



# 2009 Air Quality Updating and Screening Assessment for *Tameside MBC*

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

December 2009



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## Executive Summary

This Updating and Screening Assessment (USA) was produced by Tameside Metropolitan Borough Council in fulfilment of Part IV of the Environment Act 1995, which places a statutory obligation on all Local Authorities to review and assess air quality within their area. The report was produced in order to identify any significant changes in air quality that may have occurred since the previous round of review and assessment.

The USA includes:

- a summary of the previous reviews and assessments undertaken by Tameside MBC;
- a presentation of the latest available monitoring data; and
- an assessment of new or changed emission sources within the Borough and neighbouring authorities.

Tameside MBC monitors for a range of atmospheric pollutants within the Borough. Ambient pollutant monitoring results are presented in Section 2 of this report. The assessment has identified that several sites used to monitor for nitrogen dioxide (NO<sub>2</sub>) located within the designated Air Quality Management Area (AQMA) have recorded concentrations below the annual mean NO<sub>2</sub> Air Quality Objective. This suggests that the current AQMA boundary may now be incorrect and further assessment should be undertaken to confirm or amend the existing boundary. Tameside MBC will continue to a **Detailed Assessment** of annual nitrogen dioxide concentrations.

Road traffic sources were investigated using the emissions inventory created by the Greater Manchester Transport Unit (GMTU). Comparisons of 2005 and 2008 traffic flows at links and junctions within the Greater Manchester areas were used to address the following scenarios:

- narrow congested streets with residential properties close to the kerb;
- busy streets where people may spend 1-hour or more close to traffic;
- roads with a high flow of buses and/or HGV's;
- busy junctions;
- new roads constructed or proposed since the previous round of review and assessment;
- roads with significantly changed traffic flows; and
- emissions from bus and coach stations.

In accordance with DEFRA technical guidance it was concluded that no further assessment was required with regard to road vehicle exhaust emissions within the Borough. Industrial and domestic emission sources were also investigated in accordance with the DEFRA technical guidance. It was confirmed that there was no requirement to proceed to a detailed assessment of these emission sources.

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# **1 Introduction**

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

Tameside covers an area of 40 square miles in the east of the Greater Manchester conurbation. It is largely urban in character with continuous development in the western and central parts. The eastern part provides a marked contrast, being dominated by high moorlands forming part of the Pennine foothills. It is a multi-centred district with the population of approximately 213,500 being distributed amongst residential areas surrounding its nine towns, which vary in size from the administrative centre of Ashton under Lyne, with a population of 44,400, to Mossley in the Pennine foothills with a population of just 10,100.

The towns in Tameside began to grow in the 19th century as separate manufacturing centres in the textile and heavy engineering industries. These traditional industries have undergone a long-term decline and were hit even harder during the recession of the early 1980's when a quarter of the jobs in these sectors were lost. However, Tameside's economic future now appears much brighter. There has been considerable investment in town centres in particular in Ashton-Under Lyne, housing renewal in Hyde and Ashton and the regeneration of the Tame Valley. Considerable development interest and new strategic development opportunities have followed the completion of the M60. The Borough's employment structure has a strong manufacturing base, including food, pharmaceuticals, and chemicals, as well as engineering. Retail development has been strong in Ashton as well as in Denton Crown Point, and the strategic site of Ashton Moss has a strong logistics and distribution base alongside leisure investment. St Petersfield in Ashton and Ashton Moss will bring new office based employment to the Borough.

The established highway network in Tameside is characterised by two major east-west routes, extending from the City of Manchester to cross the Pennines, the A635 and the A57. These are intersected in Ashton, Hyde and Denton town centres by the A627 and the A6017 north-south routes linking towns on the eastern side of the conurbation. The motorway reinforces the more southerly of the east west corridors from Denton to Mottram (M67) and the north-south route from Stockport to Denton (M60), connecting Tameside to the national motorway network and to Manchester International Airport. Further to this, the M60 extension north from Denton to Middleton opened in October 2000, completing the Manchester Outer Ring Road. A map of Tameside is shown in figure 1.1.

There are two east-west rail routes, providing regular local passenger links from parts of Tameside to Manchester City centre. The area has a greater than average number of households without access to private transport and the local bus system is therefore of great importance. There is an extensive network of over 70 local bus routes.

