Authority (LA) must carry out a Detailed Assessment immediately, and not wait until the next routine Assessment.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM in England are set out in The Air Quality (England) Regulations 2000 (SI 928), The Air Quality (England) Regulations 2002 (SI 3043), 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, mg/m^3 for carbon monoxide) with the number of exceedances permitted (where applicable).

Table 1.1 Air Quality Objectives included in Regulations LAQM in England

Pollutant	Air Quality Objective	
	Concentration	Measured as
Benzene	16.25 µg/m ³	Running annual mean
	5.00 µg/m ³	Annual mean
1,3-Butadiene	2.25 µg/m ³	Running annual mean
Carbon monoxide	10 mg/m ³	Running 8-hour mean
Lead	0.50 µg/m ³	Annual mean
	0.25 µg/m ³	Annual mean
Nitrogen dioxide	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour mean
	40 µg/m ³	Annual mean
Particulate Matter (PM ₁₀) (gravimetric)	50 µg/m ³ , not to be exceeded more than 35 times a year	24-hour mean
	40 µg/m ³	Annual mean
Sulphur dioxide	350 µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean
	125 µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean
	266 µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean

1.4 Summary of Previous Review and Assessment

The following text is taken from the Isle of Wight Council's Air Quality

First Round Air Quality Review

The first round of the review in 2000 gave results that indicated it was necessary to proceed to a Detailed Assessment, as the specific concentrations predicted to be below the Air Quality Objectives.

The report of the 2000 review is not available on-line.

Second Round Updating and Screening Assessment 2004

During the second round, the Updating and Screening report 2004 (www.iwight.com/living_here/environment/environmental_health/USA.pdf) identified that there was a possibility that, for two of the pollutants, concentrations may exceed the Objectives in specific areas.

A Detailed Assessment

(www.iwight.com/living_here/environment/environmental_health/report.pdf) was carried out in 2004, examining two pollutants. Since the assessment, a new housing estate had been built close to the pollution source at Kingston, East Cowes. Computer modelling was therefore carried out to assess benzene concentrations in the area. This was supplemented by air quality monitoring for a short period. The results of the monitoring were used to update the

Quality Progress Report

(www.iwight.com/living_here/environment/environmental_health/port2005.pdf) in 2005. The modelling, together with the diffusion modelling, showed that the benzene concentration in air close to the site was very close to the Objective. There was therefore no need to declare an Air Quality Management Area for Benzene.

In addition, the modelling for sulphur dioxide emissions from the

ferry terminals also showed that there would be no exceedance of the Air Quality Objective for SO₂.

Third Round Updating and Screening Assessment 2006

During the third round

(www.iwight.com/living_here/environment/environmental_health/O2.pdf), in 2006, it was identified that, at two of the sites (Fairlee Road and the Ferry Terminal), there is a possibility that the Air Quality Objective for Nitrogen dioxide could be exceeded.

It was therefore decided to increase the number of diffusion tubes at the two sites, to monitor nitrogen oxides. Diffusion tubes are not as exact as analytical methods, so there was some doubt about the actual concentrations measured. By increasing the number of tubes at each site a more reliable result is achieved.

Detailed Assessment for Nitrogen Dioxide

This was carried out using additional monitoring, using diffusion tubes. The Detailed Assessment Report (www.iwight.com/living_here/environment/environmental_health/O2.pdf) concluded that there were unlikely to be exceedances of the Air Quality Objective for Nitrogen dioxide at either of the two sites referred to above. A Progress report was submitted in 2008.

Fourth Round Updating and Screening Assessment 2009

Before the fourth round Updating and Screening Assessment was carried out, the Department for Environment, Food and Rural Affairs issued revised guidance.

The 2009 Updating and Screening Assessment is available.

An Air Quality Progress Report was submitted in 2010.

Conclusions from 2012 Updating and Screening Assessment

Monitoring data for 2011 has demonstrated a reduction in NO₂ concentrations compared to 2010. The 2010 values were unusually high, for reasons that are not clear.

NO₂ concentration in 2011 were, nevertheless, higher than they

Isle of Wight Council concludes that there is unlikely to be exceedance of the
quality standard for Nitrogen dioxide, and therefore no need to proceed with a
Detailed Assessment.

