

Nottinghamshire Local Transport Plan Evidence Base Report

16. Air quality

16.1 Updating and screening assessments

Air quality across the county is generally good but there are some locations which have transport related air quality issues. These sites are predominantly located adjacent to the motorway and trunk road network.

16.1.1 Air quality management areas

There are currently six transport related air quality management areas (AQMAs) in the county, five of which relate to the Highways Agency managed motorway and trunk road network. Details of each of the AQMAs are summarised below. Figures 169 and 170 below show the locations of the AQMAs in Broxtowe and Rushcliffe respectively. Further details on the monitoring and action plans to address the air quality in the AQMAs can be found at <http://www.broxtowe.gov.uk/index.aspx?articleid=1292> and <http://www.rushcliffe.gov.uk/doc.asp?cat=9659>

Broxtowe

Air quality monitoring undertaken by the Borough Council in 2003 identified several locations adjacent to the M1 motorway where there were exceedences of levels of nitrogen dioxide (NO₂). Upon undertaking detailed assessment, the consultants report concluded that consideration be given to declare AQMAs in four locations, although the air quality objectives would be met prior to 2010 without any active intervention. In February 2006 Broxtowe Borough Council declared four AQMAs in the borough, all of which are related to the M1 motorway. Whilst there was also an exceedence of NO₂ at Trowell motorway services there was no need to declare an AQMA at this location as there were no permanent residential dwellings. The four locations of the AQMAs are shown in figure 169 and are located at:

- M1/A6007 closest houses to east of M1 in Iona Drive and Tiree Close, Trowell
- M1/A609 closest houses to west of M1 on Derbyshire Avenue, Trowell
- M1/A609 closest house to west of M1 on Nottingham Road, Trowell, and
- M1/B600 houses on the Nottingham Road and Back Lane, Nuthall closest to the M1.

Monitoring has shown that air quality is improving at each of the locations with NO₂ levels decreasing.