## **1.2 Purpose of Report**

This report fulfils the requirements of the Local Air Quality Management process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents. The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where exceedences are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

## 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 micrograms per cubic metre  $\mu\text{g}/\text{m}^3$  (milligrams 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 Local Air Quality Management in England.**

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
<b>Benzene</b>	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	5.00 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010
<b>1,3-Butadiene</b>	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
<b>Carbon monoxide</b>	10.0 $\text{mg}/\text{m}^3$	Running 8-hour mean	31.12.2003
<b>Lead</b>	0.5 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
	0.25 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2008
<b>Nitrogen dioxide</b>	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2005
<b>Particles (PM<sub>10</sub>) (gravimetric)</b>	50 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
<b>Sulphur dioxide</b>	350 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005





Figure 1.1: Tameside

## 1.4 Summary of Previous Review and Assessments

Tameside began the review and assessment process in 1998 and published its first report in January 1999. The table below details each of the reports published under the review and assessment framework.

Report Name	Date Published	Outcomes
Review and Assessment of Air Quality in Tameside – Stage 1	January 1999	Progression to Stage 2 required for nitrogen dioxide, sulphur dioxide, particulates, benzene and lead.
Review and Assessment of Air Quality in Tameside – Stage 2	September 2000	Progression to Stage 3 required for nitrogen and dioxide particulates
Review and Assessment of Air Quality in Tameside – Stage 3	December 2000	Wide Spread exceedences of annual nitrogen dioxide and some isolated instances of exceedence of the daily objective for particulates. Air Quality Management Area declared as a result.
Declaration of Tameside's Air Quality Management Area (see figure 1.2 )	July 2001	AQMA declared for predicted exceedences of both the annual average nitrogen dioxide objective and the daily particulate objective.
Review and Assessment of Air Quality – Stage 4	May 2003	Exercise to confirm that the boundaries of the declared AQMA are correct. Source apportionment exercise also undertaken confirming motor vehicle emissions as major source of nitrogen dioxide.
Review and Assessment of Air Quality: Updating and Screening Assessment	December 2003	Although the USA has identified no new areas of concern, new modelling work to be undertaken across Greater Manchester for NO <sub>x</sub> and PM <sub>10</sub> taking into account changes in both guidance and emission factors.
Review and Assessment of Air Quality – Detailed Assessment	July 2004	The report concludes there will be wide spread exceedences of the nitrogen dioxide annual average objective across the borough. The existing AQMA will therefore need to be amended accordingly.
Declaration of Tameside's Air Quality Management Area (see figure 1.3)	September 2005	AQMA declared for predicted exceedences of the annual average nitrogen dioxide objective.
Review and Assessment of Air Quality: Updating and Screening Assessment	October 2006	The report did not identify any need to proceed to a detailed assessment.
Review and Assessment of Air Quality - Progress Report	July 2007	No new areas of exposure identified. Progress on the Air Quality Action Plan included.

