



# 2013 Air Quality Progress Report for *Rotherham MBC*

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

**May, 2013**

Rotherham Metropolitan Borough Council

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## Executive Summary

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.

Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the Local Air Quality Management process and to report progress in meeting the air quality objectives.

Rotherham MBC has declared seven Air Quality Management Areas (AQMAs) to date. Air quality review and assessment is a continuous process. The object of this Progress Report for National Air Quality Strategy pollutants is to report on air quality in the borough.

Although air quality in most parts of Rotherham is classed as good, in all of the Council's AQMAs, levels of nitrogen dioxide annual mean still exceed the National Air Quality Objective of 40  $\mu\text{g}/\text{m}^3$  at the facades of residential properties as they have done for the last 12 years. This is similar to the situation in many UK urban areas.

The conclusions of this report are that it is statutory requirement to proceed to a detailed assessment for nitrogen dioxide annual mean for an area of Rotherham where there are newly identified levels of nitrogen dioxide annual mean which exceed the National Air Quality Objective.

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**Appendix 1 QA:QC Data**

**Appendix 2 Improving Public Transport Bus Intelligence Report - Report on Bus Patronage – SYPT 2012**

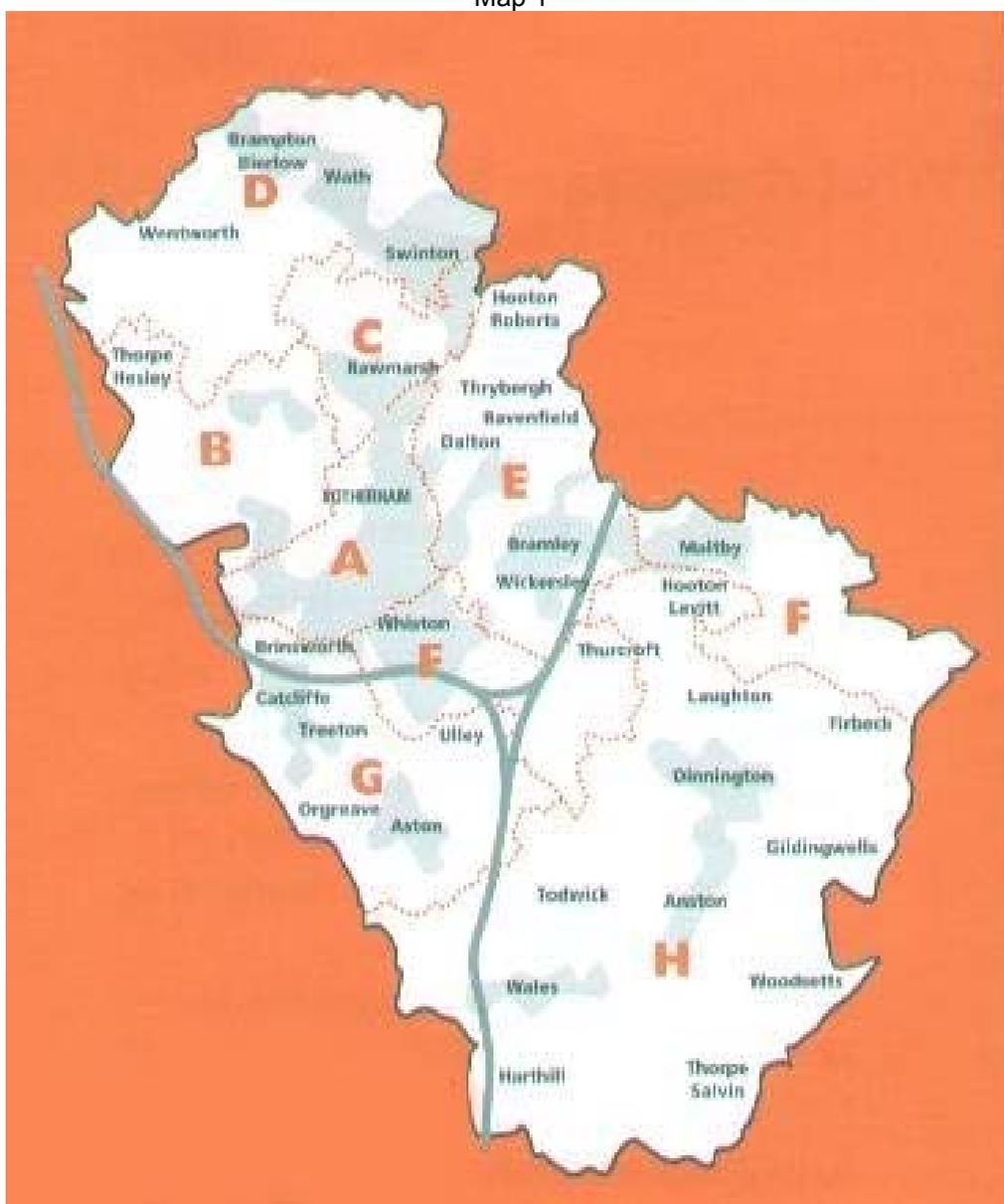
# 1 Introduction

## 1.1 Description of Local Authority Area

Rotherham Metropolitan Borough has a population of about 250,000 people. Contained within the Borough's boundary are large areas of countryside and small rural villages together with densely urbanised communities. The town of Rotherham has excellent transport links to the rest of the country, served by 2 motorways (M1 and M18) and an extensive network of rail and bus services.

**Map of the Borough of Rotherham, showing the route of the M1 and M18 Motorways**

Map 1



## 1.2 Purpose of Progress 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.

Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the Local Air Quality Management process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

## 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**

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
	5.00 µg/m <sup>3</sup>	Annual mean	31.12.2010
1,3-Butadiene	2.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m <sup>3</sup>	Running 8-hour mean	31.12.2003
Lead	0.50 µg/m <sup>3</sup>	Annual mean	31.12.2004
	0.25 µg/m <sup>3</sup>	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m <sup>3</sup> 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
Particulate Matter (PM <sub>10</sub> ) (gravimetric)	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
Sulphur dioxide	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 concept of Local Air Quality Management was introduced in Part IV of the Environment Act 1995. Under section 82 of this Act, local authorities are required to review air quality and assess whether the air quality standards and objectives are likely to be achieved by their target dates.

The publication of the National Air Quality Strategy (NAQS) laid down a number of air quality standards and objectives.

The Air Quality Regulations 1997 formalised the air quality objectives. The primary objective of the 3-stage review and assessment process is to identify those areas of the local authority where the air quality is unlikely to meet these objectives. Section 83 of the Environment Act requires a local authority, for any area where air quality standards are not being met, to issue an order designating it an Air Quality Management Area (AQMA).

The Air Quality Strategy for England, Scotland, Wales and Northern Ireland was revised in 2007 and sets out the air quality objectives and policy options to further improve air quality in the UK from today into the long term.

Air quality review and assessment in Rotherham MBC is managed as a continuous process and the following Air Quality Management Areas have been declared:

- M1 AQMA for annual average nitrogen dioxide (July 2001)
- Wales M1 AQMA for annual average nitrogen dioxide (July 2003)
- Brampton Bierlow AQMA for 15 minute and 24 hour sulphur dioxide (July 2003)
- St Ann's AQMA for 24 hour PM<sub>10</sub> (LTP) (November 2004)
- A630 AQMA for annual average nitrogen dioxide (LTP) (November 2004)
- A6021 (Wellgate) AQMA for annual average nitrogen dioxide (LTP) (November 2004)
- A629 (Bradgate) AQMA for annual average nitrogen dioxide (LTP) (November 2004)
- Amendment to the M1 AQMA for annual average nitrogen dioxide to include the additional area of Blackburn (March 2010)

The following Air Quality Management Areas have been revoked:

- Brampton Bierlow AQMA for 15 minute and 24 hour sulphur dioxide (September 2007)
- St Ann's AQMA for 24 hour PM<sub>10</sub> (LTP) (October 2010)

The Air Quality Action Plan for the area covered by the M1 AQMA was published in July 2003 and fully revised and re-published in 2007.

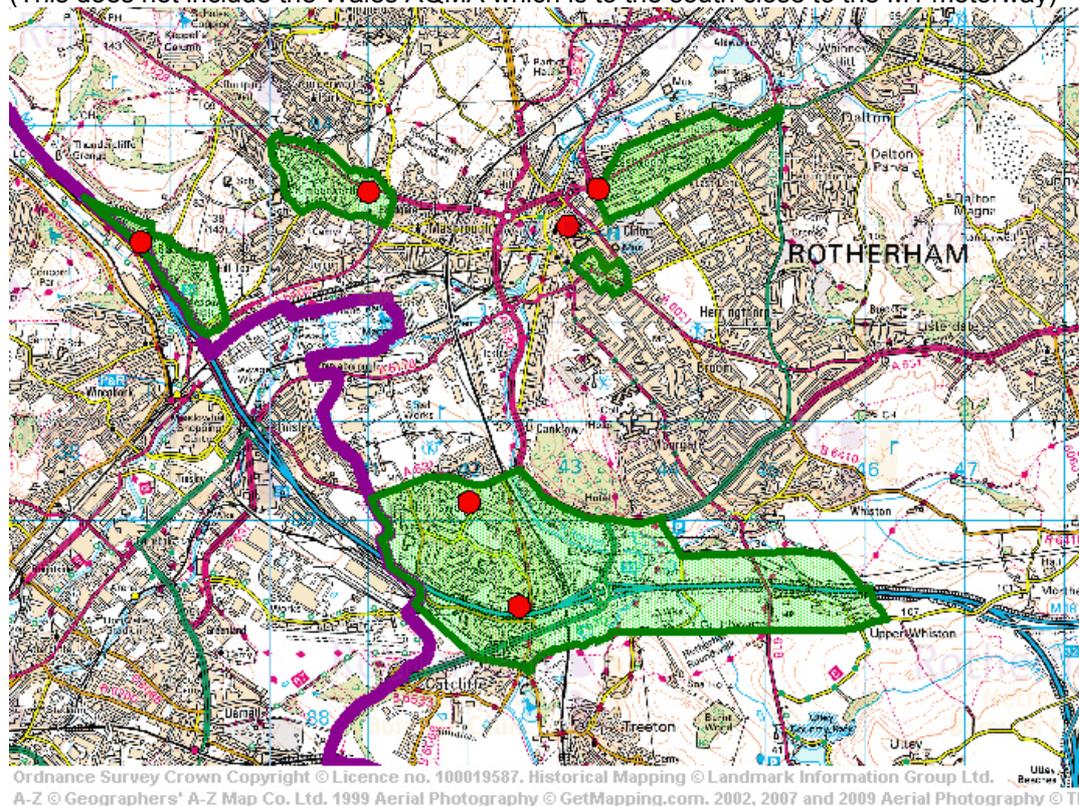
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The Air Quality Action Plan for the area covered by the town centre and therefore the Local Transport Plan AQMA was published in July 2007. Revision is taking place during LTP3 now that a programme of schemes has been finalised.

The last Rotherham MBC Updating and Screening report was produced in April 2012. A further Assessment for hourly and annual mean nitrogen dioxide was completed in March 2011 covering the M1 AQMA amendment (2010).

### Figure 1.1 Map of AQMA Boundaries – 2011

(This does not include the Wales AQMA which is to the south close to the M1 motorway)



## 2 New Monitoring Data

### 2.1 Summary of Monitoring Undertaken

#### 2.1.1 Automatic Monitoring Sites

Rotherham MBC's automatic monitoring sites are shown in Table 2.1.

**Table 2.1 Details of Automatic Monitoring Sites 2012 include Blackburn NOx and PM2.5, Wales NOx and PM10, Bradgate PM10, St Ann's NOx and PM10**

Site Name	Site Type	GridRef	Inlet Height (m)	Pollutants Monitored 2012	In AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
Blackburn	Special (M1 motorway)	438696 392816	2.0	NO <sub>2</sub> PM <sub>2.5</sub>	Y	Chemiluminescent TEOM	Y (0m)	46m	N
Wales (village)	Road side	447368 382900	2.0	NO <sub>2</sub> PM <sub>10</sub>	Y	Chemiluminescent TEOM	N (28m)	2.5m	N
Bradgate	Road side	441006 393338	2.0	PM <sub>10</sub>	Y	TEOM	Y	3m	N
St Ann's	Road side	443300 393350	2.0	NO <sub>2</sub> PM <sub>10</sub>	Y	Chemiluminescent TEOM	Y	2m	N

## 2.1.2 Non-Automatic Monitoring Sites

**Table 2.2 Details of Non- Automatic Monitoring Sites**

None of the monitoring sites are co-located with a Continuous Analyser.

