

**REPORT TO: ENVIRONMENTAL AND CONSUMER PROTECTION COMMITTEE
(16TH JUNE 2003)**

**REPORT ON: UPDATING AND SCREENING ASSESSMENT OF AIR QUALITY IN
DUNDEE**

**REPORT BY: ACTING DIRECTOR OF ENVIRONMENTAL AND CONSUMER
PROTECTION**

REPORT NO: 310-2003

1.0 PURPOSE OF REPORT

- 1.1 To inform the Committee of the contents of the Updating and Screening Assessment of Air Quality and the follow up actions that are required in Dundee. Copies of the full report are available through Group Secretaries.

2.0 RECOMMENDATIONS

It is recommended that the committee;

- 2.1 Notes the Air Quality Updating and Screening Assessment, agrees its principal points and approves its submission to the statutory consultees, the Scottish Executive and Scottish Environment Protection Agency,
- 2.2 Notes that having applied the checklist criteria assessment no further actions are required in relation to Carbon Monoxide, Benzene, 1,3 butadiene and Lead. The levels are already below the objective levels, and there are currently no significant sources of emissions within the Dundee City Council area or in neighbouring authorities for these pollutants,
- 2.3 Approves the completion of a Detailed Assessment in respect of NO₂, SO₂ and PM₁₀. The purpose of the detailed assessment is to determine whether the local authority has a statutory requirement to designate an Air Quality Management Area/s in respect of the aforementioned pollutants, and
- 2.4 Approves the completion of the further rounds of Air Quality Review and Assessment in line with agreed statutory timeframe contained in Appendix 1 of this report.

3.0 FINANCIAL IMPLICATIONS

- 3.1 The expenditure required for the financial year 2003/2004 can be met from the Environmental and Consumer Protection Department's Budgets.
- 3.2 At the present time, the resource required to complete the further rounds of Review and Assessment of Air Quality in Dundee until 2010 cannot be fully quantified. The ongoing financial costs will be dependent on the findings of the Detailed Assessment, which will be completed by the end of April 2004, and any further legislative requirements. The costs will be kept under constant review.

4.0 **LOCAL AGENDA 21 IMPLICATIONS**

4.1 The completion of the Air Quality Updating and Screening Assessment for Dundee City Council should serve to enhance the aims of Dundee 21.

4.2 The key theme that will be directly addresses is:

- Pollution is limited to levels at which natural systems can cope.

5.0 **EQUAL OPPORTUNITIES IMPLICATIONS**

5.1 None

6.0 **REPORT**

6.1 Background to Air Quality Regime.

6.1.1 The Air Quality Framework Directive, (Directive 96/62/EC on ambient air quality assessment and management), established a framework under which the EU sets limit values or target values for specific pollutants. The limit values were derived from World Health Organisation (WHO) guideline values that are based on medical evidence of the effects of particular pollutants on health. The Directive and subsequent Air Quality Daughter Directives have been transposed into UK legislation, providing a framework for air quality control in the UK through air quality management and air quality standards. The Environment Act 1995 requires Local Authorities to undertake air quality reviews from time to time. In areas where it is considered that an air quality objective/s will be exceeded, Local Authorities are required to declare an Air Quality Management Area/s and draw up and implement action plans to improve air quality.

6.1.2 The UK Government and Devolved Administrations recently revised their strategic policy framework and technical guidance for air quality management. The Department for Environment Food and Rural Affairs and the Scottish Executive published the new policy and technical guidance in January 2003. The guidance is designed to support local authorities in carrying out their duties under the Environment Act 1995, the Air Quality Regulations 2000 and the Air Quality (Scotland) Amendment Regulations 2002. The National Air Quality Strategy establishes the framework for air quality improvements. This strategy is based on measures agreed at national and international level. However, it is recognised that areas of poor air quality will remain, and that these will be dealt with most effectively using local measures implemented through the Local Air Quality Management (LAQM) regime.

- 6.1.3 Dundee City Council has completed the first round of air quality review and assessments. The Council is now required to proceed to the second round of review and assessment. This is undertaken by means of two steps in which sources of emissions to air are re-assessed against the revised guidance to identify whether the situation has changed since the first round and if so, what impact this may have on the achievement of the air quality objectives.
- 6.2 Main Findings of First Round of Air Quality Review and Assessment.
- 6.2.1 The stage 1 report (1998) concluded that although Dundee's air quality was generally good, there was insufficient information available to be confident that the objectives would be met in all parts of the City and that a stage two and/or three review was required for all seven key pollutants.
- 6.2.2 The principal findings of the Stage 2 report (2000) were that the national air quality standards would be achieved for all pollutants with no further action required. It was therefore concluded that it was not necessary to declare an AQMA in respect of any pollutant at that time. However, it was recognised that further monitoring was required. This was reflected in the comments received from the statutory consultees.
- 6.3 Main Findings of Second Round of Air Quality Review and Assessment.
- 6.3.1 The document for which this is a covering report is an Air Quality Updating and Screening Assessment (USA) for Dundee City Council. It is the first step in the second round of air quality review and assessment process and has been undertaken in accordance with the revised Government Guidelines LAQM.TG(03).
- 6.3.2 The Updating and Screening Assessment (USA), which has to be undertaken by all local authorities is based on a checklist to identify those matters that have changed since the first round was completed, and which may now require further assessment.
- 6.3.3 Where the USA identifies a risk that an air quality objective will be exceeded at a location where the public could be exposed, the authority is required to proceed to a second step, a detailed assessment. This should identify with reasonable certainty whether an exceedance is likely to occur and should give sufficient information as to the magnitude and geographic extent of any exceedance. Where such an area is identified, the local authority should then declare an Air Quality Management Area.
- 6.3.4 The following matters were evaluated against the Updating and Screening checklist criteria for each of the key pollutants identified in the revised Government guidance:
- Review the conclusions of the first round of review and assessment for each of the seven key pollutants against the revised standards and objectives.
 - Identify and evaluate any new or proposed sources of emissions, not previously considered in the first round of review and assessment, for each of the pollutants, including major roads, new developments and industry located both locally and in neighbouring authorities.