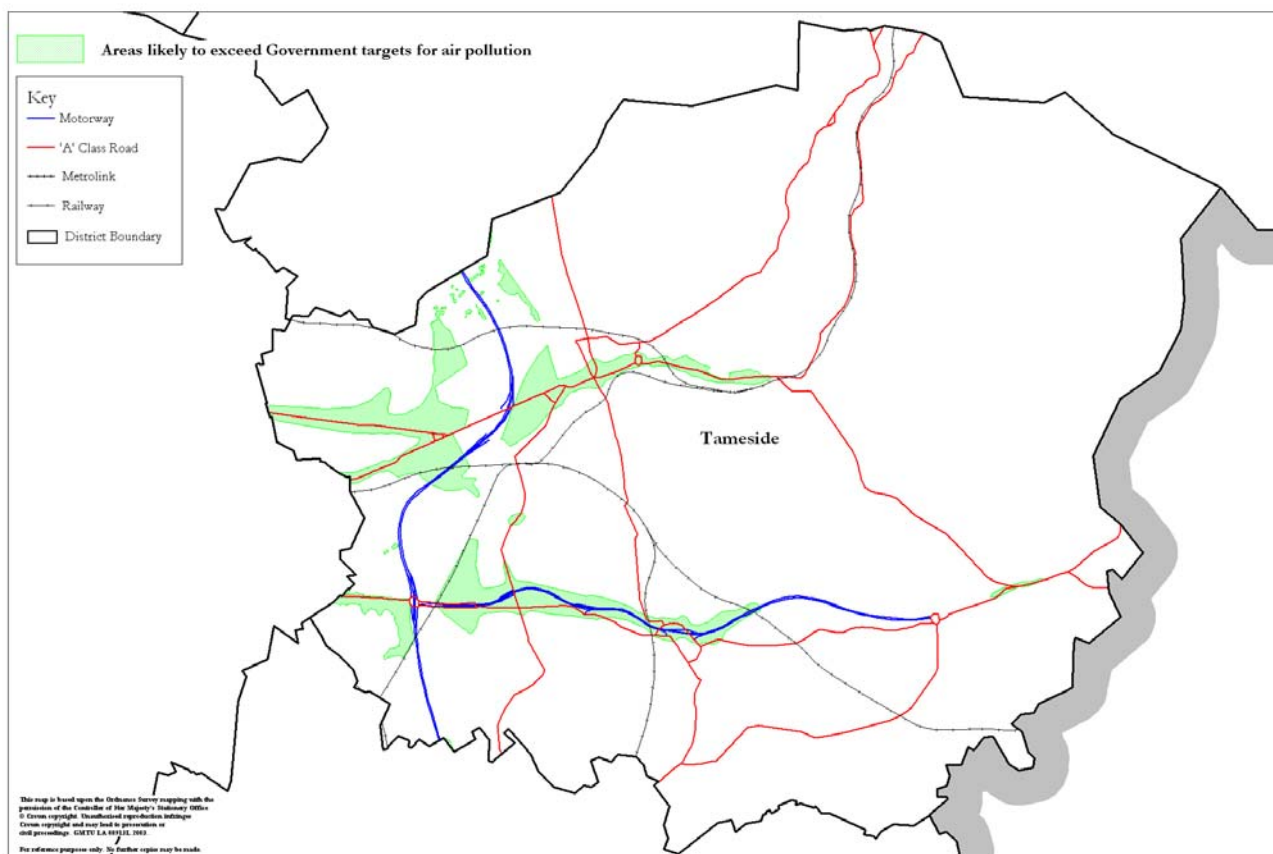


Figure 1.2: Air Quality Management Area Declared in 2001

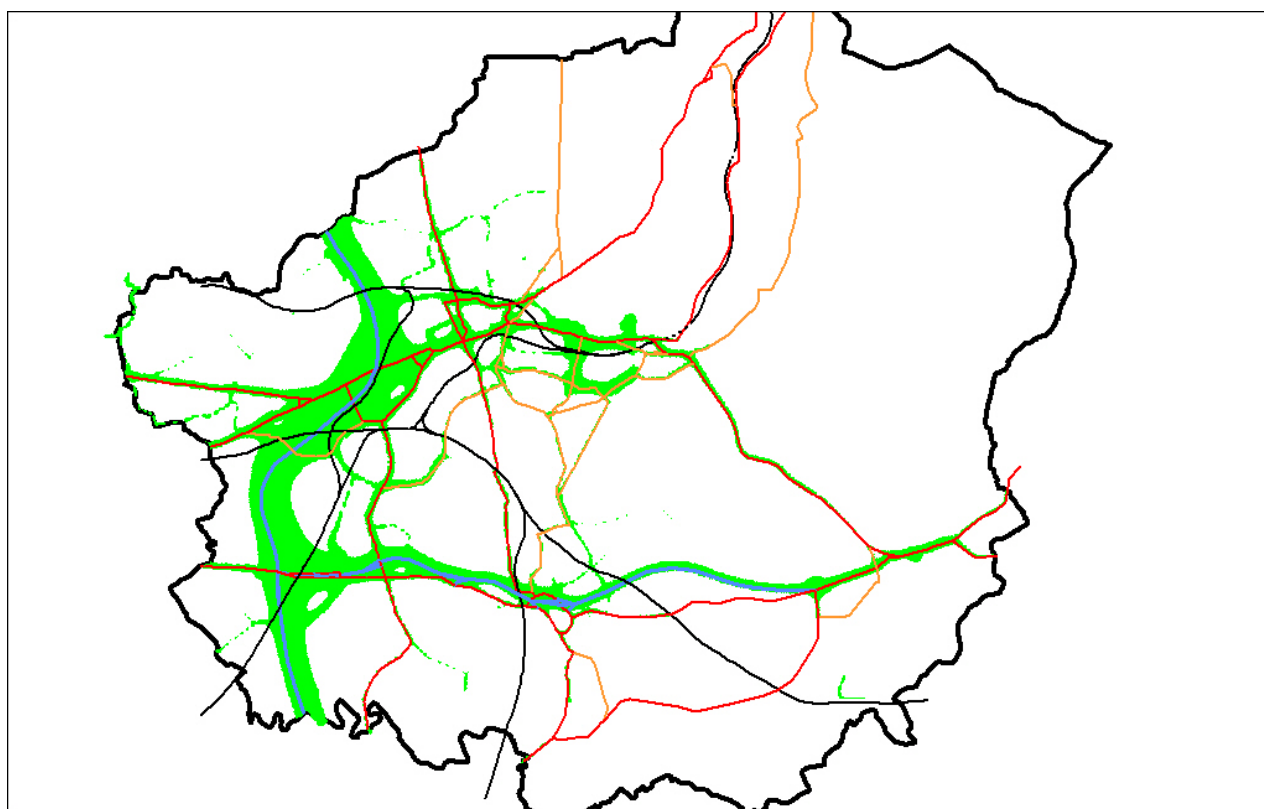


Figure 1.3 Current AQMA

## 2 New Monitoring Data

### 2.1 Summary of Monitoring Undertaken

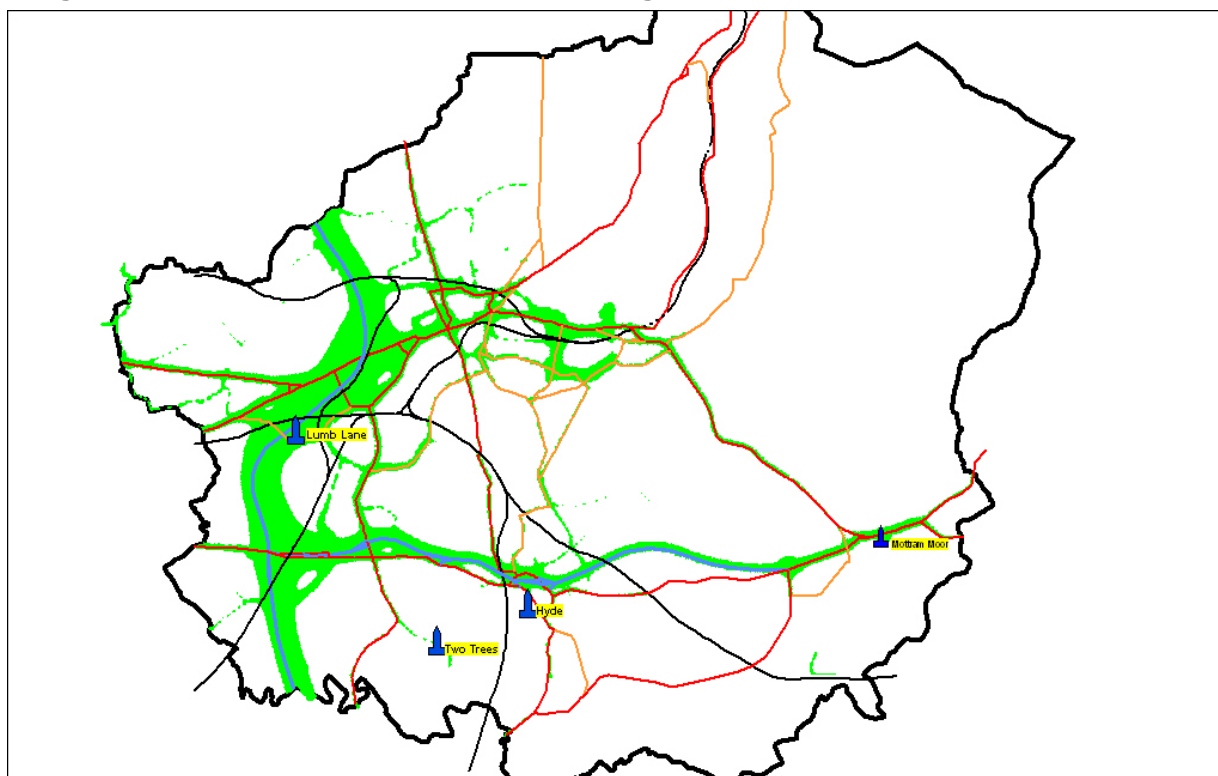
#### 2.1.1 Automatic Monitoring Sites

There are 4 real time monitoring sites across the borough, their locations are shown in figure 2.1. QA/QC details for these sites are shown in appendix A. Table 2.1 below includes details of each site.