However, the situation will be kept under review, and monitoring data
will be reported annually.

Conclusions from Assessment of Sources

Having assessed new sources since the 2009 Updating and Screening Report,
Isle of Wight Council is satisfied that there are unlikely to be exceedances of
the Quality Standards, and that it is will not be necessary to proceed with a
Detailed Assessment.

Proposed Actions

Isle of Wight Council Environmental Health will continue to liaise with
Council Planning Services to identify new potentially polluting developments
that may arise. Any Air Quality Assessments deemed to be necessary will be
undertaken at the Planning stage.

Isle of Wight Council will continue to carry out the monitoring programme for
nitrogen dioxide using diffusion tubes.

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

There are no automatic monitoring sites on the Isle of Wight.

2.1.2 Non-Automatic Monitoring

There are 2 monitoring sites on the Isle of Wight. These have been described in previous reports.

The tubes are supplied and analysed by Bureau Veritas. They provide 50% TEA in acetone.

They report:

Laboratory: ESGLtd

Preparation Method: 50% TEA v/v in Acetone

Analytical Method: U.V.Spectrophotometry

Analysis carried out in accordance with documented in-house L
GLM6

Uncertainty of measurement - 1.40%+/-

Limit of Detection - 2.89µg/m³

They are UKAS accredited.

Table 2.2 Details of Non- Automatic Monitoring Sites

Site Name	Site Type	OS Grid Ref		Pollutants Monitored
Example 1	Urban backgrd.	X111222	Y222111	NO ₂
IOW4	Kerbside	450377	089557	NO ₂
IOW10	Roadside	459101	083717	NO ₂

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2.2 Comparison of Monitoring Results with Objectives

2.2.1 Nitrogen Dioxide

Table 2.4 Results of Nitrogen Dioxide Diffusion Tubes

Site ID	Location	Within AQMA?	Relevant public exposure? Y/N	Data Capture for monitoring period %	Data Captured for full calendar year 2013 %
IOW4	Fairlee Road	N	Y	100	
IOW10	Lake Hill	N	Y	90	

Location IOW4 – Fairlee Road

This location is the same as reported in previous years. Triplicate tubes were installed at a lamp-post at about 0.5 m from the kerb. The nearest relevant receptor is the front of a house, which is 11 m from the kerbside.

The results of all tubes were averaged, then multiplied by the correction factor appropriate for Gradco 50% TEA in acetone, which is 0.93, giving a final concentration of $47.81 \mu\text{g}/\text{m}^3$.

The purpose of monitoring NO₂ is to determine/calculate the level of exposure that can be expected to be experienced by the most vulnerable receptor. The predicted annual mean NO₂ concentration at the receptor will reduce the further away you are from the road. The predicted annual mean NO₂ concentration at the receptor, which is 11m from the road, is calculated using the DEFRA model <http://laqm.defra.gov.uk/documents/NO2withDistancefromRoads>.

Distance from KERB to the tube	0.1 metres
Distance from the KERB to the nearest receptor	11 metres
Local annual mean background NO₂ concentration	10.7232215 $\mu\text{g}/\text{m}^3$
Measured annual mean NO₂ concentration (in $\mu\text{g}/\text{m}^3$)?	47.81 $\mu\text{g}/\text{m}^3$
The predicted annual mean NO₂	23.8 $\mu\text{g}/\text{m}^3$

concentration (in $\mu\text{g}/\text{m}^3$) at your receptor	
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The average background level for NO₂ was for the Isle of Wight
<http://laqm.defra.gov.uk/maps/maps2010.html>

This calculated level of 23.8 $\mu\text{g}/\text{m}^3$ is well below the limit of 40 $\mu\text{g}/\text{m}^3$

Location IOW10 - Lake Hill

This location is the same as reported in previous years. Triplicate measurements were taken at a lamp-post at about 3 m from the kerb. The nearest relevant exposure point is a house, which is 11 m from the kerbside.

The results of all tubes were averaged, then multiplied by the correction factor appropriate for Gradco 50% TEA in acetone, which is 0.93, giving a predicted concentration of **21.83 $\mu\text{g}/\text{m}^3$** .

