



**AMBER VALLEY  
BOROUGH COUNCIL**

**2015 Updating and Screening Assessment  
Amber Valley Borough Council**

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

|                                |              |
|--------------------------------|--------------|
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|--------------------------------|---------|
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## **Executive Summary**

This report fulfils the requirements of the Local Air Quality Management (LAQM) 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.

Since there has again been little change since the previous assessment, the pollutants have not been considered on an individual basis but a conclusion has been reached about the overall need for a detailed assessment.

It would not be justifiable to proceed to a detailed assessment as there is little likelihood of any air quality objectives being exceeded.

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# **1 Introduction**

## **1.1 Description of Local Authority Area**

The Borough covers an area of over 265 square kilometres making Amber Valley the third largest district Council in the East Midlands and the largest district authority population in Derbyshire with approximately 121,000 people living in 54,349 properties in the Borough.

Amber Valley is a mixture of rural communities in the western parishes, to more urban communities in the east. The eastern area includes the market towns of Alfreton, Heanor and Ripley with villages and parishes from Somercotes and Swanwick to Waingroves and Codnor. The historic mill town of Belper sits in the centre of the Borough and within the Derwent Valley Mills World Heritage Site, which runs from Cromford to Derby.

The borough has a wide range of industrial sectors including instrument engineering, timber and furniture manufacture, hotels and catering, business services, textiles and clothing. Almost 500 companies are located within 20 industrial estates, with a further 400 located on singular sites or within the urban areas.

Major roads include the A38, providing a link between Derby and junction 28, A6, A609 and A610. The A52 between Derby and Ashbourne cuts through the southernmost tip of the borough. The only rail stations in the area are at Belper, which is on the east coast mainline, and at Alfreton, with through trains to London, Manchester and the north.

## **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 **England** are set out in the Air Quality (England) Regulations 2000 (SI 928), The Air Quality (England) (Amendment) 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,  $\text{mg}/\text{m}^3$  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 England**

| <b>Pollutant</b>        | <b>Air Quality Objective</b>  |                     | <b>Date to be achieved by</b> |
|-------------------------|---|---------------------|-------------------------------|
|                         | <b>Concentration</b>  | <b>Measured as</b>  |                               |
| <b>Benzene</b>          | 16.25 $\mu\text{g}/\text{m}^3$  | Running annual mean | 31.12.2003                    |
|                         | 5.00 $\mu\text{g}/\text{m}^3$   | Running annual mean | 31.12.2010                    |
| <b>1,3-Butadiene</b>    | 2.25 $\mu\text{g}/\text{m}^3$   | Running annual mean | 31.12.2003                    |
| <b>Carbon monoxide</b>  | 10.0 $\text{mg}/\text{m}^3$   | Running 8-hour mean | 31.12.2003                    |
| <b>Lead</b>             | 0.5 $\mu\text{g}/\text{m}^3$  | Annual mean         | 31.12.2004                    |
|                         | 0.25 $\mu\text{g}/\text{m}^3$   | Annual mean         | 31.12.2008                    |
| <b>Nitrogen dioxide</b> | 200 $\mu\text{g}/\text{m}^3$ 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>)<br/>(gravimetric)</b> | 50 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year  | 24-hour mean   | 31.12.2004 |
|  | 40 µg/m <sup>3</sup>   | Annual mean    | 31.12.2004 |
| <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**

The area is semi-rural with four small towns as the main urban areas, no significant road links, no significant congestion problems or heavily polluting industry.

Monitoring exercises, from the first round of Review and Assessment, included stage 2 reports for sulphur dioxide, particulates and nitrogen dioxide and a stage 3 assessment of nitrogen dioxide. These indicated that all pollutant levels were either currently, or anticipated to be, well below the standards by the relevant objective dates.

The results of the Updating and Screening Assessment completed in 2003 showed no change to these conclusions and the Progress Reports in 2004 and 2005 again showed no need for a 'Detailed Assessment'. The NO<sub>2</sub> diffusion tube survey conducted to inform the compilation of the Progress Report 2005 also indicated that the concentrations measured at all sampling locations are below the air quality standards.

The Updating and Screening Assessment completed in 2006 did not identify any significant changes which may have impacted in the borough's air quality; it was not proposed to proceed to a detailed assessment for any of the pollutants listed. The Progress Reports of 2007 and 2008 did not identify any significant changes that



## **Amber Valley Borough Council**

would require the Council to consider a Detailed Assessment before the next full round of review and assessment.

The Updating and Screening Assessment 2009 and Progress Reports for 2010 and 2011 did not identify any potential exceedances of the National Air Quality Objectives in Amber Valley. There was no requirement to proceed to Detailed Assessment. The Updating and Screening Assessment 2012 and Progress Reports for 2013 and 2014 concurred with the earlier reports. Based on the findings of previous reports, the resources needed to undertake an air-monitoring scheme in Amber Valley could not be justified.