**Table 2.1 Details of Automatic Monitoring Sites**

Site Name	Site Type	OS 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)	Worst-case Location ?
Two Trees	Urban Background	393440 394330	NO <sub>x</sub> , PM <sub>10</sub> , SO <sub>2</sub> , CO, O <sub>3</sub>	N	Y 1m	N/A	N
Lumb Lane		391449 397321	NO <sub>x</sub> PM <sub>10</sub>	Y	Y 8m	1m	N
Mottram	Kerbside	399781 395817	NO <sub>x</sub> PM <sub>10</sub>	Y	Y 1m	1m	Y
Hyde		394756 394853	NO <sub>x</sub> PM <sub>10</sub>	Y	Y 60m	1m	Y

**Figure 2.1: Location of Automatic Monitoring Sites**



## 2.1.2 Non-Automatic Monitoring

During 2008 there were 33 non-automatic monitoring sites across the Borough. All of these were monitoring Nitrogen Dioxide using passive diffusion tubes. 19 of these tubes are within the current AQMA. Table 2.2 below shows the details of each site.

Site Name	Site Type	OS 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)	Worst-case Location ?
King Street	roadside	394050 397190	NO <sub>2</sub>	Yes	Yes	2m	Yes
Hyde Town Hall	Urban background	394770 394930	NO <sub>2</sub>	No	Yes	2m	
Thompson Road	Urban background	391000 395130	NO <sub>2</sub>	Yes	Yes	2m	
Penny Meadow	roadside	394200 399260	NO <sub>2</sub>	Yes	Yes	2m	Yes
Green Lane	Urban background	400510 396520	NO <sub>2</sub>	No	Yes	2m	
Two Trees School	Urban background	393440 394330	NO <sub>2</sub>	No	Yes		
Guide Lane	roadside	392520 396760	NO <sub>2</sub>	Yes	Yes	1m	Yes
Market Street	roadside	400410 396060	NO <sub>2</sub>	Yes	Yes	2m	Yes
Manchester Road	roadside	392590 398430	NO <sub>2</sub>	Yes	Yes	2m	Yes
Park Parade	roadside	393710 398790	NO <sub>2</sub>	Yes	Yes		Yes
Stamford Street	roadside	395410 398730	NO <sub>2</sub>	Yes	Yes		Yes
Manchester Road	roadside	391470 397930	NO <sub>2</sub>	Yes	Yes	2m	Yes
Manchester Road	roadside	389400 398220	NO <sub>2</sub>	Yes	Yes	2m	Yes
Manchester Road	roadside	392120 395510	NO <sub>2</sub>	Yes	Yes	2m	Yes
Manchester Road Crown Point	roadside	392490 395500	NO <sub>2</sub>	Yes	Yes	2m	Yes
B&Q Hyde	roadside	394540 395110	NO <sub>2</sub>	Yes	Yes	2m	
Woolley Lane	roadside	400400 395580	NO <sub>2</sub>	Yes	Yes	2m	Yes
Dean Street	Urban background	393250 399160	NO <sub>2</sub>	No	Yes		
Cavendish Mill	Urban background	393620 398590	NO <sub>2</sub>	No	Yes	N/A	
Manchester Road	roadside	390490 395630	NO <sub>2</sub>	Yes	Yes	2m	Yes
Oldham Road	roadside	393060 401060	NO <sub>2</sub>	Yes	Yes	2m	Yes
Lees Road	roadside	394940 395630	NO <sub>2</sub>	No	Yes	2m	Yes
Acres Lane	roadside	396520 398310	NO <sub>2</sub>	Yes	Yes	2m	Yes
George Lawton Hall	roadside	397040 402440	NO <sub>2</sub>	No	Yes	2m	
Dean Street	Urban background	393370 402050	NO <sub>2</sub>	Yes	Yes	10m	