The purpose of monitoring NO₂ is to determine/calculate the level to which you will be exposed to for a significant amount of time as opposed to peak levels. As NO₂ pollution levels will reduce the further away you are from the source, the nearest residents from is 11m is calculated using the DEFRA guidance
<http://laqm.defra.gov.uk/documents/NO2withDistancefromRoads.pdf>

Distance from KERB to the tube	3 metres
Distance from the KERB to the nearest receptor	20 metres
Local annual mean background NO₂ concentration	10.7232215 $\mu\text{g}/\text{m}^3$
Measured annual mean NO₂ concentration (in $\mu\text{g}/\text{m}^3$)?	21.83 $\mu\text{g}/\text{m}^3$
The predicted annual mean NO₂ concentration (in $\mu\text{g}/\text{m}^3$) at your receptor	16.4 $\mu\text{g}/\text{m}^3$

The average background level for NO₂ was for the Isle of Wight
<http://laqm.defra.gov.uk/maps/maps2010.html>

This calculated level of 16.4 $\mu\text{g}/\text{m}^3$ is well below the limit of 40 $\mu\text{g}/\text{m}^3$.

2.2.2 PM₁₀

There is no monitoring of PM10 on the island.

2.2.3 Sulphur Dioxide

There is no monitoring of Sulphur dioxide on the Island.

2.2.4 Benzene

There is no monitoring of benzene on the Island.

2.2.5 Other pollutants monitored

No pollutants other than nitrogen dioxide are monitored.

2.2.6 Summary of Compliance with Air Quality Objectives

Isle of Wight Council has examined the results from monitoring. Concentrations are all below the objectives, therefore there is no need for a Detailed Assessment.

3 New Local Developments and Planning Applications

3.1 Road Traffic Sources

There are no new sources for 2012.

3.2 Other Transport Sources

There are no new sources for 2012.

3.3 New and proposed Industrial and Commercial Sources

3.3.1 Cheverton Chalk & Gravel, Cheverton Shute, Shorewell.

This was an application for two containerised biofuel generators. The site is Permitted by the Environment Agency to handle wastes. This application was for a total generation capacity of 100kW, fired by virgin wood chip. It is in a very remote rural location, and was assessed as being unlikely to have a significant impact on air quality.

3.3.2 Isle of Wight Hunt Kennels

This was a pre-application discussion on a proposal to install an incinerator for fallen stock. Advice was given to the Local Planning Authority on what would be required from an air quality standpoint. To date, no application has resulted

3.3.3 Re-development of Sandown Bay Holiday centre

This was an application that had been determined by the LPA as requiring an ES. The response from Environmental Health to the LPA highlighted the need for a consideration of air quality matters, if the proposal was include CHP. To date, no application has resulted.

3.3.4 Proposed Concrete batching facility at East Cowes

This application was withdrawn.

3.3.5 Biomass centre, Waitrose, East Cowes

This application was accompanied by a Dispersion Modelling Assessment (<http://www.iwight.com/council/departments/planning/appsDIP/temptifpdf/iutsof55erly4n45skarhg45110201040716.pdf>). This assessment concluded that the design proposal would not result breach any of the air quality standard for England and Wales. The Biomass has been in operation for nearly two years. There have been several incidents which have resulted in complaints to the council over odours being detected in the area. As a result the Company running the centre has arranged for air quality monitoring to be carried out to ensure there are no exceedences of any air quality objectives.

3.3.6 Redevelopment of Cowes High School

This includes the proposal to heat the school with a biomass boiler. A modelling assessment was carried out by AEA Technology which demonstrated that the proposal will not result in breaches of the air quality standards.

3.3.7 Temporary biomass boiler, Pan Extension

This proposal is for a temporary plant to supply the first phase of the development, pending construction of the final CHP unit to serve the whole development. This will consist of two small boilers, one fuelled by gas, the other being a dual-fuel oil and gas boiler. Environmental Health have accepted the air quality assessment which identified that there will be no exceedences of the Air Quality Standards.