Site Name/ref	Site Type	Grid Ref	Pollutants Monitored	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
A633 N /R1	Roadside	443307 394119	NO <sub>2</sub>	N	N	2m	N
A633 S /R2	Roadside	443446 394344	NO <sub>2</sub>	N	N	2m	N
A633 S (DFS)/R3	Roadside	443579 394886	NO <sub>2</sub>	N	N	2m	N
A633 Rawmarsh Library/R4	Roadside	443707 395461	NO <sub>2</sub>	N	N	2m	N
42 Rawmarsh Hill/R5	Roadside	443684 395511	NO <sub>2</sub>	N	N	2m	N
95 Rawmarsh Hill/R6	Roadside	444346 398820	NO <sub>2</sub>	N	N	2m	N
Salvation Army Rawmarsh/R7	Roadside	443695 401424	NO <sub>2</sub>	N	N	2m	N
Warren Vale/R8	Roadside	443045 401518	NO <sub>2</sub>	N	N	2m	N
A633 Manvers Way/R9	Roadside	443307 394119	NO <sub>2</sub>	N	Y	2m	N
A633 Manvers Way/R10	Roadside	443446 394344	NO <sub>2</sub>	N	Y	2m	N
Wath Rd. Brampton Bierlow/R11	Roadside	441534 401993	NO <sub>2</sub>	N	Y	2m	N
185 Barnsley Rd. W. Melton/R12	Roadside	442430 401520	NO <sub>2</sub>	N	Y	2m	N
2 Hesley Bar /R13	Roadside	442430 401520	NO <sub>2</sub>	N	N	2m	N
London Way /R14	Roadside	436985 395814	NO <sub>2</sub>	N	N	2m	N
J35 Thorpe Hesley/ LP on slip road/R15	Roadside	437190 395697	NO <sub>2</sub>	N	N	2m	N
Lodge Lane/Broke Hill /R16	Roadside	436962 395684	NO <sub>2</sub>	N	N	2m	N
Scholes Lane/R17	Roadside	437814 395389	NO <sub>2</sub>	N	N	2m	N
Golf course Entrance A629/R18	Roadside	438278 395049	NO <sub>2</sub>	N	N	2m	N
Droppingwell Lane /R19	Roadside	439253 394358	NO <sub>2</sub>	N	N	2m	N
Grange View Rd./R20	Roadside	439507 394164	NO <sub>2</sub>	N	N	2m	N
St. Bedes School	Roadside	439966	NO <sub>2</sub>	N	N	2m	N

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Site Name/ref	Site Type	Grid Ref	Pollutants Monitored	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
/R21		393819					
Watson Rd./R22	Roadside	440170 393767	NO <sub>2</sub>	N	N	2m	N
227 Wortley Rd./R23	Roadside	441048 393329	NO <sub>2</sub>	Y	Y	2m	N
238 Wortley Rd./R24	Roadside	441104 393317	NO <sub>2</sub>	Y	Y	2m	N
228 Wortley Rd./R25	Roadside	441133 393322	NO <sub>2</sub>	Y	Y	2m	Y
248 Wortley Rd./R26	Roadside	441080 393330	NO <sub>2</sub>	Y	Y	2m	N
243 Wortley Rd./R27	Roadside	441003 393340	NO <sub>2</sub>	Y	Y	2m	N
Fenton Rd./Roundabout / R28	Roadside	441258 393286	NO <sub>2</sub>	Y	N	2m	N
Wilton Gardens/A629 Roundabout/R29	Roadside	441652 393146	NO <sub>2</sub>	N	N	2m	N
Blackburn School/R30	Roadside	438704 392842	NO <sub>2</sub>	Y	Y	2m	N
21 Blackburn Lane/R31	Roadside	438846 392594	NO <sub>2</sub>	Y	Y	2m	N
1 Whitley View Rd/R32	Roadside	439017 392388	NO <sub>2</sub>	Y	Y	2m	N
Meadowbank Rd. /R33	Roadside	439566 392053	NO <sub>2</sub>	Y	Y	2m	N
169 Bawtry Rd./R34	Roadside	441282 390311	NO <sub>2</sub>	Y	Y	2m	N
47 Derwent Cres/R35	Roadside	441765 389248	NO <sub>2</sub>	Y	Y	2m	N
7 Broadway R36	Roadside	441985 389474	NO <sub>2</sub>	Y	Y	2m	N
Brinsworth Howarth School gate /R37	Roadside	442501 389130	NO <sub>2</sub>	N	N	2m	N
New Brinsworth Rd./R38	Roadside	442576 388974	NO <sub>2</sub>	Y	N	2m	N
Grange Farm Close /R39	Roadside	442866 389162	NO <sub>2</sub>	Y	Y	2m	N
Catcliffe J&I School/R40	Roadside	442586 388588	NO <sub>2</sub>	Y	Y	2m	N
Catcliffe Chemist B6066/R41	Roadside	442746 387782	NO <sub>2</sub>	Y	Y	2m	N
Treeton/R42	Roadside	442576 388974	NO <sub>2</sub>	N	Y	2m	N
Upper Whiston, Pleasley Road/R43	Roadside	445032 389261	NO <sub>2</sub>	Y	N	2m	N
18 Poplar Way Catcliffe/R44	Roadside	442336 388086	NO <sub>2</sub>	N	N	2m	N
Parkway/B6533/R45	Roadside	441250	NO <sub>2</sub>	N	N	2m	N

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Site Name/ref	Site Type	Grid Ref	Pollutants Monitored	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
		388400					
A631/B6067 Parkway roundabout /R46	Roadside	441407 388299	NO <sub>2</sub>	N	N	2m	N
B6053/B6066 roundabout/R47	Roadside	441748 388209	NO <sub>2</sub>	N	N	2m	N
B6066 Waverley/R48	Roadside	441475 387363	NO <sub>2</sub>	N	N	2m	N
B6066 Waverley/R49	Roadside	441884 387049	NO <sub>2</sub>	N	N	2m	N
Orgreave Road /R50	Roadside	443200 385689	NO <sub>2</sub>	N	N	2m	N
Wales Primary School/R51	Roadside	447547 382894	NO <sub>2</sub>	N	Y	2m	N
34 Dowcarr Lane/R52	Roadside	448085 380458	NO <sub>2</sub>	N	Y	2m	N
8 Walseker Lane/R53	Roadside	448159 381215	NO <sub>2</sub>	N	Y	2m	N
Doncaster Gate /R54	Roadside	443007 392859	NO <sub>2</sub>	N	N	1.2m	N
24 Halsbury Road/R55	Roadside	444188 393694	NO <sub>2</sub>	Y	Y	2m	N
75 Broom Rd./R56	Roadside	444565 391640	NO <sub>2</sub>	N	N	2m	N
3 Broom Avenue/R57	Roadside	444024 391992	NO <sub>2</sub>	N	Y	2m	N
Middle Ave. Clifton/R58	Roadside	443891 393159	NO <sub>2</sub>	N	Y	2m	N
4 Hatherley Rd./R59	Roadside	443334 393413	NO <sub>2</sub>	Y	Y	2m	Y
152 Fitzwilliam Rd./R60	Roadside	443724 393628	NO <sub>2</sub>	Y	Y	2m	N
18 Clarendon Rd./R61	Roadside	443784 393496	NO <sub>2</sub>	Y	Y	2m	N
31 York Rd./R62	Roadside	443369 393360	NO <sub>2</sub>	Y	Y	2m	N
237 Wellgate/R63	Roadside	443488 392407	NO <sub>2</sub>	Y	Y	2m	N
Wellgate/Laureate Ct./R64	Roadside	443564 392385	NO <sub>2</sub>	Y	N	2m	N
Wellgate/Gerard Rd/R65	Roadside	443433 392414	NO <sub>2</sub>	Y	Y	2m	N
Wellgate/Bernard Rd./R66	Roadside	443334 392466	NO <sub>2</sub>	Y	Y	2m	N
Wellgate /Sherwood Rd./R67	Roadside	443197 392573	NO <sub>2</sub>	Y	Y	2m	N
Wellgate/Albion Rd./R68	Roadside	443145 392615	NO <sub>2</sub>	Y	Y	2m	N
Wellgate/ Masonic Hall/R69	Roadside	443071 392667	NO <sub>2</sub>	Y	Y	2m	N

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Site Name/ref	Site Type	Grid Ref	Pollutants Monitored	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
Wickersley Rd./R70	Roadside	445101 391565	NO <sub>2</sub>	N	N	2m	N
Terrace St/ Prospect Court Parkgate/R71	Roadside	443532 395635	NO <sub>2</sub>	N	Y	2m	N
25 Kirkstead Road/R72	Roadside	438627 392853	NO <sub>2</sub>	Y	Y	2m	Y
Droppingwell Lane/Whitley View Rd/R73	Roadside	439017 392388	NO <sub>2</sub>	Y	Y	2m	N
4 Bear Tree Close Parkgate/R74	Roadside	443670 395385	NO <sub>2</sub>	N	Y	2m	N
228 Broom Lane/R75	Roadside	445192 390958	NO <sub>2</sub>	N	N (7m)	2m	N
131 Moorgate Rd./R76	Roadside	443764 391283	NO <sub>2</sub>	N	N	2m	N
ASDA A630/R77	Roadside	445234 394161	NO <sub>2</sub>	N	N	2m	N
St. Gerards School Thrybergh/R78	Roadside	446176 394868	NO <sub>2</sub>	N	Y	2m	N
Doncaster Rd. Thrybergh/R79	Roadside	446255 394888	NO <sub>2</sub>	N	Y (8m)	2m	N
Main St. Bramley/R80	Roadside	448919 392336	NO <sub>2</sub>	N	Y	2m	N
9 Bentley St. Bramley/R81	Roadside	449386 392149	NO <sub>2</sub>	N	Y	2m	N
4 Westerton Dr. Bramley/R82	Roadside	449628 391724	NO <sub>2</sub>	N	Y	2m	N
Air Mount Close/Bawtry Rd. Wickersley/R83	Roadside	447280 391650	NO <sub>2</sub>	N	Y	2m	N
Lilly Hall Road Maltby/R84	Roadside	452508 392265	NO <sub>2</sub>	N	Y	2m	N
Nobel Way Dinnington/R85	Roadside	451680 386644	NO <sub>2</sub>	N	Y	2m	N
Church Lane Dinnington/R86	Roadside	452405 385936	NO <sub>2</sub>	N	Y	2m	N
Hugh Street South Anston/R87	Roadside	451708 383672	NO <sub>2</sub>	N	Y	2m	N
Thundercliffe Grange/R88	Roadside	437824 393654	NO <sub>2</sub>	N	Y	2m	N

## 2.2 Comparison of Monitoring Results with Air Quality Objectives

### 2.2.1 Nitrogen Dioxide (NO<sub>2</sub>)

#### Automatic Monitoring Data

Automatic monitoring data for Rotherham MBC is reported in this section. Table 2.3 shows the annual mean nitrogen dioxide measured at three Rotherham sites and Table 2.4 shows the comparison with the 1 – hour objective.

**Table 2.3 Results of Automatic Monitoring for NO<sub>2</sub>: Comparison with Annual Mean Objective**

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period %	Valid Data Capture 2012 %	Annual Mean Concentration (µg/m <sup>3</sup> )		
					2010*	2011	2012
Blackburn School	Roadside	Y	97	95	-	31	30
Wales (village)	Roadside	Y	83	83	<b>44</b>	36	39
St Ann's Fitzwilliam Rd	Roadside	Y	84	84	-	-	39

In bold, exceedence of the NO<sub>2</sub> annual mean AQS objective of 40µg/m<sup>3</sup>

**Table 2.4 Results of Automatic Monitoring for NO<sub>2</sub>: Comparison with 1-hour Mean Objective**

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % <sup>a</sup>	Valid Data Capture 2012 % <sup>b</sup>	Number of Hourly Means > 200µg/m <sup>3</sup>
					2012 <sup>c</sup>
Blackburn School	Roadside	Y	97	95	0
Wales (village)	Roadside	Y	83	83	1
St Ann's Fitzwilliam Rd	Roadside	Y	84	84	2

In bold, exceedence of the NO<sub>2</sub> hourly mean AQS objective (200µg/m<sup>3</sup> – not to be exceeded more than 18 times per year)

<sup>a</sup> i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

<sup>b</sup> i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

<sup>c</sup> If the data capture for full calendar year is less than 90%, include the 99.8<sup>th</sup> percentile of hourly means in brackets

## Diffusion Tube Monitoring Data

This section contains the diffusion tube monitoring data for nitrogen dioxide in Rotherham.

In bold, exceedence of the NO<sub>2</sub> annual mean AQS objective of 40µg/m<sup>3</sup>

If an exceedence is measured at a monitoring site not representative of public exposure, NO<sub>2</sub> concentration at the nearest relevant exposure are estimated based on the "[NO<sub>2</sub> fall-off with distance](http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html)" calculator (<http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html>), and results are be discussed later.

The monitoring results are presented for each AQMA and then for the different areas of Rotherham which do not have AQMAs.

**Table 2.5 Wellgate AQMA A6021**

Site ID	Within AQMA?	Data capture 2012	Annual mean concentrations (µg/m <sup>3</sup> ) Adjusted for bias		
			2010	2011	2012
Adjusted for Bias					
237 Wellgate/R63	Y	100	40	39	37
Wellgate Mount/R69	Y	100	<b>45</b>	<b>43</b>	<b>48</b>
Albion Road/R68	Y	100	37	34	34
Sherwood Crescent/R67	Y	100	34	42	44
Laureate Court/R64	Y	100	<b>46</b>	<b>42</b>	<b>31</b>
Gerard Road/R65	Y	72	36	30	31
Bernard Road/R66	Y	100	35	32	31

**Table 2.6 A629 AQMA**

Monitoring Location	Within AQMA?	Data capture 2012	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2010	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2011	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2012
Adjusted for bias					
227 Wortley Road/R23	Y	100	<b>47</b>	<b>43</b>	<b>48</b>
236/238 Wortley Road/R24	Y	100	<b>42</b>	<b>38</b>	<b>52</b>
228 Wortley Road/R25	Y	83	<b>57</b>	<b>54</b>	<b>51</b>
St Bedes School/R21	Y	100	38	32	35
248 Wortley Road/R26	Y	83	38	<b>44</b>	<b>47</b>
243 Wortley Road/R27	Y	100	<b>45</b>	<b>40</b>	<b>44</b>

**Table 2.7 A630 Fitzwilliam Road AQMA**

Monitoring Location	Within AQMA?	Data capture 2012	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2010	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2011	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2012
Adjusted for bias					
Halsbury Road/R55	Y	100	30	27	27
Hatherley Road /R59	Y	100	<b>49</b>	<b>49</b>	<b>46</b>
152 Fitzwilliam Road/R60	Y	N/A	<b>45</b>	<b>41</b>	N/A
Clarendon Road/R61	Y	N/A	29	29	N/A
York Road/R62	Y	100	34	35	32

## Rotherham Metropolitan Borough Council

**Table 2.8 M1 AQMA**

Monitoring Location	Within AQMA?	Data capture 2012	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2010	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2011	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2012
			Adjusted for bias		
Upper Whiston/R43	Y	100	36	28	35
Catcliffe Chemists/R41	Y	100	37	34	37
Catcliffe School/R40	Y	66	36	27	31
Grange Farm Close/R39	Y	100	36	38	37
Brinsworth Howarth School Gate/R37	Y	100	34	38	36
Brinsworth Road/R38	Y	100	<b>49</b>	<b>42</b>	<b>42</b>
Derwent Crescent//R35	Y	92	<b>49</b>	<b>53</b>	<b>53</b>
Broadway/R36	Y	92	34	31	31
Bawtry Road, Brinsworth /R34	Y	100	<b>46</b>	<b>43</b>	<b>46</b>

**Table 2.9 M1 AQMA (Wales)**

Monitoring Location	Within AQMA?	Data capture 2012	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2010	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2011	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2012
			Adjusted for bias		
Wales Primary School Site entrance/R51	Y	100	<b>43</b>	<b>38</b>	<b>43</b>

21m to façade of school. Calculated annual mean 32ug/m<sup>3</sup> at school façade.