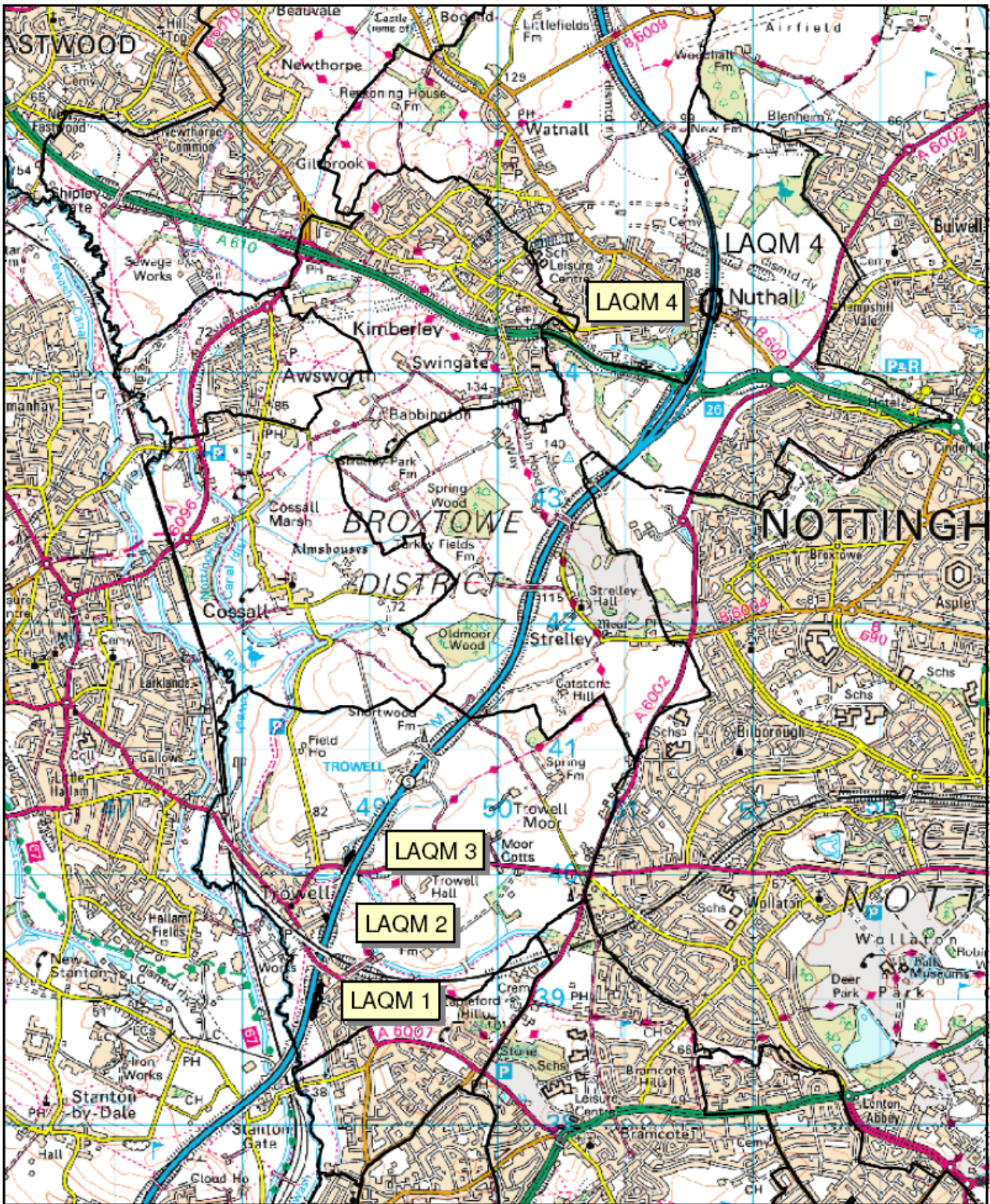
Rushcliffe

Following detailed review and assessment of air quality in 2003 and again in 2005, Rushcliffe Borough Council declared two traffic related AQMAs in September 2005 due to exceedences of NO₂. The two locations of the AQMAs are shown in figure 170 and are located at:

- houses adjacent to the approaches to Trent Bridge and Lady Bay Bridge, and
- houses adjacent to the A52 (trunk road) from Nottingham Knight roundabout northwest to the borough/city boundary.

Monitoring has shown that air quality is improving at each of the locations with NO₂ levels decreasing.

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<p style="text-align: center;">Local Air Quality Management Areas</p> <div style="text-align: center;">  <p>N</p> </div> <p style="text-align: center;">Scale: 1:40000</p>	<p style="text-align: center;">DIRECTORATE OF HOUSING, HEALTH & LEISURE</p> <p style="text-align: center; font-size: small;">Reproduced from the Ordnance Survey map with the permission of the Controller of Her Majesty's Stationery Office Crown Copyright 2005 BROXTOWE BOROUGH COUNCIL LA100019453</p>
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Figure 169: Locations of air quality management areas (AQMA) in Broxtowe borough
 Source: Broxtowe Borough Council Air Quality Action Plan