3.3.8 Proposed Asphalt Plant Median Wharf, Cowes

A Planning application has been received for a roadstone coating plant to produce hot asphalt, and a Cold Asphalt recycling mixing plant and Jaw crusher to process road plannings from the islands roads. Aside from this the applicant has applied for a Permit under Environmental Permitting (England and Wales) Regulations 2010 for the hot asphalt process. A meeting of the Council's Regulatory Committee was held on the 25 February 2013 to determine whether to grant or refuse the environmental permit. The committee determined that the application had insufficient information relating to current air quality levels in that area, and baseline air quality monitoring was required before any further decisions will be made.

3.3.9 IOW Grain TCP/16533/N-P/00973/12 - Drying plant and Biomass

IOW Grain was recently given planning permission to install a 200Kw biomass to burn waste material from grain chaff. The application also included a replacement of the oil fuelled grain dryer burners with natural gas fuelled unit. Although there will be an increase in pollution as a result of the bio-mass, Environmental Health calculated that the overall emissions from the site will be negligible as there will be an improvement from the replacement of the oil powered grain drying with a gas powered unit.

3.3.10 Biomass West Wight Swimming pool

3.3.11 Pennyfeathers housing development

An application is currently being considered for a 900 home housing development which includes a 3 MW gas powered combined heat and power plant. An air quality assessment has been provided with the application to predict the increase in air pollution levels from traffic and the CHP associated with the development. Environmental Health have accepted the air quality assessment which identified that there will be no exceedences of the Air Quality Standards.

3.3.12

TCP/03879/P - P/00438/13 - Proposed waste transfer & recycling plant

Island Waste Services Ltd

3.3.13 Morrisons, Lake Extension of store - TCP/19905/M, P/01912/12

The extension will result in an increase of no more than 50 car parking spaces. This increase in pollution is considered to be negligible and an air quality assessment was not requested.

Isle of Wight Council

3.3.14 Northcourt Manor, Shorwell - TCPL/19451/E-P/01967/12 - Biomass boiler within container

Environmental Health made no objections to this application as a rural location with expected low background levels and that this biomass will be of sufficient distance from any neighbouring property not to cause any increase in air pollution.

3.3.15 Southern water East Yar Road, Sandown, TCP/4573/L-P/01220/12 - 350kw Combined heat/power plant

Currently the methane generated from the plant is burnt already burnt off, and the application is to generate energy from this flare.

3.3.16 Marine business park (re-advertised) Kingston Marine Park TCP/30542-P/00494/11 –

3.3.17 Bardon Vectis St Georges Down - TCP/31126-P/00902/12 - Replacement asphalt plant

The plant will be permitted under Environmental Permitting (England and Wales) Regulations 2010 for roadstone coating. This is a direct replacement with a new unit. If production remains the same then emissions are likely to be improved.

TCP/31299-P/00944/12 - new foodstore, petrol station, CP - 4/1/13 St. Georges Way, Newport, Isle Of Wight

TCP/13095/C-P/01378/12 - Anaerobic digestion plant Stag Lane, Newport, Isle Of Wight

Anaerobic Digestion Plant - Request for EIA Screening Opinion Gore Cross

TCP/17104/N-P/01835/12 - Construction of supermarket Afton Road, Freshwater, Isle of Wight

TCP/30985-P/00472/12 - Proposed asphalt plant (readvertised)

3.4.1 Bardon Vectis quarry extension, St Georges Down, Newport

This was accompanied by a proposal to minimise emissions of particulates from quarrying operations. As a geographical extension to an existing quarry, this does not involve an intensification of use. Changes to potential emissions will be minimal.

Isle of Wight Council

Isle of Wight 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.

Isle of Wight 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.**

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3 Air Quality Planning Policies

3.1 Sustainable Community Strategy

The Sustainable Community Strategy (<http://www.eco-island.org.uk/documents/eco%20island%20booklet.pdf>) is branded "EcoIsland". The Local Planning Authority has referred to it in the development phase of the Island Plan.

3.2 Island Plan

The Core Strategy of the Island Plan is still in draft form only, and the draft documents are available at http://www.iwight.com/living_here/planning/Planning_Policy/Island_Plan/Core_Strategy/

The Vision for the Core Strategy is:

We want the Isle of Wight to become a world renowned Eco-Island, with a thriving economy and a real sense of pride, where residents and visitors enjoy healthy lives, feel safe and are treated with respect.