**Table 2.10 Non AQMA – Waverley Development Site**

Monitoring Location	Within AQMA?	Data capture 2012	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2010	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2011	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2012
			Adjusted for bias		
<b>Europa Link/R45</b>	N	NA	34	NA	NA
Europa Link/Parkway roundabout/R46	N	100	<b>42</b>	<b>41</b>	<b>43</b>
Europa Link/Parkway roundabout (2)/R47	N	100	<b>42</b>	37	<b>40</b>
B6066/R48	N	100	34	28	33
B6066 (2)/R49	N	100	35	26	33
Crossing Sheffield Road Woodhouse Mill/R50	N	100	33	30	32
Poplar Way/R44	N	100	35	29	29

Houses are now being constructed and occupied on the site. However it is a very large site which is being developed in phases and the distance from the monitoring sites with annual mean nitrogen dioxide >40 ug/m<sup>3</sup> and new residential development is currently approximately 1km.

**Table 2.11 Parkgate and routes north and east from town centre –non AQMA**

Monitoring Location	Within AQMA?	Data capture 2012	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2010	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2011	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2012
			Adjusted for bias		
<b>A633 N/bound Parkgate/R1</b>	N	100	38	<b>37</b>	36
A633 Parkgate/R2	N	100	<b>41</b>	<b>39</b>	<b>40</b>
A633 S/bound Parkgate/R3	N	100	39	<b>35</b>	36
A633 Rawmarsh Library//R4	N	75	<b>48</b>	<b>50</b>	<b>47</b>
42 Rawmarsh Hill (A633)/R5	N	75	<b>48</b>	<b>43</b>	<b>46</b>
Warren Vale R/Bout/R8	N	75	38	38	38
Manvers Way A6023/R9	N	100	34	34	33
Manvers Way A6023/R10	N	100	42	39	<b>42</b>
213 Wath Road	N	92	32	27	27
185 Barnsley Road West Melton	N	100	34	28	28
ASDA entrance Dalton	N	100	<b>46</b>	<b>45</b>	<b>46</b>
Terrace Street/Prospect Court/R71	N	92	<b>N/A</b>	<b>N/A</b>	<b>26</b>
Bear Tree Close Parkgate/R74	N	100	<b>N/A</b>	<b>N/A</b>	<b>28</b>

**There is relevant exposure at R10 on Manvers Way.  
Calculated value at receptor 42 Rawmarsh Hill was 43ug/m<sup>3</sup>  
Calculated value at nearest receptor to Library is 40 ug/m<sup>3</sup>**

**Table 2.12 A629 Non AQMA Monitoring**

Monitoring Location	Within AQMA?	Data capture 2012	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2010	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2011	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2012
Adjusted for bias					
A629/ London Way	N	100	<b>43</b>	<b>44</b>	<b>43</b>
A629/ Lodge Lane	N	83	34	29	28
A629/ Scholes Lane	N	83	28	26	27
A629/ Golf Course	N	75	<b>40</b>	25	<b>28</b>
A629/Droppingwell Lane	N	100	31	28	26
A629/Grange View Road	N	100	37	33	34
A629/ St Bedes School	N	100	38	32	43
A629/ Fenton Road	N	92	<b>46</b>	<b>41</b>	<b>45</b>
A629/ Wilton Gardens	N	100	<b>44</b>	<b>43</b>	<b>43</b>
A629/ M1 Jcn 35	N	100	<b>46</b>	<b>44</b>	<b>43</b>

**Note:** Distance to receptor for Fenton Road is 23m and Wilton Gardens 45m  
 Distance to receptor London Rd is 2.5m, calculated nitrogen dioxide annual mean is 39.9 ug/m<sup>3</sup>  
 Distance from J35 tube to receptor 20m calculated annual mean is 33 ug/m<sup>3</sup>

**Table 2.13 Non – AQMA Routes Town centre, West, South and East of Rotherham**

Monitoring Location	Within AQMA?	Data capture 2012	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2010	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2011	Annual mean NO <sub>2</sub> µg/m <sup>3</sup> 2012
Adjusted for bias					
Doncaster Gate /R54	N	100	<b>50</b>	<b>45</b>	<b>40</b>
Broom Road (A6021)/r56	N	100	35	35	38
Broom Ave/r57 (100m from A6021)	N	92	34	31	34
Wickersley Rd (Church) (A6021)/r70	N	92	<b>45</b>	<b>40</b>	<b>37</b>
Broom Lane junction with A631 (Worrygoose island)/r75	N	100	<b>44</b>	<b>42</b>	<b>47</b>
Moorgate Road (A618) (near to District Hospital)/R76	N	100	34	36	34
Bentley Road Bramley (near to M18 motorway)/R81	N	92	30	29	31
Westerton Drive, Bramley (near to M18 motorway)/R82	N	100	30	30	31
Blackburn School façade/R30	N	100	33	30	29
Lily Hall Road Maltby/R84	N	75	n/a	n/a	32
Nobel Way Dinnington/R85	N	100	n/a	n/a	28
Church Lane Dinnington/R86	N	82	n/a	n/a	23
Hugh Street South Anston/R87	N	83	n/a	n/a	30
Thundercliffe Grange/R88	N	75	n/a	n/a	27

Broom Lane - distance to receptor is 14m, calculated nitrogen dioxide annual mean is 36 ug/m<sup>3</sup> (2012)

### Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites

The trend of NO<sub>2</sub> annual mean results over the past 5 years is a decrease in concentration at most sites in Rotherham. However, the annual mean objective for nitrogen dioxide is still observed to be exceeded at many monitoring sites.

## 2.2.2 Particulate Matter (PM<sub>10</sub>)

Monitoring for PM<sub>10</sub> and PM<sub>2.5</sub> particulate matter takes place in Rotherham. The results of the monitoring are presented in this section in Tables 2.14 and 2.15.

**Table 2.14 Results of Automatic Monitoring for PM<sub>10</sub>: Comparison with Annual Mean Objective**

Site Location	Within AQMA (for PM <sub>10</sub> )	Valid Data Capture 2012 %	Annual mean concentration (VCM corrected) (µg/m <sup>3</sup> )
			2012
Wales	N	70 <sup>1</sup>	22
St Ann's	N	73 <sup>1</sup>	25
Bradgate	N	98	23

<sup>1</sup>Loss of data due to communication problems.

**Table 2.15 Results of PM<sub>10</sub> Automatic Monitoring: Comparison with 24-hour Mean Objective**

Site Location	Within AQMA (for PM <sub>10</sub> )?	Data Capture 2012 %	Number of Exceedences of 24 hourly mean (50 µg/m <sup>3</sup> )
			2012
St Ann's	N	73 <sup>1</sup>	18 (90.4%ile is 36)
Bradgate	N	98	19
Wales	N	70 <sup>1</sup>	6 (90.4%ile is 25)

<sup>1</sup>Loss of data due to communication problems.

At no locations have levels of annual mean PM<sub>10</sub> greater than 40µg/m<sup>3</sup> been measured.

There are no locations where more than 35 daily mean exceedences of 50µg/m<sup>3</sup> have been observed or the 90.4<sup>th</sup> percentile of daily mean concentrations have exceed 50µg/m<sup>3</sup>.

### 2.2.3 Sulphur Dioxide (SO<sub>2</sub>)

No sulphur dioxide monitoring has taken place in Rotherham during 2012.

### 2.2.4 Benzene

No monitoring for benzene has been undertaken.

### 2.2.5 Other Pollutants Monitored

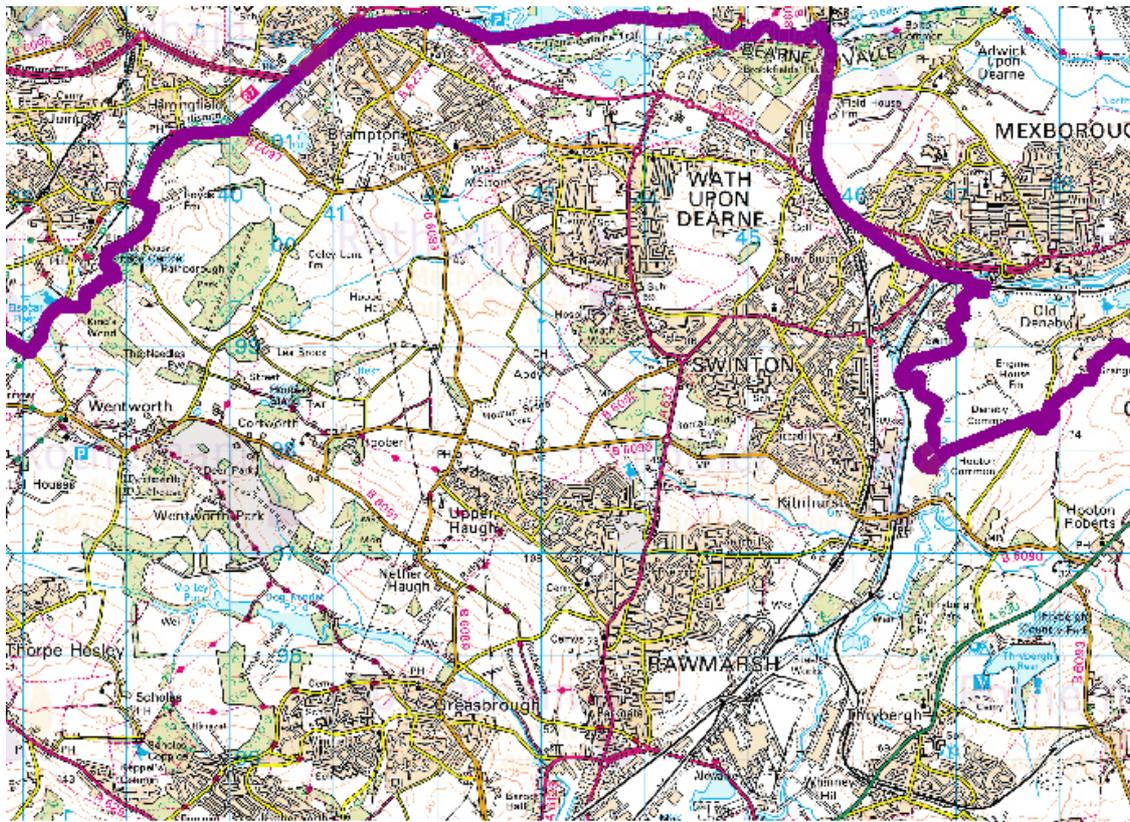
**Table 2.16 Results of PM<sub>2.5</sub> Automatic Monitoring**

Site Location	Data Capture 2012 %	Annual mean PM <sub>2.5</sub>
		2012
Blackburn	96	10

2.2.6 Summary of Compliance with AQS Objectives

Rotherham MBC has measured concentrations of nitrogen dioxide above the annual mean objective at relevant locations outside of the AQMAs, and **will need to proceed to a Detailed Assessment**, for the areas of Rotherham which are close to the A633 through Parkgate and Rawmarsh, the A6022 through Swinton and for the A6023 Manvers Way in Wath. The area is shown on the map below.

Map showing area of Detailed Assessment 2014



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## **3 New Local Developments**

### **3.1 Road Traffic Sources**

There are no newly identified road traffic sources to be assessed such as:

- Narrow congested streets with residential properties close to the kerb.
- Busy streets where people may spend one hour or more close to traffic.
- Roads with a high flow of buses and/or HGVs.
- Junctions.
- New roads constructed or proposed since the last Updating and Screening Assessment.
- Roads with significantly changed traffic flows.
- Bus or coach stations.

There are two managed motorway schemes which are planned for the M1 as it passes through Rotherham which will be assessed for their impact on air quality. The impact of these schemes will occur in areas where AQMAs already exist. This is discussed in the planning section.

### **3.2 Other Transport Sources**

No new/newly identified non-road traffic sources have been identified such as:

- Airports.
- Locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.
- Locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.
- Ports for shipping.

### **3.3 Industrial Sources**

No new/newly identified industrial sources have been identified.

### **3.4 Commercial and Domestic Sources**

Previous review and assessment reports have covered the areas of Rotherham with the highest domestic solid fuel burning and no areas have been identified during the last year with the potential to lead to unacceptably high PM<sub>10</sub> concentrations. An AQMA declared for sulphur dioxide objectives in the worst case location of the borough in 2003 but this was revoked in 2007, following the conversion of a significant number of boilers in the area to gas. The whole of Rotherham is covered by a Smoke Control Order. No areas with large densities of service sector biomass combustion appliances are currently installed in Rotherham.

