

Air Quality in Bolsover District Council

How is air quality managed in Bolsover District Council?

Currently there are two aspects to managing air quality in the District, Local Air Quality Management and more recently under the EU Ambient Air Quality Directive.

1 Local Air Quality Management

The Council has, since the 1990s, a statutory duty to assess air quality in its district using screening methodology prescribed in statutory guidance for a range of pollutants. These are:

- nitrogen dioxide
- sulphur dioxide
- small particles (called PM₁₀)
- lead
- 1,3-butadiene
- benzene
- carbon monoxide.

The pollutants of principal concern are nitrogen dioxide and PM₁₀, the main sources of which are emissions from road vehicles.

There are a number of standards (concentrations) against which the air quality is assessed, called Air Quality Objectives (AQO) which are set in the UK Air Quality Strategy and Regulations.

Where the assessment identifies an exceedance the authority must declare an Air Quality Management Area (AQMA) and then develop an Air Quality Action Plan detailing measures to reduce pollutant levels to a concentration below the AQO.

The assessment is undertaken at a sensitive property such as a dwelling.

What is the extent of monitoring undertaken in Bolsover District Council?

The Council currently operates a programme of monitoring for nitrogen dioxide using passive diffusion tubes at 30 selected locations around the district.

What is the current state of air quality in the Bolsover District Council area in terms of Local Air Quality Management?

The Council has in the past identified three areas that were in exceedance of the annual mean Air Quality Objective for nitrogen dioxide at three locations. These are:

- Carter Lane East, South Normanton (12 dwellings)

- Chesterfield Road, Barlborough (1 dwelling)
- Orchard Close, Barlborough (5 dwellings)

The Council declared Air Quality Management Areas for these three locations in 2004, 2005 and 2007 respectively.

Since 2012 there have been no exceedances of the annual mean AQO for nitrogen dioxide in the Council's area. Following an external review of the monitoring data, it has been concluded that the two Barlborough AQMAs are now significantly below the Objective such that they should be revoked. We are now commencing the consultation process in this respect.

The South Normanton AQMA is only marginally below the Objective and will be monitored closely over the next few years to establish whether the conversion of the M1 to a Smart Motorway has had an effect on air quality.

How is the data reported?

Each year the Council is required to prepare a report on the state of air quality in the district and detailing initiatives that are in place to reduce air pollution called the Annual Status Report (ASR). There is now specifically a requirement to consider very small particles (PM_{2.5}) and the report has to be signed off by the Director of Public Health (Derbyshire County Council) The 2018 ASR is publicly available through the Council's website at the following link:

<http://www.bolsover.gov.uk/images/LIVE/A/Air-quality-Report-2018-bdc.pdf>

2 EU Ambient Air Quality Directive

The Government prepared a national air quality plan to bring about compliance with the EU Directive for nitrogen dioxide. This involved the use of a screening model that considered all the UK major road networks. This model identified a number of significant exceedances in urban centres such as Derby, Sheffield, Leeds etc. These Councils were mandated to implement schemes to improve air quality which are now coming to conclusions and there has been recent press coverage about consultations taking place to introduce charging zones (Clean Air Zones – CAZ) whereby the most polluting vehicles will be required to pay a charge to enter the Clean Air Zone e.g. £50 per day. This is to encourage replacement vehicles with less polluting emissions.

There is a second wave of Councils that are being required to implement measures to bring about compliance sooner than would otherwise be the case.

Why has Bolsover District Council suddenly become involved in this when it has no duty to do so?

The Government were challenged on their approach to complying with the Directive in the High Court in a much publicised case brought by the pressure group, ClientEarth. Bolsover District Council was identified along with 30 or so other Councils as having an area that was currently non-compliant but that

compliance should be achieved before 2021. The Government took the view that by the time any measures could be implemented the air quality would be already compliant. However, the High Court ruled that this was inadequate and required the Government to take all available steps to bring about compliance in the shortest possible time.

This was the subject of a Ministerial Direction served on the Council in March 2018. The Council was required to undertake a feasibility study to evaluate measures that would bring about compliance before 2021.

What is the extent of this non-complaint area?

Publicity in the media at the time generally gave the impression that the state of air quality in Bolsover was harmful to health. There was generally no details as to the extent of the exceedance and the casual reader would probably have been left with the impression that either the whole population of the Bolsover District Council area or at least Bolsover Town were being exposed to harmful concentrations of nitrogen dioxide.

This is not the case.

The area of concern is the A38 dual carriageway from Junction 28 of the M1 to the Council's boundary with Ashfield District Council (a length of around 1.2km). The Council was awarded a sum of money from central Government to undertake this work which had to be completed within a very challenging timeframe by 31 July 2018.

The Council engaged specialist air quality consultants to undertake predictive modelling on a range of measures but it was concluded that there were no cost effective means which could be implemented that would bring about compliance by 2021.

However, the more detailed (accurate) modelling undertaken by the consultants revealed that compliance would not be achieved without intervention until 2023 and not 2021 as was predicted from the initial assessment (ie a basic screening model) The exceedance is limited to a small footpath that runs alongside the A38 between Carter Lane East and the M1 Junction 28 roundabout, of approximately 400m in length.

How was the air quality assessed?

The initial study that flagged this length of carriageway as having an exceedance was undertaken by predicting the pollutant concentration using a basic model called a screening model, which uses traffic flow rates, typical vehicle emissions for the distribution of the various classes of vehicles using the carriageway, background concentrations and distance from the carriageway (in this case 4m)

What is a detailed assessment?

A detailed assessment uses more accurate modelling with inputs of weather data and topography, and more accurate source apportionment to provide predicted

concentrations over a number of years in the future. This provides more accurate predictions of pollutant concentrations.

What is the Current Situation?

There were 8 local authorities that were in a similar position as Bolsover District Council in that the non-compliance was more persistent than originally thought. The outcome of this is that a further Ministerial Direction was issued on 4th October 2018 requiring the Council to develop a plan to bring about compliance in the shortest possible time.

Funding for this work has been provided from central Government.

The Council is mandated to provide an initial plan by 31 January 2019 and to “identify a preferred option for delivering compliance in the shortest possible time and setting out value for money considerations and implementation arrangements” by 31 October 2019.

The work has to be undertaken in accordance with strict centrally issued guidance. It is stated that any intervention must deliver air quality at least as good as implementing a Clean Air Zone.

How is this being managed?

Officers of Environmental Health are engaging closely with colleagues in Derbyshire County Council (Highways and Public Health), Highways England and The Joint Air Quality Unit (JAQU) (DEFRA and DfT)

The Council is to continue working with specialist air quality consultants and, through partner organisations’ specialist transport planning consultants. Traffic surveys and detailed transport and air quality modelling will be required.

Should the Council have identified this exceedance as part of its Local Air Quality Management duties?

No. It is not part of the LAQM procedures to assess exposure in public spaces. It has been frustrating when reading reports in the press which give the impression that the Council is somehow failing to manage air quality in its area. We have seen statements which refer to the “8 offending authorises” for example, and reports suggesting the air quality in Bolsover or the District Council area as a whole is at harmful concentrations, which, as has been explained above, is not the case.

Bolsover District Council has always taken its duties seriously and proactively delivered against its statutory duties and managed air quality in its area.

Joint Environmental Health Service

Jan 2019