Under this Vision are a number of priority themes, including:

*We will:
Create wealth whilst reducing our carbon footprint;
Produce as much of our energy as possible from renewable sources;*

Among the Core Strategy Objectives are the following:

- 2) To ensure that all development supports the principles of sustainable development.*
- 9) To provide renewable sources of energy that contribute to the Island being self-sufficient in renewable electricity production.*
- 10) To reduce the need to travel, to improve accessibility across the Island and maintain functional transport links with the mainland.*
- 11) To manage the Island's waste in a sustainable and environmentally sensitive way.*
- 12) To manage the Island's minerals supply in a sustainable and environmentally sensitive way.*

The Sustainability Appraisal of the draft Island Plan was undertaken between May and October 2010. This Appraisal examined 6 possible Spatial Strategy Options, and appraised them against a number of environmental impacts, including the effect on air quality.

Isle of Wight Council

After progressing through various consultation and assessment stages, it is anticipated that the final version of the Core Strategy will be adopted in December 2011.

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5 Local Transport Plans and Strategies

Isle of Wight Local Transport Plan 2011-2038

4.1 The Island Transport Plan (ITP) was adopted in June 2011 and is the third statutory Local Transport Plan (LTP) for the Island. Compiled in accordance with government legislation, the plan accords with local plans and policies including Eco-Island, the Council's Corporate Plan and the Island Plan Core Strategy. It covers the years 2011-2038 to fit with the delivery of our road maintenance Private Finance Initiative (PFI) and includes a local transport "vision", supported by six key "goals" and six "objectives".

These six objectives are to:

Enhance and maintain our highway assets.
Maintain and improve journey time reliability and predictability for all road users.
Protect and enhance the environment and quality of life.
Improve road safety.
Reduce the need to travel.
Promote travel choice.

The ITP is formed of two distinct elements:

An area wide strategic policy (or strategy) and.
An implementation plan setting out how the local authority intends to deliver improvements on the ground.

The production of two separate documents allows the Council the flexibility to review the strategy as required and tailor the implementation plan to more closely reflect the funding available and local priorities. The ITP can be viewed at the Council's website.

4.2 The Island Transport Plan (LTP3) will run until 2038. Both LTP2 and LTP3 can be viewed at the Council's website.

6 Local Transport Plans and Strategies

LOCAL TRANSPORT PLAN

The Isle of Wight Council's Local Transport Plan (LTP) sets out the framework for the development of a sustainable transport strategy on the Isle of Wight.

Island Transport Plan (LTP3)

The Island Transport Plan is the Council's third local transport plan and will run until 2038. The Transport Act 2008 requires the plan to be divided into two distinct elements: an area wide strategic policy (or strategy) and an implementation plan setting out how the local authority intends to deliver improvements on the ground. The Council also decided to prepare a Background Paper to support the plan.

- [Strategy 2011-2038](#)
- [Implementation Plan 2011-2013](#)
- [Background Paper](#)

The final plan was adopted by the Council's Cabinet on 10 May 2011 and endorsed by Full Council on 15 June 2011 (Cabinet papers available here).

Assessments

As part of the plan development, the plan was subject to a number of statutory assessments:

- [Equality Impact Assessment \(EQIA\)](#)
- [Habitats Regulations Assessment – Screening Statement](#)
- [Habitats Regulations Assessment – Screening Statement \(Volume 2\)](#)
- [Strategic Environmental Assessment – Scoping](#)
- [Strategic Environmental Assessment – Environmental Report](#)
- [Strategic Environmental Assessment – Environmental Report \(Appendices\)](#)
- [Strategic Environmental Assessment – Post Adoption Statement \(including Health Impact Assessment\)](#)

LTP2 The second Local Transport Plan (LTP2) covered the period from 2006 to 2011.