### 3.5 New Developments with Fugitive or Uncontrolled Sources

Rotherham MBC confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

Rotherham MBC confirms that all the following have been considered:

- **Road traffic sources**
- **Other transport sources**
- **Industrial sources**
- **Commercial and domestic sources**
- **New developments with fugitive or uncontrolled sources.**

## 4 Planning Applications

With reference to LAQM.TG(09) this section includes planning applications for new developments for which air quality assessment is required.

### Tesco

Planning permission was granted in 2012 for a new town centre Tesco Store to be located to the south of Centenary Way in Rotherham. An air quality assessment was produced in support of the application. Rotherham MBC Planning Condition 43 states:

*“Prior to the commencement of the development a scheme to monitor the impact of the development on air quality shall be submitted to and approved in writing by the Local Planning Authority. Details to be approved shall include the frequency and the methodology of the monitoring throughout the development phase and for a period into the initial operational phase. The details in the approved scheme shall be implemented in accordance with the approved time scales within the scheme.”*

A monitoring strategy was prepared by Tesco’s agents to satisfy the discharge of Planning Condition 43 placed on the planning permission by Rotherham Metropolitan Borough Council (RMBC) for the new Tesco Store located to the south of Centenary Way in Rotherham. The contents of the monitoring strategy have been discussed and agreed with the Council’s Community Protection Team.

Rotherham MBC has confirmed that the main aim of this monitoring strategy is to establish the change in annual mean NO<sub>2</sub> concentrations in the Air Quality Management Area located approximately 100m to the east of the site on Fitzwilliam Road and at residential dwellings along Drummond Street/ Henry Street due to exhaust emissions from traffic generated by the construction and operational phases of the Store.

The monitoring strategy which has been agreed includes a diffusion tube survey, which will be undertaken for two years covering the construction phase up until the end of the first six months of the trading at the Tesco Store. Monitoring will be undertaken at two locations, and the results of the NO<sub>2</sub> survey will be provided to the Community Protection.

### Managed Motorway Scheme M1 J31-28

Although not subject to a Planning Application as such, as it will not take any additional land, an EAR has been produced on behalf of the Highways Agency for this managed motorway scheme, which was submitted to RMBC in May 2013. The EAR concludes that with respect to air quality in particular levels of nitrogen dioxide annual mean, there will be an increase in concentrations as a result of the scheme at many sensitive receptors. However, it is argued that the levels of annual mean nitrogen dioxide will return to pre-scheme levels within one year of the scheme being in operation. RMBC has sought clarification of this from the Highways Agency’s consultants on this as there is no explanation of a mechanism to account for this, given that traffic levels are predicted to increase by over 2000 vehicles per day as a result of the scheme and there will be permanent 4-lane running bringing the traffic closer to receptors.

## 5 Air Quality Planning Policies

Local policies that relate to air quality and any changes that have been introduced are described in this section (Para 4.34 – 4.35 LAQM-TG(09))

The Local Plan (previously called the Local Development Framework or LDF) will provide a long-term development strategy for Rotherham, setting out policies and proposals for new housing, shopping and employment, and how you travel throughout the borough.

The Local Plan will eventually replace the existing [Unitary Development Plan](#) and will help to streamline the local planning process and promote a proactive and positive approach to managing development. It will help the Council decide on planning applications and promote Rotherham's continued regeneration whilst protecting and enhancing the natural environment. The current programme for producing the Local Plan is set out in our [Local Development Scheme](#).

### Local Plan - Core Strategy

Document	Stage	Expected
Core Strategy	Publication	July 2012
	Submission	June 2013
	Examination	Sept 2013
	Adoption	Feb 2014

### Local Plan - Sites and Policies

Document	Stage	Expected
Sites & Policies	Draft	May 2013
	Publication	June 2014
	Submission	Oct 2014
	Examination	Feb 2015
	Adoption	July 2015

Please note that these timetables are subject to review.

Progress in achieving the milestones is reported in the [Annual Monitoring Report](#).

One of the policies which are being developed is the LDF Community Health and Safety Policy. This is a draft at the time of writing but states:

‘New development should contribute to the quality of the locality and not have an adverse impact on existing neighbours, future occupants or the environment. It should help to create and maintain quality environments that are clean, safe, healthy and pleasant. The LDF can make a significant contribution to protecting people and the environment from various forms of pollution by controlling the type and location of new development. This is particularly meaningful for Rotherham owing to its legacy of activities such as mining, quarrying and heavy industrial activities which have resulted in the degradation of environmental quality in the past and have potential to cause further pollution or damage to amenity. Associated concentrations of deprivation and ill-health following the demise of many of these industries further serves to vindicate an approach whereby developments

### **Rotherham Metropolitan Borough Council**

should maximise opportunities to contribute to well-being, including supporting opportunities for improved life chances and healthier lifestyle choices. An important consideration in the planning process is the precautionary principle. This means that where there is significant risk of damage to the environment, planning and pollution controls will take into account the need to prevent or limit harm, even where there is no definite scientific knowledge.

Development will be supported which protects, promotes or contributes to securing a healthy and safe environment and minimises health inequalities.

Development should seek to contribute towards reducing pollution and not result in pollution or hazards which may prejudice the health and safety of communities or their environments. Appropriate mitigation measures may be required to enable development. When the opportunity arises remedial measures will be taken to address existing problems of land contamination, land stability or air quality.

Proposals within Coal Mining Development Referral Areas must be accompanied with a risk assessment.

New development should be appropriate and suitable for its location. Proposals will be required to consider the following factors in locating and designing new development:

- a. Whether proposed or existing development contributes to, or are put at unacceptable risk from pollution, natural hazards or land instability
- b. Public safety and health risks directly arising from in-situ operations, past mining activity, and/ or from potential indirect or cumulative impacts on surrounding areas including sensitive land uses, tranquil areas, general amenity, and effects on the natural environment requiring the maintenance of healthy functioning ecosystems
- c. The impact of existing sources of pollution and the potential for remedial measures to address problems of contamination, land stability or air quality.

Potential adverse effects of additional development near to hazardous installations and upon Air Quality Management Areas'

## 6 Local Transport Plans and Strategies

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**south**yorkshire  
local transport partnership

**AIR QUALITY AND CLIMATE ACTION PLAN  
REVISED DRAFT MARCH 2013**

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**1 INTRODUCTION**

- 1.1 The goal of reducing emissions from vehicles is central to the Sheffield City Region (SCR) Transport Strategy and presents partners with the challenges of reducing the emission from vehicles of both carbon dioxide (which contributes to climate change) and harmful gases such as nitrogen dioxide and fine particles (which affect human health).
- 1.2 Transport is responsible for around 20% of direct greenhouse gas emissions in South Yorkshire. Developing and maintaining a private and public transport network that efficiently utilises and adopts new, low carbon transport technologies will contribute to the economic success of South Yorkshire. This has been recognised in the South Yorkshire Local Transport Plan and is further recognised in the emerging fleet strategy developed by the Local Transport Partnership. Given that at present all four local authorities rely largely on fossil fuels for their service fleets, as does the public transport network for the sub-region (with the exception of a number of new Electric Hybrid buses in Sheffield managed by Stagecoach), the long term predicted rise in oil prices will mean that more and more council funding will need to be spent on fuel. This will have a clear knock on effect on the provision of council services with funds most likely diverted away from delivery actions. Without the means to develop the infrastructure (charging and fuelling stations) and integrate electric, hybrid and hydrogen vehicles South Yorkshire will struggle to decouple economic growth from carbon emissions.
- 1.3 There are clear gains in terms of emissions targets and improved air quality and health to be made from investing low emission transport. It should be noted that this is not an exploration of leading modal shift but rather about incorporating the low emission technologies being developed for public and private transport. At present the uptake of low carbon vehicles amongst the public has been limited, as with most products in their infancy. Growth in uptake is forecast to be steady and continually gaining momentum over the next 25 years as car manufacturers move to develop low carbon alternatives. The gradual shift to low carbon, electric and hybrid vehicles will only be possible if research and investment in an infrastructure that can support them is undertaken at national and local level.
- 1.4 Over recent years the evidence of the damage caused by air pollution has grown stronger. But the UK is still failing to meet European targets for safe air pollution limits across many parts of the country. Forty out of the UK's 43 assessment zones are failing to meet EU targets on levels of annual mean nitrogen dioxide (which should have been met across the UK by 2010) and poor air quality has now been found to be shortening the lives of up to 200,000 people by an average of 2 years. The source of this is the Committee on the medical effects of air pollution (COMEAP), the Government's advisory body on this issue, who published a report on the *Mortality Effects of Long-Term Exposure to Particulate Air Pollution in the UK* (December 2010). These wider determinants of health and their effect on widening health inequalities are highlighted in the influential Marmot Report – Fair Society, Healthy Lives (institute of health equity 2010). Medical conditions affected by poor air quality are of increasing concern to health professionals. At a local level the 2011 annual report by the Director of Public Health in just one of the South Yorkshire districts (A call for Action NHS Barnsley 2011) illustrated the extent of just one such condition “respiratory illness”....- the third most common cause of deaths in the borough accounting for 16% of all deaths between 2007 -2009.
- 1.5 In South Yorkshire the highest levels of pollutants are recorded close to major roads. Many people live in areas of elevated air pollution. All four Local Authorities in South Yorkshire have declared Air Quality Management Areas for the pollutant nitrogen dioxide, and Sheffield City Council has declared an Air Quality Management Area for PM<sub>10</sub>. In its guidance on Local Transport Plans, the Department for Transport (DfT) expects authorities to consider their contribution to national transport goals as over-arching priorities for their local transport plans. These include reducing social and economic costs of transport to public health, including air quality impacts, in line with EU obligations. The DfT also provides guidance on assessing the impact of transport schemes on local air quality. It requires the impacts on air quality to be appraised and monetised. The policies supporting our strategic aim are categorised into four

groups - vehicle efficiency; informed travel choices; energy use & generation; and air quality. Alongside this approach a full Strategic Environmental Assessment (SEA) has been prepared in parallel which examines our entire strategy from an environmental perspective, and includes further detail and additional analysis.

## **2 ROLE AND REMIT**

- 2.1 The Air Quality & Climate Group (AQ&CG) was created from the former LTP2 Air Quality Delivery Group. It has representatives from the five main LTP partners, which include the four Local Authorities and the PTE. To cater for the transition from LTP2 to LTP3 and to respond to the key changes brought about by our new Transport Strategy, the AQ&CG has widened its remit. The role of the Group is to work towards the improvement of air quality in the county and reducing emissions through encouraging the use of more efficient and low carbon vehicles and energy, with a particular focus on the reduction of the impact of transport on the environment.
- 2.2 The group will develop and promote the LTP3 policies (identified in section 3 below), which tackle air pollution and other environmental indices, for instance noise and greenhouse gas emissions. The role of the group is to also actively promote air quality and emissions as an issue to all other shared priority groups and key partners. In doing so, the group demonstrates the air quality benefits of the groups' work.
- 2.3 The group also has responsibility for the production of a robust evidence base to support and promote air quality and encourage reduced emissions dialogue and activities for the wider LTP Implementation Groups to own. The group works according to ongoing guidance developed by both the DfT and Department for Environment, Food & Rural Affairs (Defra). In this way, the group's accountability to both organisations is recognised, resulting in the minimising of potential conflicts and optimisation of potential opportunities.
- 2.4 The group will liaise with other LTP Implementation Groups and in particular work with the South Yorkshire Freight Partnership (SYFP), to ensure air quality and reduced emissions is part of a sustainable Freight Strategy and subsequent delivery. The group is also forming a series of linkages with other agencies that have a shared agenda. An example of this is the South Yorkshire Health Protection Unit and the county's network of Public Health Officers, who are also working to raise awareness of the relationship between improved air quality and public health. The AQ&CG meets on a bi-monthly basis and is chaired by the Director for Sustainable Development at Sheffield City Council. The Chair works with the LTP Central Team in order to summarise progress and outlying future issues. The group is also charged with overseeing the LTP county-wide air quality and climate programme to ensure that funds are spent on high value, high impact projects. The group works to bring forward a range of activity to attract further LTP funding and other sources of funds as appropriate.
- 2.5 The group's strategy is to continue to address the need to evaluate and assess progress and performance through ongoing monitoring and measurement of emissions as required by Government and to support capital schemes across the LTP programme; and increasingly, invest more capital in to projects which will deliver performance improvement through the development of low carbon energy generation and distribution for transport in South Yorkshire.

## **3 POLICIES**

- 3.1 The group's strategy is to continue to address the need to evaluate and assess progress and performance through ongoing monitoring and measurement of emissions as required by Government. The Air Quality and Climate Group has the strategic lead for the air quality and climate change aspects of the **Sheffield City Region Transport Strategy (2011 – 2026)**, with overall responsibility for evaluation as well as those measures directly aimed at reducing emissions from vehicles and energy use. The Transport Strategy is centred on four goals:-



3.2 Underpinning these four goals are twenty-six policies, defined to achieve delivery of our Strategy. The AQ&CG has lead responsibility for the following three policies:-

GOALS	REF	POLICIES
To Reduce Emissions	R	To work to improve the efficiency of all vehicles and reduce their carbon emissions.
	U	To support the generation of energy from renewable sources and use energy in a responsible way.
	V	To improve air quality, especially in designated AQMA areas.

## **KEY ACTIONS AND DELIVERY**

- 3.3 In support of our fifteen year Transport Strategy and its policies, a four year **SOUTH YORKSHIRE LTP3 IMPLEMENTATION PLAN (2011 – 2015)**, was published. This Plan comprises of eighteen “Investment Themes”, three of which have been defined by the Air Quality & Climate Group. Our Key Actions, delivery and funding / spend profiles are reported against each of these Investment Themes and detailed in Tables 1 to 3 of this Action Plan.
- 3.4 Increasingly, we recognise that LTP funding will form a diminishing proportion of overall project expenditure, but that it remains important as ‘core funding’ against which funding can be matched (e.g. ERDF, LSTF) or attract private sector funding. In June 2011 the DfT approved South Yorkshire’s LSTF ‘Key Component’ bid worth £5m. This was followed in July 2012 by the DfT’s approval our ‘large project’ bid for LSTF which has secured £24.6m. Both elements of funding have been paid upfront to South Yorkshire, for investment up to 31<sup>st</sup> March 2015. This additional funding will support an integrated investment along four geographical corridors in South Yorkshire, which were selected based on a combination of genuine local need and a high potential for carbon-friendly economic growth.