Site Name	Site Type	OS 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)	Worst-case Location ?
Oldham Road	roadside	393380 399810	NO <sub>2</sub>	Yes	Yes	2m	Yes
Waterton Lane	Sub urban	396900 402450	NO <sub>2</sub>	No	Yes	2m	
Arundel Street	roadside	396386 402440	NO <sub>2</sub>	No	Yes	2m	Yes
Lees Road	roadside	397010 402560	NO <sub>2</sub>	No	Yes	2m	Yes
Stockport Road	roadside	397090 402620	NO <sub>2</sub>	No	Yes	2m	Yes
Stamford Road	roadside	397080 402540	NO <sub>2</sub>	No	Yes	2m	Yes
Argyle Street	Sub urban	397060 402390	NO <sub>2</sub>	No	Yes	2m	
Stamford Street	roadside	397720 402050	NO <sub>2</sub>	No	Yes	2m	Yes

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

## 2.2 Comparison of Monitoring Results with AQ Objectives

### 2.2.1 Nitrogen Dioxide - Automatic Monitoring Data

The measured annual average concentrations do not exceed 40µg/m<sup>3</sup> at any of the monitoring locations apart from Mottram Moor, where the 2008 annual average was 44µg/m<sup>3</sup>, as shown in table 2.3a.

The hourly objective of 200µg/m<sup>3</sup> not to be exceeded more than 18 times per year was exceeded in 2008 on 34 occasions at the Mottram Moor site. None of the other sites had any exceedences of the hourly objective. The number of exceedences of the hourly objective at this site is somewhat surprising. Provisional data for 2009 indicates only 1 breach of the hourly objective. Further investigation into this area will be undertaken via a detailed assessment.

**Table 2.3a Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with Annual Mean Objective**

Site ID	Location	Within AQMA?	Proportion of year with valid data 2008 %	Annual mean concentrations (µg/m <sup>3</sup> )		
				2006 *	2007 *	2008
	Lumb Lane, Audenshaw	Y	98.9	36	38	36
	Water Street, Hyde	N	95.9	27	27	27
	Mottram Moor, Mottram	Y	71.4	44	53	53
	Two Trees Lane, Denton	N	94.5	19	19	19

**Table 2.3b Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1-hour Mean Objective**

Site ID	Location	Within AQMA?	Data Capture 2008 %	Number of Exceedences of hourly mean (200 µg/m <sup>3</sup> ) <i>If the period of valid data is less than 90% of a full year, include the 99.8<sup>th</sup> %ile of hourly means in brackets.</i>		
				2006 *	2007 *	2008
	Lumb Lane, Audenshaw	Y	98.9	0	2	0
	Water Street Hyde	N	95.9	0	0	0
	Mottram Moor, Mottram	Y	71.4	3	33	34 (227.2)
	Two Trees Lane, Denton	N	94.5	0	0	0

## 2.2.2 Diffusion Tube Monitoring Data

Of the 19 sites located within the currently declared AQMA, 12 have exceeded the 40µg/m<sup>3</sup> annual average objective. 7 of the sites located within the current AQMA have annual average concentrations that are regularly below the 40µg/m<sup>3</sup>. Of the 14 sites currently outside the designated AQMA only 1 fails the annual objective. The results are shown in figure 2.1

The monitoring results indicate that the boundary of the current AQMA should be revised and Tameside MBC will need to progress to a detailed assessment for nitrogen dioxide.

**Table 2.4a Results of Nitrogen Dioxide Diffusion Tubes**

Site ID	Location	Within AQMA?	Data Capture 2008 %	Annual mean concentrations
				2008 (µg/m <sup>3</sup> ) Adjusted for bias
	King Street Dukinfield	Yes	96	34.90
	Hyde Town Hall	No	100	34.57
	Thompson Road Denton	Yes	100	32.15
	Penny Meadow Ashton	Yes	96	<b>54.55</b>
	Green Lane Hollingworth	No	100	16.51
	Two Trees School Denton	No	100	19.00
	Guide Lane Audenshaw	Yes	65	<b>40.16</b>
	Market Street Hollingworth	Yes	100	<b>75.42</b>
	Manchester Road Ashton	Yes	87	<b>48.99</b>
	Park Parade Ashton	Yes	100	<b>41.30</b>
	Stamford Street Stalybridge	Yes	96	30.57
	Manchester Road Audenshaw	Yes	100	<b>41.83</b>
	Manchester Road Droylsden	Yes	100	37.76