Due to the size of the document, the plan has been divided into sections which can be downloaded below:

- [Foreword](#)
- [Access to Information](#)
- [Contents Page](#)
- [Executive Summary](#)
- [Chapter A – Introduction](#)
- [Chapter B – Transport and the Wider Context](#)
- [Chapter C – Transport Issues and Opportunities](#)
- [Chapter D – Long Term Strategy](#)
- [Chapter E – Five Year Strategy](#)
- [Chapter F – Increasing Accessibility](#)
- [Chapter G – Promoting Economic Prosperity and Regeneration](#)
- [Chapter H – Improving Road Safety and Health](#)
- [Chapter I – Improving Air Quality and the Environment](#)
- [Chapter J – Tackling Congestion](#)
- [Chapter K – Ensuring Effective Management](#)
- [Chapter L – Delivering the Strategy](#)
- [Chapter M – Investment Programme](#)
- [Chapter N – Performance Indicators](#)
- [Chapter N – Mandatory Indicators form – part 1](#)
- [Chapter N – Mandatory Indicators form – part 2](#)
- [Chapter O – Additional Information](#)

Supporting Documents

The plan also includes an annex containing copies of the following supporting plans and strategies:

- [Annex A – Bus Strategy](#)
- [Annex B – Bus Information Strategy](#)

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- [Annex C – Rail Strategy](#)
- [Annex D – Smarter Choices Strategy](#)
- [Annex E – Rights of Way Improvement Plan](#)
- [Annex F – School Travel Plan Strategy](#)
- [Annex G – Road Safety Plan](#)
- [Solent Transport Strategy](#)
- [SEA Statement and Environmental Report](#)

Annual Progress Report (APR) 2007

Although not mandatory, the Council produced an Annual Progress Report which covered the first year of LTP2 (2006/07):

- [2007 APR – including Appendices A-E](#)
- [Appendix E – Solent Transport Strategy: 2007 Monitoring Report](#)
- [2007 APR Summary Leaflet](#)

Progress Report 2008

The Council also prepared a report which looked back over 2006/07 and 2007/08) and forward to 2011:

- [2008 Progress Report \(including Appendices 1-7\)](#)
- [2008 APR Summary Leaflet](#)

LTP1 covered the years from 2001 to 2006. The Council also produced an LTP1 Delivery Report.

6.1 Isle of Wight Council Local Transport Plan

The current Local Transport Plan (LTP2) covers the years 2006- 2011 and can be found at www.iwight.com/transport

The council is currently preparing the next local transport plan, the delivery of which will be reliant on the agreed roads maintenance 25 year Private Finance Initiative (PFI). Details of this plan, the Strategic Environmental; Assessment (SEA) and Habitats Regulation Assessment (HRA) can be found at www.iwight.com/transport

Details of the roads maintenance PFI can be found at www.iwight.com/highways-pfi/project.asp

6.2 Isle of Wight Council Speed Limit Policy

This may be found at <http://www.iwight.com/council/committees/cabinet/1-10-09/PAPER%20C%20-%20APPENDIX.pdf>. It includes the text:

Emissions & environment – Vehicle emissions and vehicle noise are greatest at very low and very high speeds. Due to the potential impact on air quality and noise pollution, 20mph limits will not be considered on high volume roads.

~~5.36.3~~ Isle of Wight Council Sustainable Travel to School Strategy

This is available here:

http://www.iwight.com/living_here/environment/Transport_Strategies/images/2SustainableTraveltoSchoolStrategy.pdf

~~5.46.4~~ School Travel Plans

All schools now have adopted plans in place; copies of which can be found on the Eduwight site: http://eduwight.iow.gov.uk/the_lea/policies_plans/School_Travel_Plan/School_Travel_Options/default.asp

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7 Implementation of Action Plans

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8 Conclusions and Proposed Actions

8.1 Conclusions from New Monitoring Data

The monitoring data for 2010 demonstrate that air quality within the Isle of Wight Council's area will not exceed the AQ Objectives. It will, therefore, not be necessary to proceed to a Detailed assessment.

8.2 Conclusions relating to New Local Developments

Planning applications received, where relevant, have been assessed for their potential impact on air quality. None of them individually or in total will result in exceedences of the Air Quality Standards.

8.3 Proposed Actions

The monitoring data demonstrate that the air quality at sites of relevant exposure is unlikely to exceed the Air Quality Standards, and there is therefore no need to proceed to a Detailed Assessment.

The reason why the monitored values for 2010 on Fairlee Road are significantly higher than in previous years is not known. However, there have been various road closures for road works during the year, which may have resulted in some traffic being diverted from other routes onto Fairlee Road.