#### 4 INTERFACES WITH OTHER LTP GROUPS & EXTERNAL AGENCIES

SUBJECT	ISSUE
<b>ASSET MANAGEMENT &amp; MAINTENANCE GROUP</b>	
Energy efficiency	Reduce the carbon impact of our assets.
Low carbon energy	Exploit our existing and future assets for the generation of low carbon energy.
Low carbon travel	Ensure our assets support the promotion of travel modes such as cycling, walking and public transport.
Alternative / Low Carbon fuels	Maintenance implications of installing new infrastructure for alternative / renewable fuels for vehicles. Ensure our infrastructure supports the provision of refuelling facilities in recognition of the increasing shift towards low carbon fuels including gas, electric and hydrogen. Specifically we will, together, develop a low carbon energy strategy across the LTP's assets, including the identification of sites within our asset base suitable for gas and electric recharging.
<i>Lighting</i>	<i>Trialling / use of LED type lighting and associated capital costs; reducing the number and time lamps are on.</i>
<i>Use of assets for energy generation</i>	<i>Full assessments required on the scope and nature of assets for energy generation, e.g. use of signs and fixtures as sites for the generation of electricity, such as solar panels.</i>
<i>Better maintained roads</i>	<i>A better understanding required on the carbon impacts of "better" road surfacing.</i>
<b>NETWORK MANAGEMENT GROUP</b>	
Air pollution & other emissions	Make informed decisions to mitigate air pollution and other emissions and develop our collective modelling capability.
<i>Journey reliability</i>	<i>A focus on journey reliability (rather than journey speed) is helpful to both agendas.</i>
<i>Project Assessment</i>	<i>There is a need for a more joined up process of formulating / assessing schemes. Carbon / air quality impacts need to be written specifically into scheme assessments of all significant schemes.</i>
<i>syITS</i>	<i>There would be productive interfaces between syITS and air quality assessments.</i>
<i>Highway incidents</i>	<i>Consideration needs to be given to the management of incidents on the highway and which agencies need to do what.</i>
<i>Carbon impact</i>	<i>Climate policies are very broad - consideration should be given to appropriate indicators of carbon impact.</i>
<b>FREIGHT PARTNERSHIP GROUP</b>	
Engage with the freight community	Shape and complete the Freight Strategy so that air quality and carbon are mitigated.
EcoStars	Promote EcoStars to all fleet operators.
<b>PUBLIC TRANSPORT BOARD (Lead officer – Gavin Bland)</b>	
Fleet performance	Establish the current make-up and performance of the operator fleet.
	Develop a plan with emissions performance improvement over the next 10 years in line with collective AQAPs.
EcoStars	Promote EcoStars to all fleet operators.
Drive Green	
<b>QUALITY OF LIFE GROUP (Lead officer – Steve Brown)</b>	
Achieve modal shift	Develop an integrated communications plan.

SUBJECT	ISSUE
	Influence support packages for organisations Travel Plans e.g. advice on using vehicles efficiently / alternative fuels.
	Understand the impact of initiatives to promote more efficient vehicles on modal shift.
	Understand the opportunities to further reduce emissions related to initiatives such as car clubs / electric bikes.

CONTINUED >>

SAFER ROADS PARTNERSHIP	
Eco-driving	Continue to integrate eco-driving into the safer roads programme.
Vehicle technology	Understand the safety issues associated with changes to vehicle technology, especially for electric, gas, hybrid and hydrogen vehicles.
HIGHWAYS AGENCY	
M1 speed limits.	Continue to work with the HA in relation to speed limits on the M1 motorway at Tinsley for air quality reasons.

## **7 Climate Change Strategies**

Rotherham MBC's Climate Change Strategy can be found at:

[http://www.rotherham.gov.uk/downloads/file/5876/environment\\_and\\_climate\\_change\\_strategy\\_and\\_action\\_plan\\_2011](http://www.rotherham.gov.uk/downloads/file/5876/environment_and_climate_change_strategy_and_action_plan_2011)

## **8 Implementation of Action Plans**

### **Implementation and development of Rotherham MBC's Air Quality Action Plan**

The progress made on implementing the measures contained within the revised Rotherham Air Quality Action Plan –M1 (2006-2011) is listed below using the method recommended in LAQM.TG(09), Chapter 4.

The first Rotherham M1 Air Quality Action Plan was finalised in 2003, after a 2 year consultation process, taking account of measures within the first South Yorkshire Local Transport Plan (2001-2006). The Rotherham Air Quality Action Plan was fully revised during 2006 to reflect the Local Transport Planning process, proposed new developments, current guidance, air quality monitoring results and the second South Yorkshire Local Transport Plan (SYLTP2 2006-2011).

The Council declared four AQMAs for three major town centre routes during 2004. Further Assessment work found that the declaration was justified and initial work was done on the formulation of an Action Plan for these routes. A prioritisation exercise was carried out during 2006-7 by Faber Maunsell on behalf of the South Yorkshire Authorities and South Yorkshire PTE to develop a programme of measures with the aim of improving air quality on the town centre routes. The Air Quality Action Plan for the Town Centre was then finalised.

A new Action Plan will be produced during 2013.

Progress over the period 2012-13 is detailed in the table below.

# Implementation of Action Plans

**Table 9.1 Action Plan Progress Rotherham M1 and Town Centre Air Quality Management Area Action Plans 2012-2013**

Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target annual emission reduction in AQMA	Progress to date	Progress 2012-13	Estimated completion date	Comments relating to target emission reductions
<b>Package 1 Improving Public Transport</b>										
Quality Bus Corridors/ Partnerships		SYPTe	2007-08	<b>2009-11 Better bus fund 2013</b>	Bus patronage	Reduction in background NOx of 1%	£2.5m project Two projects are funded from the Better Bus Fund and will enhance the Rotherham to Doncaster Smartroute (now called Smartroute) All the other projects are now complete.	Fitzwilliam Road, in an AQMA and on the Rotherham to Doncaster Smartroute, between 2007 and 2012 there has been a 20% reduction in annual mean nitrogen dioxide.	<b>Better bus fund project to be completed August 2013</b>	See Bus Intelligence Report in Appendix 2
South Yorkshire Car Club	Establishing a car club in South Yorkshire	Whizzgo /SCC	2006	2007-11	Number of members	<1%	<b>Whizzgo has 5,000 members nationwide</b>	<b>Increase in members</b>	<b>complete</b>	
Extension to Supertram							Scheme has not received approval from DfT.		<b>Complete</b> A new tram/train project may go ahead.	
Emission standards for taxis	Impact of taxis	RMBC	2006	2008-09			ANPR study	<b>Study completed</b>	<b>complete</b>	

Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target annual emission reduction in AQMA	Progress to date	Progress 2012-13	Estimated completion date	Comments relating to target emission reductions
<b>Package 2 Campaigns</b>										
<b>South Yorkshire Care4air Campaign</b>	A South Yorkshire media campaign.		<b>2003</b>	<b>2004-11</b>			A new web site has been developed during 2012/13.	Care4air campaign progress deferred to 2012/13 because of funding issues.	<b>Phase 2 complete.</b>	Quantification of campaigns on the impact on air quality of campaigns is very difficult

Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target annual emission reduction in AQMA	Progress to date	Progress 2012-13	Estimated completion date	Comments relating to target emission reductions
<b>Package 3 Planning</b>										
<b>Travel Plans (3a)</b>	Workplace and School Travel Planning	RMBC	n/a	2006-11	% of workforce covered by an active travel plan		27,566 workers covered by a travel plan 100% of schools have Travel Plan	100% of schools have Travel Plan.		See previous progress report for detailed comments
<b>Planning and Air Quality Guidance (3b)</b>	Air Quality guidance for developers	RMBC	2006-08	ongoing	Adoption of validation policy		Guidance developed.	The validation policy, including air quality was adopted in April 2008. Core Strategy Policy CS23 is being developed which includes air quality.	Complete	Mitigation measures introduced as appropriate
<b>Assess proposed major schemes for air quality impact (3c)</b>	Assessment of major schemes	RMBC	n/a	n/a	All major schemes assessed for air quality impact		100% major schemes assessed	Major schemes such as new Tesco assessed	On going	Mitigation measures to be conditioned as appropriate

Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target annual emission reduction in AQMA	Progress to date	Progress 2012-13	Estimated completion date	Comments relating to target emission reductions
<b>Package 4 M1 – Options Specific to Reducing Emissions from the M1 and Traffic Using the Motorway</b>										
<b>Mitigation measures (4a)</b>	The Highways Agency is working on proposals to widen the M1 motorway as it passes through Rotherham. The Government's 2010 Spending Review announcement outlined that the M1 J32 to J35a Managed Motorway scheme will be prepared for start of construction by 2015, subject to the outcome of statutory processes. For more information please visit the HA's <a href="#">Future Delivery Programme</a> web page.	<b>HA</b>				This scheme may be implemented with a reduction in speed which may reduce total emissions of NOx. The scheme will result in vehicles travelling closer to the receptors in the Rotherham M1 AQMA.	Ramp-metering has been introduced at some M1 junctions e.g. J34, within the M1 AQMA	Scheme preparation. Air quality assessment has been ongoing for 2 years. No assessment has been submitted to Rotherham MBC to date. EA Report for MMS for J31-28 has been received.	<b>Start of construction estimated for 2015.</b>	
<b>Package 4 Town Centre – Options Specific to Reducing Emissions in Town Centre AQMAs</b>										
<b>Vehicle Emission Testing in South Yorkshire's AQMAs (5a)</b>	AQMA vehicle emission testing programme	<b>RMBC</b>	<b>2006-07</b>	<b>2007-08</b>	<b>Number of tests</b>	<b>&lt;1%</b>	Complete	Complete	<b>Complete</b>	

Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target annual emission reduction in AQMA	Progress to date	Progress 2012-13	Estimated completion date	Comments relating to target emission reductions
<b>Package 4 M1 and Town Centre– Options Specific to Reducing Emissions in all AQMAs</b>										
Freight Quality Partnerships and Eco Stars Fleet Accreditation Scheme	FQP has been developed. 1. Recognition of best Practice in vehicle replacement, driver training, retrofitting components and fuel management all of which contribute to a reduction in emissions of fleet vehicles.  2. Encouraging other operators to adopt similar best practice.	BMBC-lead RMBC/ SCC/ DMBC SYLTP partners  <b>South Yorkshire's LSTF bid is now funding some of the ECO Stars Scheme.</b>  <b>The project has EU funding 2011-14.</b>	complete	Phase 1 2008-09 Phase 2 2009-10 Phase 3 2011-14	No of ECO Stars members	0.5 tonnes of NOx  0.1 tonne of PM <sub>10</sub> modelled	Roll out of schemes including Gedling, Nottingham, Thurrock, Falkirk, Edinburgh and York.  European ECO Stars has 12 European Country members and is 2 years old.	52 Members with 5800 vehicles have been recruited.  A review of the criteria for awarding stars has been completed.  A review has started.  A workshop on the future of ECO Stars has taken place	<b>2014 Phase 3</b>	<b>Further information is below</b>
								<b>See further information below</b>		

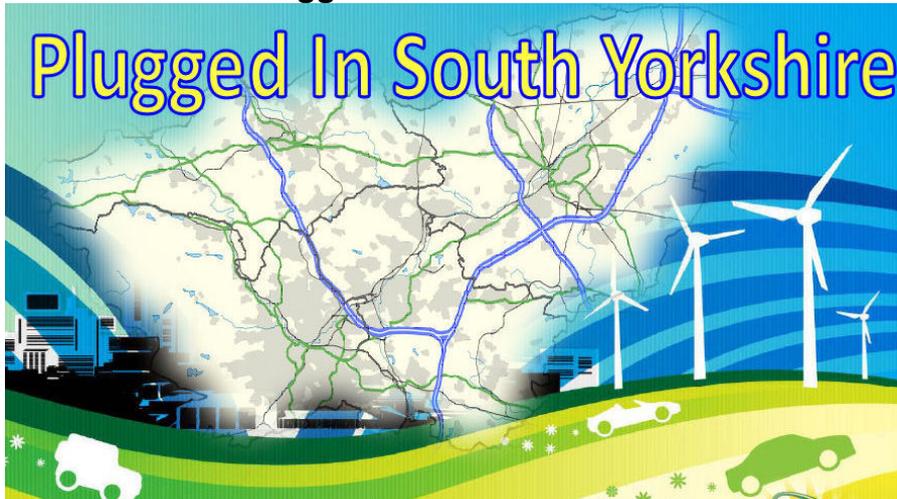
Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target annual emission reduction in AQMA	Progress to date	Progress 2012-13	Estimated completion date	Comments relating to target emission reductions
<b>Package 4 Town Centre Specific Local Road Schemes</b>										
<b>Waverley link Road (4a)</b>	A new link road to enable development	<b>RMBC</b>	<b>2009-2011</b>	tbc	n/a	tbc	Preferred route identified.		<b>Post 2015 – uncertainty as now on proposed route of HS2.</b>	
<b>A629 (1)(4b)</b> Re-locate bus stop	Re-locate bus stop	<b>SYPT/ RMBC</b>	<b>2008-09</b>	<b>2010-11</b>	<b>Lower NO<sub>2</sub> and PM10 in AQMA</b>	<b>&lt;1%</b>		No progress	<b>Project not to go ahead</b>	
<b>A629(2) (4c)</b> Assessment of parking prohibition	Assessment of parking prohibition	<b>RMBC</b>	<b>2008-09</b>					Prohibition of parking is not currently feasible.	<b>Project not to go ahead</b>	
<b>A630 Congestion Measures (LTP2) 4 e)</b>	Bus Lanes to be introduced	<b>RMBC /SYPT</b>						This measure needs to be incorporated into a larger scheme for it to go ahead.		
<b>A630/ St Ann's roundabout improvements( 4f)</b>	Signalisation of roundabout to improve traffic flow	<b>RMBC</b>	<b>2007-08</b>	<b>2008</b>	<b>Nitrogen dioxide and PM10 concentrations</b>	<b>2%</b>	Annual mean nitrogen dioxide (2008) was 5% less than 2007	The A630 AQMA for 24 hour PM10 was revoked by Rotherham MBC following improvement.	<b>Complete</b>	<b>Reduction of queuing traffic in Fitzwilliam Road AQMA has contributed to reduction.</b>
<b>A630 Bus fleet replacement (X78) (4g)</b>	Euro IV buses to run on X78 service through AQMA	<b>First Bus</b>	<b>2006</b>	<b>2007-08</b>	<b>Nitrogen dioxide and PM10 concentrations</b>	<b>2%</b>	Annual mean nitrogen dioxide (2008) was 5% less than 2007		<b>Complete</b>	<b>Improvements to the bus fleet also resulted in increased bus patronage.</b>

Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target annual emission reduction in AQMAs	Progress to date	Progress 2012-13	Estimated completion date	Comments relating to target emission reductions
<b>Package 5 – European/National measures</b>										
<b>New Euro Standards V/VI</b>	<b>National measure</b>	<b>Central Govt EU</b>							<b>On-going</b>	
<b>National road pricing scheme</b>		<b>Central Govt</b>							<b>Unlikely to go ahead</b>	

Rotherham MBC -RMBC  
 Sheffield City Council - SCC  
 Doncaster MBC -DMBC  
 South Yorkshire Passenger Transport Executive- SYPTE  
 Barnsley MBC -BMBC

## Projects

### Plugged in South Yorkshire



Plugged In South Yorkshire aims to use Government and European funding to make the Sheffield City Region (SCR) a leading area for electric vehicle (EV) uptake by businesses.

This is a unique project, circa £1m, funded through the Dept for Transport's Local Sustainable Transport Fund. The delivery of this will be via a third party private sector delivery partner, currently out to OJEU. It has just passed through Pre-Qualification Questionnaire stage and about to start Invitation to tender (ITT) with a view to starting the project in July. In discussions with a senior DfT official, it appears that this EV project is the biggest LSTF one in the country and they are very keen to see how this progresses.

Key points:

- To deliver by **2015**
- circa **80 SMEs in South Yorkshire** a 50% grant to lease hire an electric car or van
- A **50% grant** towards the cost of installing a charging point at the SME premises (which they then own at project end)
- At least 4 publicly accessible rapid chargers – these take recharge times down from 6/8 hours to 30 mins- to support these vehicles (and others) whilst out and about
- A **web portal** will provide simple, comprehensive and independent information about the advantages and disadvantages of EVs.
- An **Alternative Fuels Champion** that will assist in promoting alternative fuel uptake (inc EVs) across the region
- **Support** accessing EVs at commercial rates when trials end
- OJEU Process – we have a shortlist of 5 companies (subject to financial checks) that we will be sending the ITT out to these range from SMEs to multinationals.

- In addition a bid has been submitted to DfT for a further £350k for the installation of further rapid charge points across the region which will augment and increase the reach of the above project
- is a unique scheme – there are no other schemes operating in the UK that enable SMEs to trial EVs on a discounted basis, and then support them to purchase or hire them on a commercial basis. It is our view that installing charging points alone will not catalyse the uptake of EVs and that “hands-on trials” are needed to address the reasons (e.g. range anxiety, battery life, upfront costs, unfamiliarity etc) that currently inhibit SMEs from using EVs.

## Plugged in South Yorkshire - Benefits

- ◆ Installation and maintenance of the charge points will create **8 jobs** in the SCR
- ◆ Reduce carbon emissions by **30 tonnes** – equivalent to around 73,000 vehicle miles or the equivalent of going 3 times round the globe in an average conventional car
- ◆ Help participating **SMEs save at least £2000** per vehicle per annum on fuel and maintenance against a conventional vehicle
- ◆ Produce direct Gross Value Added (GVA) benefits of **£600k** which in turn result in growth in Gross Domestic Product (GDP).
- ◆ **Cut air pollution** of oxides of nitrogen and fine particle emissions, more people die through air pollution than road accidents each year
- ◆ Help SMEs **over come anxiety and misinformation** around the use of electric vehicles, so that they incorporate them in their fleets
- ◆ Help SMEs market their green credentials and provide a **competitive edge** through a commitment to environmental issues
- ◆ Assist with the **Sheffield City Region’s vision** around low carbon industries

## The ECO Stars Fleet Recognition Scheme

ECO Stars Fleet Recognition Scheme (Efficient and Cleaner Operations) is a free, voluntary scheme designed to provide recognition, guidance and advice to operators of goods vehicles, buses and coaches.

It was set up in South Yorkshire in 2009 as a part of the county-wide Care4Air initiative in which all four constituent Local Authorities participated. Barnsley Metropolitan Borough Council was the lead authority - and it retains that position today. The other authorities (Sheffield CC, Rotherham MBC and Doncaster MBC) are represented on, and take an active part in, the ECO Stars

scheme steering group which oversees management of the scheme. In addition, NHS Barnsley (Public Health) plays an important role in supporting and participating in the scheme and its organization, as does the South Yorkshire Passenger Transport Executive.

The South Yorkshire ECO Stars scheme was the first of its kind in the UK and since its inception has grown considerably in membership, extent and popularity.

The South Yorkshire scheme now has 52 members operating in excess of 5800 vehicles between them. Members' fleets vary in size from 2 to 950 vehicles. Members operate a huge variety of vehicles - vans and Lorries of all sizes and weights through to buses and coaches.

Other areas of the UK that now operate an ECO Stars scheme under agreement with South Yorkshire include Mid-Devon, Edinburgh and Gedling in Nottinghamshire. All participating Authorities are invited to join the Steering Group.

EU ECO Stars was launched as part of a three-year project funded by the Intelligent Energy Europe (IEE) ii Programme for 2010. The project itself commenced in June 2011.

Consultancy firm Transport and Travel Research Ltd (TTR Ltd.), manage and operate the ECO Stars scheme on a day-to-day basis on behalf of the South Yorkshire steering group and are also the scheme's operator on behalf of the Local Authorities in other areas including Mid Devon, Edinburgh and Gedling.

They played a major part in the build-up to the granting of the European ECO Stars project and co-ordinate and manage all the constituent organizations in that initiative.

### **About ECO Stars**

ECO Stars Fleet Recognition Scheme (Efficient and Cleaner Operations) is a free, voluntary scheme designed to provide recognition, guidance and advice to operators of goods vehicles, buses and coaches.

ECO Stars rates individual vehicles and the fleet's overall road transport operation using star rating criteria, to recognise levels of operational and environmental performance.

The ECO Stars scheme is the first of its kind in the UK and is now also active in parts of mainland Europe. It is straightforward to set up in your area and is designed to make membership easy.

Each member signing up to the scheme will receive tailor-made support to ensure that their fleet is running as efficiently and economically as possible in order to help them progress to higher ratings.

The scheme is open to operators of all types of commercial vehicles (light goods, medium goods, heavy goods vehicles, buses and coaches), across all sectors of the industry (own account, hire and reward, private and public sectors, retail, haulage, distribution, industrial, parcels, community transport, local registered bus services, longer distance coach services etc.) and in all sizes.

Key points of the scheme are:

- Free for operators to join
- A focus on fuel efficiency improvement
  - Saving money
  - Reducing Emissions
- Tailor-made support is provided

By implementing the key measures recommended by the ECO Stars Scheme, a typical HGV operator could expect to reduce fuel consumption by a minimum of 5% in the first year. Based on 80,000 miles per year at 8mpg and an average of £1.18 (excl. VAT) per gallon of diesel, this would result in a saving of the equivalent of over £2600 per vehicle. For an operator with 10 vehicles this equates to a saving of one full tanker of diesel\*.

The ECO Stars team develop a tailor-made “Road Map” for each member to help continually improve performance and progress to higher star-rating levels.

\* figures from Department for Transport - Freight Best Practice Programme  
Recent fuel cost values have been used to update earlier Figure from DfT Freight Best Practice Programme

Members also receive windscreen decals and door stickers for each vehicle to profile efficiency and environmental credentials to customers and the public.

Members gaining a five star rating receive a special achievement plaque in recognition of their efforts.

50th Member of the South Yorkshire ECO Stars Scheme receiving their 5 Star Award and membership plaque from Scheme Manager Ann Beddoes



## **PERFORMANCE INDICATORS**

In monitoring the outcomes and overall impact of our activity, the South Yorkshire LTP Partners have developed a suite of performance measures aligned to our Transport Strategy. These are reported at three 'tiers':-

- Tier 1: Contextual – High level impacts, including economic / health / carbon emissions performance indicators.
- Tier 2: Delivery / Implementation – LTP related outcome indicators, including mode share of travel, public transport patronage, highway maintenance and road casualty numbers.
- Tier 3: Diagnostic – Detailed level performance measures to explain performance (many of these are still to be defined).

The Air Quality and Climate Group has direct relevance to one Tier 1 indicator: "Carbon Dioxide Emissions" (1-07). We have adopted an interim measure using data published by the Department of Energy and Climate Change (DECC), until such time as the South Yorkshire Partners are able to develop more relevant locally based carbon emissions datasets. The DECC data results relate to estimates of local and regional Carbon Dioxide emissions. We report against the 'per capita' figures relating to road transport (although the caveats applied by DECC should be noted, as should the fact that the impacts of wider issues such as the national road network, outside of our direct control, will impact on results). Our ambition, over the Implementation Plan period, is to maintain a stable / slight improvement in CO<sup>2</sup> emissions, below the UK average; which has thus far been achieved.

Two of the five Tier 2 indicators ascribed to AQ&CG activities have so far been developed. The "Mode Share of Journeys" measure (2-01a), relates to travel to / from the four main South Yorkshire urban centres. Recent results indicate that the overall number of people travelling has fallen since the highest levels reported in 2009 and, whilst those surveyed walking and cycling has continued to rise, the number travelling by bus has fallen markedly since 2008. The other relevant Tier 2 indicator reports "Levels of NO<sup>2</sup> and PM<sup>10</sup> in Air Quality Management Areas" (2-06a). Our ambition is for a slight improvement during the period of our Implementation Plan, with reported results actually exceeding projections.

The following LTP3 indicators are reported on in South Yorkshire and relate to air quality and are shown in the following table:

**South Yorkshire Air Quality and Climate related Performance Indicators (updated November 2012)**

INDICATOR	COMPONENT	RESULTS							PERFORMANCE	
	Calendar Year	2007	2008	2009	2010	2011	2012	2013	RAG	Notes
<b>1-07 : CARBON DIOXIDE EMISSIONS</b> Road Transport	UK: KTCO2	134,307	129,107	124,488	124,515				<b>G</b>	
	UK: %	25.9	25.5	27.3	26.2					
	UK: Per Capita	2.2	2.1	2.0	2.0					
	SY: KTCO2	2,703	2,619	2,518	2,536					
	SY: %	27.3	26.7	28.8	27.4					
	SY: Per Capita (Actual)	1.4	1.3	1.3	1.3					
	SY: Per Capita (Forecast)	N/A	N/A	N/A	1.3	1.3	1.2	1.2		
	Calendar Year	2008	2009	2010	2011	2012	2013	2014	RAG	Notes
<b>2-01a : MODE SHARE OF JOURNEYS TO / FROM URBAN CENTRES</b> People (%)	Single occupancy cars	426,305 (30.8)	433,639 (31.3)	438,154 (32.1)	423,101 (31.7)	421,344 (32.4)			<b>NA</b>	No forecasts have been established for this indicator
	Multi occupancy cars	367,981 (26.6)	376,608 (27.2)	364,850 (26.7)	361,432 (27.1)	342,107 (26.3)				
	Light Goods Vehicles	108,288 (7.8)	102,006 (7.4)	103,127 (7.6)	102,725 (7.7)	102,598 (7.9)				
	Medium / Heavy Goods Vehicles	33,154 (2.4)	28,968 (2.1)	28,374 (2.1)	26,745 (2.0)	25,331 (1.9)				
	Buses	266,122 (19.2)	245,687 (17.7)	239,519 (17.5)	220,906 (16.6)	211,717 (16.3)				
	Trams	38,665 (2.8)	35,709 (2.6)	42,421 (3.1)	33,382 (2.5)	32,574 (2.5)				
	Trains	49,068 (3.5)	53,937 (3.9)	54,558 (4.0)	54,887 (4.1)	60,020 (4.6)				
	Motor Cycles	6,101 (0.4)	6,932 (0.5)	5,623 (0.4)	5,362 (0.4)	6,039 (0.5)				
	Pedal Cycles	6,468 (0.5)	7,330 (0.5)	7,150 (0.5)	7,805 (0.5)	7,554 (0.6)				

INDICATOR	COMPONENT	RESULTS							PERFORMANCE	
	Pedestrians	81,577 (5.9)	95,996 (6.9)	81,292 (6.0)	98,010 (7.3)	91,926 (7.1)				
	All	1,383,729 (100.0)	1,386,812 (100.0)	1,365,068 (100.0)	1,334,355 (100.0)	1,301,210 (100.0)				
	Calendar Year	2008	2009	2010	2011	2012	2013	2014	RAG	Notes
<b>2-06a: LEVELS OF NO2 AND PM10 IN AQMAs</b> ug/m3	NO2 (Actual)	44	45	45	44	45			<b>G</b>	Forecasts have been suggested to 2013 only at the present time. Projections for 2014 will be investigated once the implications of "Euro6" engines have been assessed.
	NO2 (Forecast)	N/A	N/A	N/A	45	45	44	TBC		
	PM10 (Actual)	24	22	25	23	22			<b>G</b>	
	PM10 (Forecast)	N/A	N/A	N/A	25	25	24	TBC		
	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	RAG	Notes

**RAG**

- R Red: Performance not achieving forecast level and / or worse than reported in the previous year.
- A Amber: Performance improving but still not achieving forecast level and / or worse than reported in the previous year but improved since the 'base year'.
- G Green: Performance matching or exceeding forecasts and / or better than in the previous year.

