# 1 Introduction to the Updating and Screening Assessment

## 1.1 PURPOSE OF THE UPDATING AND SCREENING ASSESSMENT

The second round of air quality review and assessments is now complete and all local authorities should have completed all necessary stages. Where the likelihood of exceedences of air quality objectives have been identified in areas of significant public exposure, an air quality management area should have been declared, followed by a Further (formerly 'Stage 4') Assessment and the formulation of an action plan detailing measures intended to reduce or to eliminate exceedences.

Local authorities are now required to proceed to the third round of review and assessment. The updating and screening assessment reassesses sources of emissions to air to identify whether the situation has changed since the second round of review and assessment. Changes are reviewed to assess the potential impact on predicted exceedences of the air quality objectives. Such changes might include significant traffic growth on a major road, which had not been foreseen, construction of a new industrial plant with emissions to air, or significant changes in the emissions of an existing plant.

The third round of review and assessment is undertaken in two steps. The first step is an Updating and Screening Assessment. This Assessment updates the findings of the previous Review and Assessment cycle, undertaken for all pollutants identified in the Air Quality Regulations. Where a significant risk of exceedence is identified for a pollutant it will be necessary for the local authority to proceed to a Detailed Assessment. Where a local authority does not need to undertake a Detailed Assessment, a progress report is required instead by the following year.

## 1.2 STRUCTURE OF THE REPORT

The report is structured as follows:

- **Section 1** summarises the aims of the updating and screening assessment, the approach adopted for the assessment, the pollutants and air quality objectives
- **Section 2** summarises the UK Air Quality Strategy and the function of an updating and screening assessment
- **Section 3** summarises the conclusions of air quality review and assessment work to date, identifies data used in support of this assessment as well as relevant background information on the Council area, and relevant emissions-to-air sources and highlights significant changes in emissions to air within the borough since the last round of review and assessment
- **Sections 4-10** present the review and assessment for each of the seven pollutants included in the Air Quality Regulations
- **Section 11** presents conclusions and recommendations for further work, where required, for each of the seven pollutants.

## 1.3 OVERVIEW OF APPROACH TAKEN

The general approach taken to this Updating and Screening Assessment was to:

- Identify the conclusions of the last round of review and assessment for each of the seven pollutants included in the air quality regulations
- Identify significant sources of emissions to air for the seven pollutants included in the air quality regulations, including major roads and industrial plant
- Identify new sources not previously considered in the first and second rounds of review and assessment
- Identify any sources for which emissions have changed significantly since the last round of review and assessment
- Identify and interpret the significance of air quality monitoring data made available since the last round of review and assessment
- Assess the risk of exceedences of the air quality objectives in locations where relative public exposure may exist using screening models and nomograms
- Where necessary, identify locations and pollutants for which further detailed assessment of air quality will be required.

## 1.4 RELEVANT GUIDANCE DOCUMENTATION

This report takes into account the guidance in LAQM.TG(03), published January 2003, and the update to this guidance, published January 2006.

## 1.5 POLLUTANTS CONSIDERED IN THIS REPORT

All pollutants included in the Air Quality Regulations for the purposes of Review and Assessment have been considered in this report (Table 1.1).

**Table 1.1** Objectives included in the Air Quality Regulations 2000 and (Amendment) Regulations 2002 for the purpose of Local Air Quality Management

| Pollutant | Air Quality Objective | | Date to be achieved by |
|---|---|---|---|
| | Concentration | Measured as | |
| **Benzene** | | | |
| All authorities | 16.25 $\mu gm^{-3}$ | running annual mean | 31.12.2003 |
| Authorities in England and Wales only | 5.00 $\mu gm^{-3}$ | annual mean | 31.12.2010 |
| Authorities in Scotland and Northern Ireland only[a] | 3.25 $\mu gm^{-3}$ | running annual mean | 31.12.2010 |
| **1,3-Butadiene** | 2.25 $\mu gm^{-3}$ | running annual mean | 31.12.2003 |
| **Carbon monoxide** | | | |
| Authorities in England, Wales and Northern Ireland only [a] | 10.0 $mgm^{-3}$ | maximum daily running 8 hour mean | 31.12.2003 |
| Authorities in Scotland only | 10.0 $mgm^{-3}$ | running 1-hour mean | 31.12.2003 |
| **Lead** | 0.5 $\mu gm^{-3}$ | annual mean | 31.12.2004 |
| | 0.25 $\mu gm^{-3}$ | annual mean | 31.12.2008 |
| **Nitrogen dioxide**[b] | 200 $\mu gm^{-3}$ not to be exceeded more than 18 times a year | 1 hour mean | 31.12.2005 |
| | 40 $\mu gm^{-3}$ | annual mean | 31.12.2005 |
| **Particles ($PM_{10}$) (gravimetric)**[c] | | | |
| All authorities | 50 $\mu gm^{-3}$ not to be exceeded more than 35 times a year | 24 hour mean | 31.12.2004 |
| | 40 $\mu gm^{-3}$ | annual mean | 31.12.2004 |
| Authorities in Scotland only[d] | 50 $\mu gm^{-3}$ not to be exceeded more than 7 times a year | 24 hour mean | 31.12.2010 |
| | 18 $\mu gm^{-3}$ | annual mean | 31.12.2010 |
| **Sulphur dioxide** | 350 $\mu gm^{-3}$ not to be exceeded more than 24 times a year | 1 hour mean | 31.12.2004 |
| | 125 $\mu gm^{-3}$ not to be exceeded more than 3 times a year | 24 hour mean | 31.12.2004 |
| | 266 $\mu gm^{-3}$ not to be exceeded more than 35 times a year | 15 minute mean | 31.12.2005 |

[a] Air Quality (Northern Ireland) Regulations were consulted on in 2003
[b] The objectives for nitrogen dioxide are provisional
[c] Measured using the European gravimetric transfer sampler or equivalent
[d] These 2010 Air Quality Objectives for $PM_{10}$ apply in Scotland only, as set out in the Air Quality (Scotland) Amendment Regulations 2002