Monitoring will be continued.

Deploy Nox tubes to ryde area

9 References

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

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Appendices

Appendix A: Quality Assurance / Quality Control (QA/QC) Data

Appendix B:

Appendices may include maps, tables, lists of processes, etc. Include as many as necessary.

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Appendix A: QA:QC Data

Diffusion Tube Bias Adjustment Factors

Bias adjustment is effectively a calculated factor which shows whether diffusion tubes are over or under reading ambient concentrations and therefore allows for a correction to be made.

As there is no local automatic monitoring, Isle of Wight Council uses a national factor as given on the review and assessment help desk website¹ for Bureau Veritas (Gradko 50% TEA in acetone).

Factor from Local Co-location Studies (if available)

As the council does not carry out any continuous monitoring on the Island the national bias adjustment factor for Bureau Veritas (Gradko 50% TEA in acetone) has instead been used. The factors used in this assessment are as follows:

2000 - 1.2
2001 - 1.45
2002 - 1.27
2003 - 1.11
2004 - 1.1
2005 - 1.1
2006 - 1.01
2007 - 0.98
2008 - 0.93
2009 - 0.97
2010 - 1.03
2011 – 0.93

Discussion of Choice of Factor to Use

The Council has used the national factor for Bureau Veritas (Gradko 50% TEA acetone) as no local continuous monitoring is carried out.

PM Monitoring Adjustment

Isle of Wight Council

The Council does not carry out any local monitoring for PM₁₀.

Short-term to Long-term Data adjustment

This has not been necessary for the three years covered by this report.

QA/QC of automatic monitoring

No automatic monitoring is carried out on the Island.

QA/QC of diffusion tube monitoring

The Workplace Analysis Scheme for Proficiency (WASP) is an independent analytical performance testing scheme, operated by the Health and Safety Laboratory (HSL). WASP formed a key part of the former UK NO₂ Network's QA/QC, and remains an important QA/QC exercise for laboratories supplying diffusion tubes to Local Authorities for use in their Local Air Quality Management work.

Defra and the Devolved Administrations advise that diffusion tubes used for LAQM should be obtained from laboratories that have demonstrated satisfactory performance in the WASP scheme.

Out of a rating of GOOD, ACCEPTABLE, WARNING AND FAILURE, the results for 2008 show that Bureau Veritas (Gradko) were rated as GOOD. This is classified as follows:

GOOD: Results obtained by the participating laboratory, Bureau Veritas (Gradko 50% TEA in acetone) are on average within 13% of the assigned value. This equates to an RPI of 169 or less.

I attach a copy of a report on methodology and QA / QC from Environmental Scientific Group Ltd., Didcot (Appendix B). This report is copyright Environmental Scientifics Group Ltd., Unit 12, Moorbrook, Southmead Industrial Estate, Didcot, Oxfordshire, OX11 7HP and may not be reproduced without their consent.

Figure A1 Table of precision of diffusion tubes

AEA Energy & Environment
From the AEA group

Checking Precision and Accuracy of Triplicate Tubes

Diffusion Tubes Measurements									Automatic Method		Data Quality Check		
Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 µgm ⁻³	Tube 2 µgm ⁻³	Tube 3 µgm ⁻³	Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of mean	Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data
1	05/01/2011	02/02/2011	56.8	60.5	56.5	58	2.2	4	5.5			Good	
2	02/02/2011	02/02/2011	57.7	60.8	63.0	61	2.7	4	6.6			Good	
3	02/02/2011	31/03/2011	57.0	59.8	56.8	58	2.1	4	5.1			Good	
4	31/03/2011	27/04/2011	43.1	54.2	39.8	46	7.5	17	18.7			Good	
5	27/04/2011	02/06/2011	36.3	36.2	39.1	37	1.6	4	4.1			Good	
6	02/06/2011	29/06/2011	40.5	40.8	41.7	41	0.6	2	1.6			Good	
7	29/06/2011	03/08/2011	47.9	45.8	37.8	44	5.3	12	13.2			Good	
8	03/08/2011	31/08/2011	46.0	43.0	41.3	43	2.4	5	5.9			Good	
9	31/08/2011	29/09/2011	47.3	44.1	48.1	47	2.1	5	5.3			Good	
10	29/09/2011	02/11/2011	54.5	58.0	54.6	56	2.0	4	4.9			Good	
11	02/11/2011	29/11/2011	57.2	47.6	54.4	53	4.9	9	12.3			Good	
12	29/11/2011	04/01/2012	48.9	44.3	51.3	48	3.6	7	8.8			Good	
13													

It is necessary to have results for at least two tubes in order to calculate the precision of the measurements

Overall survey → Good precision #DIV/0!