**Other Air Quality Indicators**  
**Public Health Indicator**

**Indicator 3.01** Fraction of mortality attributable to particulate air pollution

Local Authority Area <b>South Yorkshire in bold</b>	Period	Fraction of mortality attributable to particulate air pollution
<b>Barnsley</b>	2010	<b>5.4</b>
Bradford	2010	5.3
Calderdale	2010	5.0
<b>Doncaster</b>	2010	<b>5.6</b>
East Riding of Yorkshire	2010	4.9
Kingston Upon Hull, City of	2010	5.9
Kirklees	2010	5.4
Leeds	2010	5.5
North East Lincolnshire	2010	5.6
North Lincolnshire	2010	5.5
North Yorkshire	2010	4.3
<b>Rotherham</b>	2010	<b>5.7</b>
<b>Sheffield</b>	2010	<b>5.5</b>
Wakefield	2010	5.7
York	2010	4.8

England mean – 5.6

Further information on this indicator will be available in future years.

**Rotherham MBC Corporate Plan Indicator**

This indicator is reported annually.

Indicator - Corporate Plan Outcome - **Air Quality: National Air Quality Strategy Measures - Annual average nitrogen dioxide in Rotherham (in  $\mu\text{g}/\text{m}^3$ )**

The average is calculated from the data from the automatic monitoring sites in the borough. Not all the monitoring sites are in AQMAs.

**Table Annual average nitrogen dioxide in Rotherham (in  $\mu\text{g}/\text{m}^3$ )**

Year	Annual mean nitrogen dioxide $\mu\text{g}/\text{m}^3$
2010 calendar year	34
2011 calendar year	32
2012 calendar year	34

# Measures to be included in Rotherham's new Air Quality Action Plan

## 1. SYLTP3 Measures – remove financial information

REF	KEY ACTIONS	TIME	DELIVERY PROGRESS
<b>INVESTMENT THEME 13: Energy Generation</b> (Key alignment with Policy: U)			
13/1	Consider how micro-generation can be incorporated into SYPTE / Local Authority assets (e.g. interchanges / park and ride sites, bus shelters, traffic signs, etc.).	C	Developing the feasibility / outline designs for micro-generation at transport assets across South Yorkshire to inform business cases to enable prioritisation for delivery. Funded from 2011/12 LTP Capital Programme allocation.
13/2	Implementation of micro-generation at SYPTE / Local Authority assets (e.g. interchanges / park and ride sites, bus shelters, traffic signs, etc.).	S/M/L	Implementation of schemes with best business cases to be progressed. Funded either by LTP or third party private investment.
13/3	Use energy in a responsible way e.g. using low energy bulbs, reducing lighting up hours etc.	O	
<b>INVESTMENT THEME 14: Vehicles and Fuels</b> (Key alignment with Policies: R and V)			
14/1	Promote and develop:- <ul style="list-style-type: none"> <li>• Low carbon vehicles;</li> <li>• Low carbon vehicle infrastructure.</li> </ul>	O	In LTP2 a Low Carbon Vehicle and Infrastructure Delivery Plan was developed and began to be implemented. Initial projects going forward within LTP3 include progressing the development of a CNG Refuelling Station and the development of an electric vehicle / infrastructure demonstration project. Both projects are supported by the LTP but are dependent on bringing in additional funding streams.
14/2	Promote more efficient use of vehicles	O	ECO driving information freely available with the ongoing commitment to the care4air website. LSTF main bid includes eco driving training / messages as part of the ECO Academy scheme. Eco Stars scheme provides recognition, guidance and advice to operators of goods vehicles, buses and coaches in the South Yorkshire area. Each member signing up receives tailor-made support to ensure that their fleet is running as efficiently and economically as possible, to help them progress to higher ratings.
14/3	Accelerate take-up of cleaner engines	O	Eco Stars scheme provides recognition, guidance and advice to operators of goods vehicles, buses and coaches in the South Yorkshire area. Each member signing up receives tailor-made support to ensure that their fleet is running as efficiently and economically as possible, to help them progress to higher ratings. Rotherham Bus Partnership.
14/4	Work with partners to aid delivery of low carbon initiatives	O	Electric vehicle infrastructure demonstration project developing to support the use of EVs across small and medium size businesses in South Yorkshire. Funding is being bid for through the LSTF and LTP with private sector match. There is also the

REF	KEY ACTIONS	TIME	DELIVERY PROGRESS
			potential to expand this scheme with an ERDF bid being led by CO2 Sense.

CONTINUED >>

14/6	Work with the Highways Agency to better manage vehicle flow.	O	Highways Agency feel 'Managed Motorways' broadly neutral in terms of air quality impact. Council Officers have already had meetings with DEFRA and HA officials on this matter and although useful were informed that changing of speed limits on the motorway required ministerial approval. Letters have been written to local MPs seeking support and assistance in asking the Department for Transport (DfT) / Highways Agency (HA) to allow a 50 mph speed limit on the M1 motorway at Tinsley for air quality reasons.
<b>INVESTMENT THEME 15: Evaluation of Emissions, Air Quality and Noise</b> (Key alignment with Policy: V)			
15/1	Sustain air quality monitoring	O	Monitoring is taking place across South Yorkshire as part of the LTP3 programme. The monitoring project focuses on road transport pollution and produces data which is used to measure progress.
15/2	Sustain air quality / carbon emissions modelling	O	Project to build, maintain and update an air quality model which can be used to make predictions in regard to air quality and carbon emissions from traffic throughout South Yorkshire.

2014/15 = TBC

O ongoing

S short term

M medium term

L long term

## Local Steering Groups

There are several steering groups in South Yorkshire which work in partnership with the aim of improving air quality. These are:

South Yorkshire LTP3 Air Quality and Climate Change Steering Group (see section 7 membership from LTP Central Team, Rotherham MBC, Sheffield CC, Doncaster MBC, Barnsley MBC, SYPTE, NHS Barnsley). Meets bi-monthly.

South Yorkshire LTP3 Air Quality Technical Group (Rotherham MBC, Sheffield CC, Doncaster MBC, Barnsley MBC). Meets monthly.

South Yorkshire LTP3 Air Quality Modelling Group (Rotherham MBC, Sheffield CC, Doncaster MBC, Barnsley MBC). Meets monthly.

Rotherham LES Project Steering Group (Rotherham MBC, Sheffield CC, Doncaster MBC, Barnsley MBC). Meets monthly.

South Yorkshire ECO Stars Steering Group (Rotherham MBC, Sheffield CC, Doncaster MBC, Barnsley MBC and other Local Authority Scheme Managers) Meets monthly.

Sheffield Clean Air Partnership (wide range of public and private sector organisations). Meets several times per year.

Sheffield LEZ Phase 2 Steering Group ((wide range of public and private sector organisations) Meets regularly throughout the project.

There is also an active Yorkshire sub regional group which meets several times/year: Yorkshire and Humberside Pollution Advisory Council Air Quality Sub Group (membership of all the Yorkshire Councils)

## **9 Conclusions and Proposed Actions**

### **9.1 Conclusions from New Monitoring Data**

Exceedences of the annual mean objective for nitrogen dioxide were identified, both within and outside of existing AQMAs.

### **9.2 Conclusions relating to New Local Developments**

No new developments give rise to the need for a Detailed Assessment at this time.

### **9.3 Proposed Actions**

The monitoring data has identified the need to proceed to a Detailed Assessment for nitrogen dioxide annual mean. The areas of Rotherham are Parkgate/Rawmarsh and Manvers Way Wath-upon-Dearne.

Rotherham MBC is now required to progress to carrying out a detailed assessment for Parkgate/Rawmarsh and Manvers Way in Wath-upon-Dearne. The next reports to be submitted by the authority will be a 2014 Progress Report and a Detailed Assessment.

Additional monitoring survey has started to provide data for the Detailed Assessment. No changes are required for Rotherham's AQMAs. There are no outstanding LAQM Tasks for this authority.

## 10 References

Air Quality (England) Regulations 2000 (SI 928), and the Air Quality (England) (Amendment) Regulations 2002 (SI 3043)

Department for Environment, Food and Rural Affairs *Air Quality Strategy for England, Scotland, Wales and Northern Ireland* (2007)

The Second South Yorkshire Local Transport Plan (2006-2011), SYPTE

Rotherham MBC Draft Climate Change Strategy 2009

Rotherham MBC Air Quality Action Plan 2007

# Appendices

**Appendix A: Quality Assurance / Quality Control (QA/QC) Data**

**Appendix B: Further Information - Measure Package 1 Improving Public Transport Bus Intelligence Report - Report on Bus Patronage – SYPTE 2012 EXECUTIVE SUMMARY**

## Appendix A: QA:QC Data

### PM Monitoring Adjustment

The Particulate Matter monitoring data was adjusted using the VCM method.

### QA/QC of Automatic Monitoring

The Local Authority carries out the QA/QC. Calibrations are fortnightly. The main issues affecting data capture are power supply disruption and mobile communication problems.

### QA/QC of Diffusion Tube Monitoring

Nitrogen dioxide diffusion tubes for 2012 were analysed by the South Yorkshire Air Quality Samplers. The laboratory at South Yorkshire Air Quality Samplers uses the analytical technique, of the grid adsorbent being 50% triethanolamine (TEA) in acetone. Reagents used in the analysis are sulphanylamine and NEDA. The technique used is spectrometry, at a wavelength of 540 nanometres.

South Yorkshire Air Quality Samplers participates in the WASP scheme for nitrogen dioxide, and has previously participated within the survey's inter laboratory comparison scheme. Laboratory performance during 2011 and 2012 was based on rounds 111 - 118 (Oct-Dec 2010 to Jul-Sep 2012) of the WASP annual performance criteria for NO<sub>2</sub> diffusion tubes used in Local Air Quality Management. For rounds 111 to 118 100% of the measurements were determined to be satisfactory based upon a z-score of < +/- 2.

### Diffusion Tube Bias Adjustment Factors

Data taken from the bias adjustment spreadsheet (version 03 /12) for the Barnsley A628 Roadside site in South Yorkshire gives the following:

Year	Length of survey (months)	Tube mean $\mu\text{g}/\text{m}^3$	Monitor mean $\mu\text{g}/\text{m}^3$	Bias (%)	Tube Precision	BAF
2008	10	42	47	-11	Good	1.12
2009	11	43	41	4.1	Good	0.96
2010	10	45	41	9	Good	0.92
2011	12	46	42	10.2	Good	0.91
2012	12	44	40	9.8	Good	0.91

Rotherham MBC has used this local bias adjustment factor for diffusion tube data contained within this report, based upon triplicate diffusion tubes co-located at the Barnsley A628 Roadside nitrogen dioxide analyser (QA/QC associated with this analyser is discussed later in this appendix). This factor has been used for a number of years.

As diffusion tube data for the last five years (2008 to 2012 inclusive) is reported within this assessment, QA/QC issues relating to this data set are detailed within this appendix. These data have been bias adjusted using the locally derived factor rather than using a bias adjustment factor derived from the national database of co-location studies. Our locally derived bias adjustment factors are detailed within the below table, and are compared against the national factor for the corresponding year.

Year	Locally Derived Bias Adjustment Factors	Nationally Derived Bias Adjustment Factors
2008	1.12	0.96
2009	0.96	0.91
2010	0.92	0.88 (April 2011)
2011	0.91	0.79
2012	0.91	0.80

The BMBC data have been entered into the AEA Precision and Accuracy spreadsheet (version 04, February 2011) and are summarised below:

2008*		2009**	
<b>Precision</b>	10 out of 10 periods have a co-efficient of variation (CV) < 20% (with 95% confidence)	<b>Precision</b>	11 out of 11 periods have a co-efficient of variation (CV) < 20% (with 95% confidence)
<b>Overall Mean CV</b>	6	<b>Overall Mean CV</b>	5
<b>Overall Survey</b>	Good precision (< 10%)	<b>Overall Survey</b>	Good precision (< 10%)
<b>Automatic Monitor data capture check</b>	Good overall data capture 98.8%	<b>Automatic Monitor data capture check</b>	Good overall data capture 99%
<b>Adjusted Tube Average</b>	47 +/- 3 µg/m <sup>3</sup>	<b>Adjusted Tube Average</b>	41 +/- 2 µg/m <sup>3</sup>

- 10 month study, \*\* 11 month study
- 

2010***		2011	
<b>Precision</b>	10 out of 10 periods have a co-efficient of variation (CV) < 20% (with 95% confidence)	<b>Precision</b>	12 out of 12 periods have a co-efficient of variation (CV) < 20% (with 95% confidence)
<b>Overall Mean CV</b>	4	<b>Overall Mean CV</b>	4
<b>Overall Survey</b>	Good precision (< 10%)	<b>Overall Survey</b>	Good precision (< 10%)
<b>Automatic Monitor data capture check</b>	Good overall data capture 97%	<b>Automatic Monitor data capture check</b>	Good overall data capture 97.8%
<b>Adjusted Tube Average</b>	41 +/- 3 □g/m <sup>3</sup>	<b>Adjusted Tube Average</b>	42 +/- 3 □g/m <sup>3</sup>

\*\*\* 10 month study

<b>2012</b>	
<b>Precision</b>	12 out of 12 periods have a co-efficient of variation (CV) < 20% (with 95% confidence)
<b>Overall Mean CV</b>	5
<b>Overall Survey</b>	Good precision (< 10%)
<b>Automatic Monitor data capture check</b>	Good overall data capture 98%
<b>Adjusted Tube Average</b>	40 +/- 4 µg/m <sup>3</sup>

### Discussion of Choice of Factor to Use

The decision to adopt a local bias adjustment factor was taken due to:

The national factor for 2012 has been derived from a combination of urban background, “other” and kerbside sites, as well as roadside.