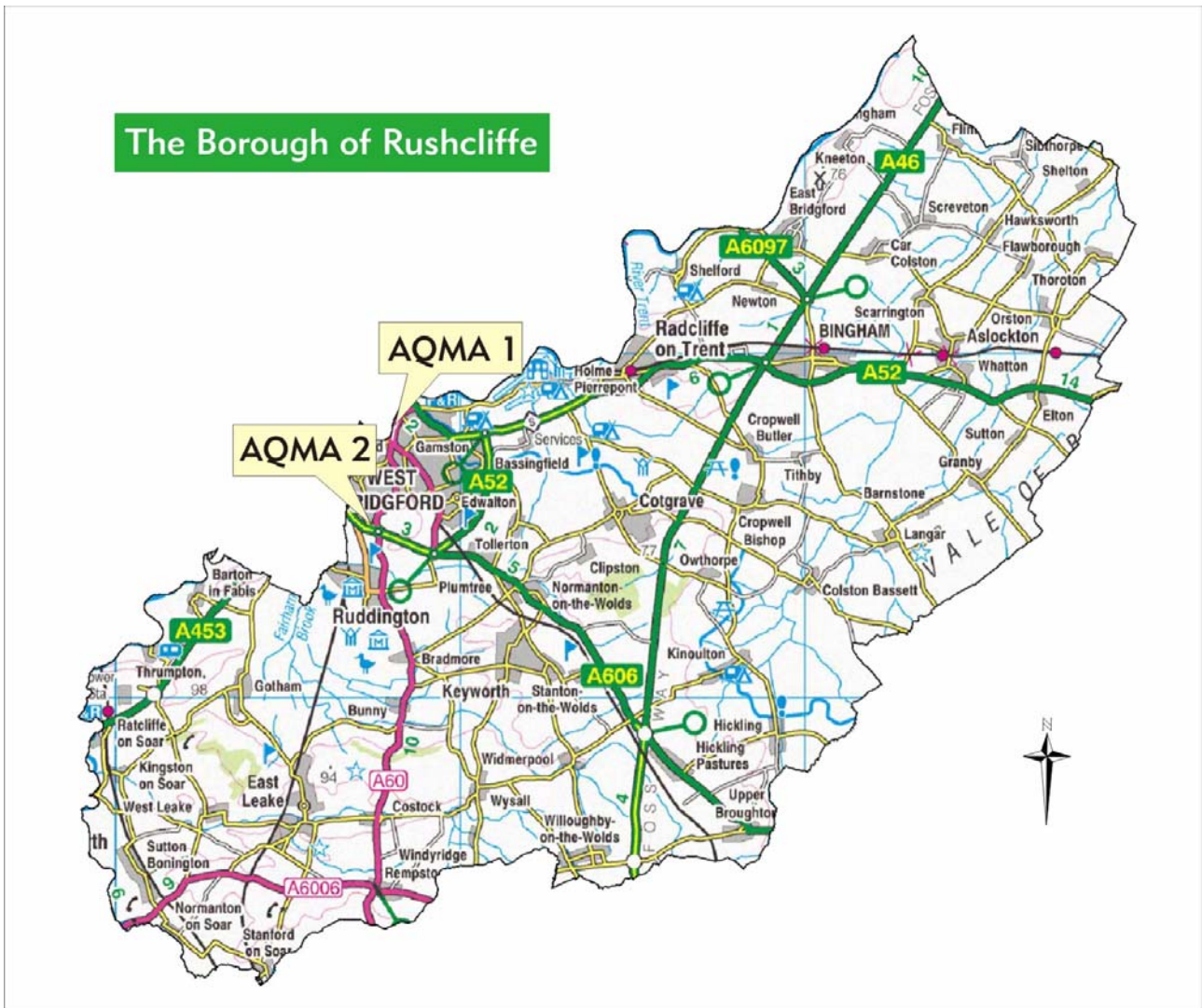


Figure 170: Locations of air quality management areas (AQMAs) in Rushcliffe borough

16.1.2 Locations of potential exceedences

Monitoring of air quality across the county has also identified two further locations where the borough councils may have to declare an AQMA.

Gedling

In 2009 Gedling Borough Council measured concentrations of NO₂ above the annual mean objective at locations on the A60 Mansfield Road, Daybrook. The Borough Council is currently in the process of carrying out a detailed assessment at this location to determine if an AQMA will need to be declared.

Rushcliffe

Rushcliffe Borough Council is currently undertaking further assessment work at a location on the A52 (trunk road) at Stragglethorpe to determine if an AQMA relating to NO₂ will need to be declared.

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16.1.3 Locations that are close to exceedence

Ashfield

Assessment and monitoring undertaken in 2000 by Ashfield District Council highlighted potential particulate (PM₁₀) exceedences at properties adjacent to the M1 motorway at Selston and Pinxton. Further monitoring, however, determined that the number of exceedences at these locations was insufficient to exceed the PM₁₀ objective.

Bassetlaw

The 2006 'Updating and Screening Assessment' identified a number of locations in Bassetlaw that could be considered '*narrow congested streets with residential properties close to the kerb*'. These locations have now either been screened out or monitored using diffusion tubes. One site on Watson Road, Worksop was the subject of a 'Detailed Assessment'. The 2007 and 2008 Annual Progress Reports identified two areas that required a 'Detailed Assessment' for the annual mean NO₂ objective. These were the A1 at Tuxford and Watson Road at Worksop. The detailed assessment in May 2009 concluded that the two locations currently comply with the annual mean objective, but recommended continued monitoring at these locations. Monitoring in 2008 also identified a location on Hospital Road, Retford but it is considered that this will comply with the annual NO₂ objective.