- Identify and evaluate the significance of existing sources of emissions at new receptors e.g. new build at City Quay.
- Identify and evaluate any significant changes to existing sources of emission that may have an effect on any of the seven key pollutants. This will include alterations to industrial processes, traffic management particularly in congested streets where there is a high percentage of Heavy Duty Vehicles (HDV) or/and canyon effects (narrow streets with high sided buildings on both sides of the street).
- Identify and evaluate the implications of changes in the Benzene and PM10 standards.
- Interpret the significance of any additional air quality monitoring/modelling undertaken since the first round of review and assessment for each of the seven key pollutants.
- Undertake assessments with nomograms and other simple screening tools in accordance with the Government Guidance, in locations where there is relevant public exposure and a risk of exceeding the objectives for any of the seven key pollutants.
- Identify any locations or pollutants where it will be necessary to undertake a Detailed Assessment in terms of the Government guidelines.

6.3.5 The USA has identified that there is a risk that the National Air Quality Objectives will not be achieved for NO₂, SO₂ and PM₁₀. The authority is therefore required to undertake a Detailed Assessment in respect of these pollutants. The following matters will have to be examined.

Nitrogen Dioxide

1. The screening monitoring data suggests that there will be exceedances of the annual mean National Air Quality Standard in the following locations:

- | | |
|-------------------------------|--------------------|
| • Abertay (North Marketgait) | • Logie Street |
| • Clepington Road/Forfar Road | • Seagate |
| • Dock Street | • Union Street |
| • Kingsway/Strathmartine Road | • Victoria Street |
| • Lochee Road | • Whitehall Street |

Further monitoring is also required to establish the possibility of the exceedances of the 1-hour mean at those locations where exposure is relevant. This will be used to validate future modelling which will predict the geographical extent of the exceedances at these locations in order to determine the boundaries of any Air Quality Management Areas which may need to be declared.

2. There is insufficient information in relation to the checklist criteria stipulated in the guidance to determine whether a detailed assessment is required in respect of the following:

- Narrow congested streets with residential properties close to the kerb
- Junctions
- Busy streets where people may spend 1-hour or more close to traffic; and
- Roads with high flow of buses and/or HGV's

Further assessment will be undertaken of these matters to determine the likelihood of exceedances of the annual and 1-hour National Air Quality Standards.

Sulphur Dioxide

Whilst it is not necessary to proceed to detailed assessment for the majority of the checklist criteria for sulphur dioxide, it is necessary to proceed in relation to the new housing in the proximity of Nynas AB UK for all SO₂ National Air Quality Standards.

PM₁₀

1. Having applied the checklist criteria, the annual mean results from the continuous real-time monitors located in Union Street and Dock Street have shown that the annual mean of 40ug/m³ (2004) will be achieved. However the predicted figures for 2010 are currently showing that the annual mean of 18ug/m³ will be exceeded at both locations.
2. There are a number of junctions which are showing predicted exceedances of the 2010 annual mean.

It is therefore necessary to proceed to a detailed assessment in respect of PM₁₀ for a number of junctions and to further examine the predicted exceedances of the 2010 annual mean at both monitoring locations.

7.0 **CONSULTATIONS**

Chief Executive
Director of Finance
Director of Support Services
Director of Planning and Transportation
Director of Corporate Planning

Jim Laing, Acting Director of Environmental & Consumer Protection
Date: 9th June 2003

Appendix 1

Timescales for submission of Reviews and Assessment and Annual Progress Reports

LAQM Activity	Completion Date (end of)	Which Authorities?
Updating and screening assessment	May 2003	All authorities.
Detailed assessment	April 2004	Those authorities which have identified the need for one in their April 2003 updating and screening assessment.*
Progress report	April 2004	Those authorities which identified that there was no need for a detailed assessment in their April 2003 updating and screening assessment
Progress report	April 2005	All authorities
Updating and screening assessment	April 2006	All authorities
Detailed assessment	April 2007	Those authorities which identified that there was no need for a detailed assessment in their April 2006 updating and screening assessment.
Progress report	April 2008	All authorities
Updating and screening assessment	April 2009	All authorities
Detailed assessment	April 2010	Those authorities which have identified the need for one in their April 2009 updating and screening assessment.
Progress report	April 2010	Those authorities which identified that there was no need for a detailed assessment in their April 2009 updating and screening assessment.