In previous years there has been a wide variation in derived factors, as the table below demonstrates. In addition in earlier years (2004 and 2005), there has been a relatively low number of co-location studies for this analysis (50% TEA in acetone).

<b>Year</b>	<b>Locally Derived Bias Adjustment Factors</b>	<b>Nationally Derived Bias Adjustment Factors</b>	<b>Number of co-locations studies</b>	<b>Factor variation (national studies)</b>
2008	1.12	0.96	10	0.83 – 1.12
2009	0.96	0.91	8	0.76 – 1.02
2010	0.92	0.88	5	0.78 – 1.00
2011	0.91	0.79	4	0.72 – 0.91
2012	0.91	0.80	3	0.73 - 0.91

## Appendix 2

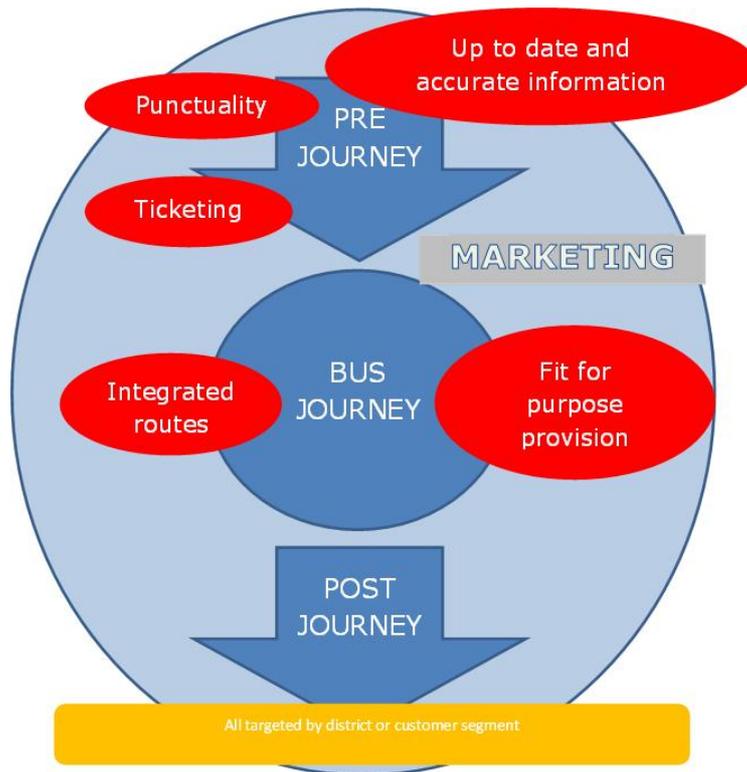
### **Further Information - Measure Package 1 Improving Public Transport Bus Intelligence Report - Report on Bus Patronage – SYPTTE 2012 EXECUTIVE SUMMARY**

This report combines national datasets, PTE comparisons with local transport and customer intelligence. There are some deep systemic changes that are taking place across the country as we become more prosperous over time. The main impact of these trends is a decline in the number of passenger journeys. Whilst at the same time the service that is being delivered on a day-to-day basis to the people of South Yorkshire is improving.

The table below summarises what's going well and key opportunities as well as the key issues and challenges that the bus service faces today and in the near future. The recommended action diagram illustrates the key areas to focus on in order to deliver real benefits to users and thereby drive passenger growth.

<b>What's going well</b>	<b>Issues</b>
Capacity	Perception of the network differs from perception of the service being used
Journey Times	Value for money
Interchange provision	Routes
Quality of vehicles	Ease of interchange
Bus drivers	Waiting time / punctuality
Safety	Facilities at the bus stop
Basic Information Products	Gap in the information offer
<b>Opportunities</b>	<b>Challenges</b>
Growing population in key markets	Car ownership likely to rise, particularly for women.
When people are changing jobs/home	Passenger numbers falling
<b>Financial Constraints</b>	
Public sector funding cuts	Reduced revenues and commercial viability

### **Recommended Actions**



## 1. TOPLINE SUMMARY

### 1.1. Key Findings

#### Volume

- For approximately 40 years people in Great Britain have travelled for the same reasons, the same duration, but we own more cars so travel faster and further.
- South Yorkshire has recorded the greatest bus patronage decline since 1985, but current trends are more in line with other PTEs.
- South Yorkshire is 3rd amongst the 6 English PTEs for the number of passenger journeys per person.
- At a district level, bus patronage trends have varied significantly since 2007/08:

Barnsley	Doncaster	Rotherham	Sheffield
 18.3%	 -6%	 -17.9%	 -0.9%

- South Yorkshire has the lowest proportion of fare paying passengers amongst PTEs (48% compared to 61-73%), not accountable via differences in age profiles.
- Within fare payers, South Yorkshire has the highest percentage of cash fares (41% compared to 19-31%).
- Since 2007/08 Barnsley is the only district to have avoided a loss of fare payers, and has seen a movement towards pre-pay operator tickets.
- Doncaster has lost cash fares.
- Rotherham has lost patronage across all categories, excluding PTE tickets, particularly in cash fares. The PTE ticket market is strongest in Rotherham.
- Sheffield has the largest fare paying market, with a movement towards cash fares and away from operator pre-pay tickets.

- Strong demand for inter-peak bus services; possibly because of the dominance of shopping as a journey purpose.

#### External Environment

- Women generally make more trips, but don't travel as far, and are more likely to be car passengers, use buses, taxis and walk. They also have more complex journeys.
- Car use for women is increasing at the same men are using cars less. Young women are now acquiring driving licences at the same rate as men.
- People make more trips as they get older, but are slow to reduce them – our elderly populations are very active. Shopping trips also increase with age.
- The young and old make dis-proportionately more trips by bus, making up 42-53% of the market in South Yorkshire districts.
- The overall population in South Yorkshire is projected to grow by 5% in 10 years, but those aged 65+ are projected to grow by 16% over the same period.
- Higher socio-economic groups travel more and further, and are more likely to be a car or van driver and use the train.
- South Yorkshire GVA and wages are low. Sheffield is distinct with higher GVA than the other three districts. With respect to wages, this difference is less clear in recent years with the exception of Barnsley which has the lowest wages.
- Increased car ownership is only linked to change of mode, not increased trips or time spent travelling.
- The number of cars per person in South Yorkshire is low, but the trend is broadly in line with other areas.
- Between 1994 and 2005 the number of cars per person in Barnsley, Doncaster and Rotherham has increased in line with some of the highest rates in the country (@40%).
- The average percentage of non-car households is 25% for Great Britain. Sheffield is higher (28%) but Barnsley, Doncaster, and Rotherham are lower (22-23%).
- South Yorkshire's population and employment densities are the lowest of all PTE areas and this is by a significant margin.
- 80% of households are located within 400m of the core network (stops with at least 6 buses per hour).

#### Satisfaction<sup>1</sup>

- The SYPTE Passenger Satisfaction Survey (PSS) shows satisfaction across nearly all the measures increased from 2005-2008 and since stabilised since then.
- The national Passenger Focus Bus Passenger Satisfaction Survey (BPS) finds South Yorkshire as having the joint second highest overall satisfaction with bus (86%), and highest for value for money (66%)
- The PSS finds lower satisfaction levels for overall satisfaction (56%) and value for money (37%).
- Capacity does not appear to be an issue (85% BPS; 77% PSS) but routes, opportunities to travel and ease of interchange are (55-60% PSS)
- Of the time factors (journey time, waiting time, punctuality) measured, it is the waiting time and punctuality that are key elements (c.75% BPS; c. 50% PSS).

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<sup>1</sup> The Passenger Focus Bus Passenger Survey (BPS) asks people on a bus what they think of that particular journey. The South Yorkshire Passenger Satisfaction Survey (PSS) asks both users and non-users (c.70-75% of the sample are users) about the network as a whole. On average, people will have a more positive view of a specific journey, and users will have a more positive view of the service. As a result, BPS satisfaction figures are, on average, significantly higher than those from the PSS.

- Vehicle and facility quality has been improving and is generally on a comparative par with other areas. The lowest satisfaction scores are for cleanliness (73% BPS; c. 60% PSS) and bus stops (c. 55% PSS) but these are significantly above other metrics such as value for money
- Similarly the driver factors measured show improvements with the driving style and driver attitude recording the least satisfaction in this at (71% for the BPS; and 62% PSS)
- Personal safety attracts relatively high values, the lowest c. 70% in both surveys.
- At stop, timetables are viewed as the most satisfactory information provided across PTEs (70-80% satisfaction BPS)); there is very low satisfaction with fare and route map information.
- Overall there is a discrepancy between satisfaction with information provided overall (56% PSS) and the products on offer (57-78% PSS) suggesting a gap in the offer.

### Quality

- For the same size area, London has 7 times the vehicle kilometres of South Yorkshire. A typical metropolitan area has 1.8 times.
- Barnsley and Doncaster have approximately 0.6 times the South Yorkshire average; Rotherham 0.9 and Sheffield 2.1.
- Nationally, since 1985 fares have increased beyond the rate of inflation (312% compared to 219%); overall car costs have stayed in line (212%), whilst the very visible vehicle costs element of car ownership is significantly lower (97%).
- However, since 2002 fares have risen below the average for metropolitan areas (46% compared to 68%).
- Since district data was available in 2006/07 Barnsley, Doncaster and Rotherham have shown rises below the metropolitan area average; Sheffield fares have not risen at all.
- Bus is distinctly unreliable and unpunctual compared to other public transport modes, and is worst at peak times. Both have improved in recent years, particularly punctuality in the Am peak (82% on time to 90.5% between 2007 and 2011).
- South Yorkshire has seen significant investment in facilities - 9 in 10 stops have information and 4 in 10 have shelters; re-building all interchanges
- South Yorkshire is ahead of national averages on low floor buses and real time functionality, but behind on CCTV and the age of the fleet.
- A high percentage of journeys that could have had real time working in 2012 do not (nearly two fifths).
- Information provision has developed significantly in recent years, with the additions of real time, onward journey maps, passenger information displays, touch screen kiosks, journey planner and most recently a mobile friendly website version.

### **1.2. Key Issues**

South Yorkshire performs comparatively well, 3rd for bus journeys per person amongst PTEs in the face of low household and employment densities, and low vehicle kilometre density. However:

- Car ownership is projected to increase, as is GVA – both regarded as deflators of demand.

- Whilst the percentage of no-car households in SY is around the national average, the number of cars per person is low. During previous national increases in cars per person, Barnsley, Doncaster and Rotherham increased rapidly. Given that the value is still low, it suggests room for continued growth beyond the national trend.
- Women make difficult trips, and are increasing their car use whilst men are reducing theirs.
- Overall satisfaction appears to be high amongst users of a particular service (86%), but cost is an issue (66% satisfied with value for money).
- Perception appears to be an issue as satisfaction drops when people consider their satisfaction with the network, rather than the journey they are making.
- There are some key areas of dissatisfaction – routes, opportunities to travel, ease of interchange, waiting time / punctuality; bus stop facilities; and information products are not fulfilling the objective of the customer.
- Reliability and punctuality has improved in recent years but still remains behind other modes.
- Real time is available on the fleet but not working on a large proportion of services.
- South Yorkshire has an ageing fleet, and less CCTV than other areas.

Whilst the above present challenges for us to tackle over the coming years, it should be noted that there are significant opportunities to influence people's behaviour if we take the right actions:

- The British Household Panel Survey shows that '18% of commuters change their mode of travel and 8% of the households alter their level of car ownership in any given year.' (Metz 2010)
- Nearly 20% of the workforce change job each year (Metz 2010)
- More than 33% of people have resided at their current address for less than 5 years (Metz 2010)
- The increase in those aged 65+ years old across the county represents an opportunity for future patronage growth.
- The increase in people aged 0-19 years old in Sheffield represents an opportunity for future patronage, with potential implications for long term retention of the customer base where this is not student led.

These challenges and opportunities must be met whilst the public sector is faced with significant financial constraints, anticipated to continue for the foreseeable future. In parallel, the private sector faces falling patronage and the resultant impacts on revenues.

### 1.3. Key Actions

- Ensure appropriate services are available for the elderly population, including community transport.
- Develop retention strategies for Sheffield's growing 0-19 years old age group.
- A focus on travel solutions for women – for example, **ticketing** solutions – this may help to stem the loss in this key market
- To tackle perceptions of **reliability**, there should be a focus on increasing the proportion of **RTI units on buses** that are operating correctly
- The **information** product offer is not meeting customer requirements and requires alterations.
- Continued investment with some bus stop facilities – potentially **RTI units** to reduce perception of wait time.

- Continued **partnership working** to seek value for money for the customer, optimised **integrated routes**. Should the Sheffield Bus Partnership deliver customer benefits, Rotherham may be the next location in South Yorkshire to benefit most because of its strong PTE ticket pre-paid market, and falling patronage.
- **Marketing** to improve impressions of the service.

#### **1.4. Areas for Further Analysis**

- Decline in passenger numbers issue in Rotherham
- Impact of changes / increase in child fares
- Inconsistency of punctuality data across areas
- Investigation of financial issues – constraints, threats, impacts of schemes