Mansfield

Assessment and monitoring undertaken in 2008 by Mansfield District Council highlighted that NO₂ levels on Chesterfield Road North, Mansfield are at the annual mean threshold. It should be noted, however, that there has been no deterioration in air quality at this location since 2007 and NO₂ levels have reduced since 2006.

Newark

Assessment and monitoring has indicated that sites on the Beaumont Cross junction in Newark recorded annual means that were relatively close to the NO₂ objective and this location is one of the busiest junctions in the Newark & Sherwood district. Results at The Lodge have been consistently close to the NO₂ objective since monitoring of the site began. The site lies between two busy roundabouts that link the A1, A46 to Lincoln and A17 to Sleaford and Lincoln Road back into Newark.

16.2 Carbon dioxide emissions from transport

Per capita carbon dioxide (CO₂) emissions from transport have reduced in all of the districts in Nottinghamshire. Transport, however, still accounts for a high proportion of CO₂ emissions in the county, 31% of the total CO₂ emissions in Nottinghamshire, ranging from 37% of emissions in Broxtowe borough to 19% of emissions in Gedling borough. The proportion of CO₂ emissions from transport in Broxtowe borough is higher than those from domestic and industry/commercial purposes. Similarly, in Bassetlaw and Newark & Sherwood districts, the proportion of CO₂ emissions from transport is higher than those from domestic purposes and almost as high as those from industry/commercial purposes. It should be noted, however, that the districts with the highest CO₂ emissions from transport in the county all have major nationally strategic roads running through them (Bassetlaw - A1; Broxtowe - M1 and A52; and Newark & Sherwood - A1 and A46).. Table 101 below details the CO₂ emissions from transport in the county, regionally and in England.

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Table 101: CO₂ emissions from transport

Area	Year	CO ₂ emissions			
		Road transport	Percentage of total emissions	Population ('000s mid-year estimate)	Per capita transport emissions (t)
Ashfield	2005	237	29%	114.6	2.1
	2006	234	28%	115.0	2.0
	2007	236	29%	115.3	2.0
	2008	219	27%	115.7	1.9
Bassetlaw	2005	378	32%	110.5	3.4
	2006	380	34%	110.6	3.4
	2007	386	37%	110.7	3.5
	2008	369	35%	111.3	3.3
Broxtowe	2005	319	37%	109.5	2.9
	2006	316	37%	109.8	2.9
	2007	320	38%	110.1	2.9
	2008	293	37%	110.9	2.6
Gedling	2005	113	20%	112.2	1.0
	2006	110	19%	111.8	1.0
	2007	112	20%	112.0	1.0
	2008	107	19%	112.3	1.0
Mansfield	2005	133	22%	99.0	1.3
	2006	128	22%	99.2	1.3
	2007	130	23%	99.3	1.3
	2008	124	21%	99.8	1.2
Newark & Sherwood	2005	405	35%	110.5	3.7
	2006	406	36%	111.2	3.7
	2007	419	37%	111.9	3.7
	2008	401	36%	112.5	3.6
Rushcliffe	2005	264	31%	108.6	2.4
	2006	258	29%	109.3	2.4
	2007	262	30%	110.0	2.4
	2008	250	32%	110.8	2.3
Nottinghamshire	2005	1,848	30%	764.7	2.4
	2006	1,833	31%	766.9	2.4
	2007	1,864	32%	769.3	2.4
	2008	1,763	31%	773.3	2.3
East Midlands	2005	11,180	28%	4,327.1	2.6
	2006	11,029	27%	4,362.6	2.5
	2007	11,151	28%	4,397.0	2.5
	2008	10,630	28%	4,429.4	2.4
England	2005	114,109	26%	50,466.2	2.3
	2006	111,879	26%	50,763.9	2.2
	2007	113,032	27%	51,106.2	2.2
	2008	108,527	26%	51,464.6	2.1

Source: AEA local and regional CO₂ emissions estimates for 2005-2008, September 2010