Site Name/ ID:	Precision 12 out of 12 periods have a CV smaller than 20%	(Check average CV & DC from Accuracy calculations)
Accuracy (with 95% confidence interval) without periods with CV larger than 20% Bias calculated using 0 periods of data Bias factor A Bias B Diffusion Tubes Mean: µgm ⁻³ Mean CV (Precision): µgm ⁻³ Automatic Mean: µgm ⁻³ Data Capture for periods used: Adjusted Tubes Mean: µgm ⁻³	Accuracy (with 95% confidence interval) WITH ALL DATA Bias calculated using 0 periods of data Bias factor A #DIV/0! Bias B #DIV/0! Diffusion Tubes Mean: #DIV/0! µgm ⁻³ Mean CV (Precision): #DIV/0! µgm ⁻³ Automatic Mean: #DIV/0! µgm ⁻³ Data Capture for periods used: ##### #DIV/0! Adjusted Tubes Mean: #DIV/0! µgm ⁻³	<p>Jaume Targa jaume.targa@aeat.co.uk Version 03 - November 2005</p>

Appendix B – Report from the laboratory

NO₂ Diffusion Tube Information – 2011/2

Supplier: Environmental Scientifics Group Ltd

Address: Unit 12
Moorbrook
Southmead Industrial Estate
Didcot
Oxfordshire
OX11 7HP

Diffusion Tube Performance:

Tube Type: 50% Acetone : 50% TEA

Uncertainty: Under European guidelines, diffusion tubes are considered an indicative method, and as such the uncertainty is defined as <20%. (In field intercomparisons ESG's diffusion tubes perform at <10% uncertainty.)

Quality Control: A quality control sample of known concentration is run every 10 samples. The data generated is compared to acceptable limits as determined statistically using a Shewhart Chart control system.

Analytical Repeatability: In 2011 several thousand QC samples were analysed, achieving a relative standard deviation of 1.09%

Confidence Intervals: Assuming a normal distribution, 95.45% of results should fall within 2σ ($\pm 2.18\%$) and 99.73% of results should fall within 3σ ($\pm 3.18\%$) of the expected value.

Limit Of Detection: 0.03 μ g NO₂ on the tube.
Over a 4-week exposure this would equate to 0.6 μ g/m³, or 0.3ppb

Quality Assurance: The manufacture and analysis of NO₂ diffusion tubes is covered by our UKAS accreditation

The method meets the requirements laid out in DEFRA's "Diffusion Tubes For Ambient NO₂ Monitoring: A Practical Guidance."

The laboratory has taken part in the WASP proficiency scheme since it's inception, and has maintained the highest ranking of 'Satisfactory'

Analytical Information :

Analytical Technique: Colorimetric

Instrument: Continuous Flow Auto-analyser

Principle: Nitrite ions react with Sulphanilamide to form a diazonium compound. In acidic conditions, this couples with N-(1-naphthyl)-ethylenediamine dihydrochloride to form a purple azo dye. Utilising spectrophotometric analysis at 540nm, the NO₂ concentration is calculated by quantification of the colour change in comparison to that produced by known standards.

Calibration: Standards are made from brought in 1000ppm standard – These standards hold Iso Guide 34 and ISO/IEC 17025 certification

Isle of Wight Council

The instrument is calibrated every run

The instrument calibration must achieve a coefficient of linearity >0.999 to be considered acceptable.

System Suitability Checks: System suitability checks are used to ensure performance within expected criteria. These include baseline, peak height and gain.

Extraction: To ensure complete, homogeneous extraction, tubes are mixed on a vibrating tray for not less than 30 minutes.

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