## **2 New Monitoring Data**

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

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

The Progress Report 2014 concluded that it was unlikely that any National Air Quality Objectives would be exceeded in Amber Valley, as such it was not deemed necessary to conduct any air monitoring in the past 12 months.

#### **2.1.2 Non-Automatic Monitoring Sites**

The Updating and Screening Assessment Reports for 2009 and 2012, and the Progress Reports for 2010, 2011, 2013 & 2014, concluded that the cost of a monitoring programme could not be justified based on the very low likelihood that National Air Quality Objectives would be breached in the borough. As such there is no new monitoring data.

## **3 Road Traffic Sources**

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

Local knowledge, analysis of vehicle count data provided by Derbyshire County Council, and selections of property polygons at or within 2m of highway polygons using a Geographical Information System did not find any new properties in the borough that met the descriptions contained within Box 5.3 Section A.1 of the LAQM.TG(09).

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**

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.**

There are no new/newly identified roads with high flows of buses/HDVs.

### **3.4 Junctions**

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**

There are no new/proposed roads.

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

Derbyshire County Council provided average count data for the preceding five years where flows were greater than 8000 vehicles over a 12 hour period. The Highways Authority recommended multiplying this 12hr data by 25% to reflect likely flows over a 24 hour period.

There are no new/newly-identified roads with significantly changed traffic flows.

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

There are no relevant bus stations in the Local Authority area.

## **4 Other Transport Sources**

### **4.1 Airports**

There are no airports in the Local Authority area.

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

#### **4.2.1 Stationary Trains**

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**

There are no locations with a large number of movements of diesel locomotives and potential long-term relevant exposures.

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

There are no ports or shipping that meets 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**

Amber Valley Borough Council 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**

Amber Valley Borough Council 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**

Amber Valley Borough Council 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**

Amber Valley Borough Council confirms that there are no petrol stations meeting the specified criteria.

## **5.4 Poultry Farms**

Amber Valley Borough Council confirms that there are no poultry farms meeting the specified criteria.

## **6 Commercial and Domestic Sources**

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

Amber Valley Borough Council confirms that there are no relevant biomass combustion plants in the Local Authority area.

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

There are no significant biomass combustion plant issues in the Local Authority area and no significant issues from domestic solid fuel burning in the borough. It is deemed to be unnecessary to assess the combined impacts of biomass combustion.

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

This was considered in the Updating and Screening Assessment 2006, which concluded that detailed assessment was not required. The house condition survey conducted at the time showed coal burning to be declining in this area so further assessment is not necessary.

The Council monitor complaints regarding domestic solid-fuel burning and will keep the issue under consideration.

Amber Valley Borough Council confirms that there are no areas of significant domestic fuel use in the Local Authority area.



## **7 Fugitive or Uncontrolled Sources**

There are no new or substantially changed potential sources of fugitive particulate matter emissions in the Local Authority area.

## **8 Conclusions and Proposed Actions**

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

There is no new monitoring data as the Progress Report 2014 concluded that the cost of a monitoring programme could not be justified based on the very low likelihood that National Air Quality Objectives would be breached in the borough.

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

Amber Valley Borough Council can confirm that no local developments are predicted to increase the concentration levels of any ambient pollution as listed in the regulations.

This assessment was intended to identify those aspects that have changed since the last round of review and assessment. The USA was also intended to indicate which pollutants and specific locations within the Borough require a Detailed Assessment.

This report has considered all the potential issues within the Borough that may impact on air quality but since the area is semi-rural with four small towns as the main urban areas, no significant road links, no significant congestion problems or large industry, there is no reason to believe there will be any exceedences of National Air Quality Objectives, therefore there is no requirement to procedure to Detailed Assessment.

### **8.3 Proposed Actions**

Based on the findings of this and previous reports, the resources required to implement an air-monitoring scheme in Amber Valley cannot currently be justified. This decision will remain under review and any relevant emerging information will be considered.

Amber Valley Borough Council's next course of action is to produce the 2016 Progress Report.

## 9 References

- AVBC USA 2006
- AVBC Progress Report 2007
- AVBC Progress Report 2008
- AVBC Updating and Screening Assessment 2009
- AVBC Progress Report 2010
- AVBC Progress Report 2011
- AVBC Updating and Screening Assessment 2012
- AVBC Progress Report 2013
- AVBC Progress Report 2014
- Defra (2003) Local Air Quality Management. Technical Guidance. LAQM.TG (03).
- Defra (2009) Local Air Quality Management. Technical Guidance. LAQM.TG (09)
- National Atmospheric Emissions Inventory website, <http://www.naei.org.uk/>