## Tameside MBC - England

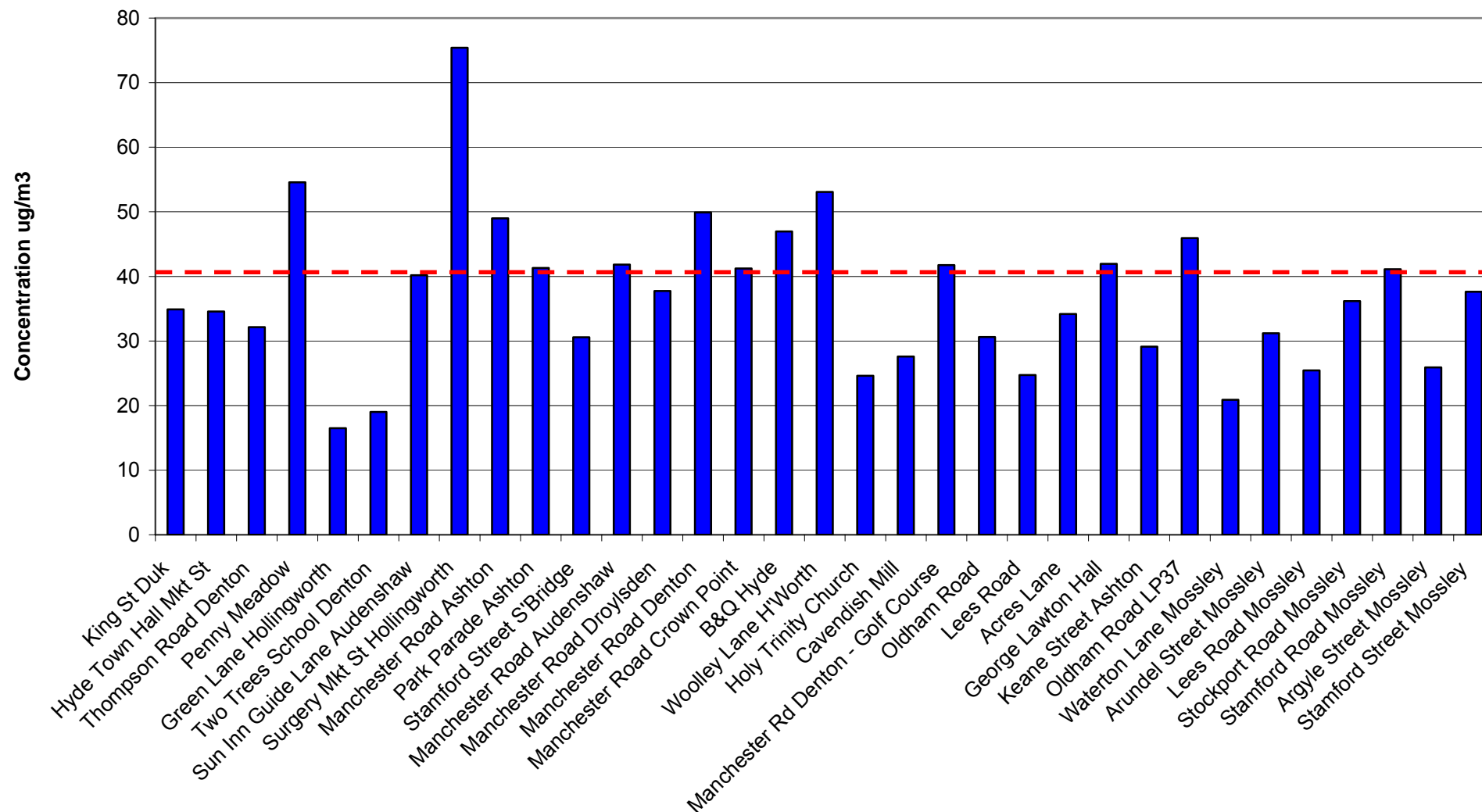
	Manchester Road Denton	Yes	74	<b>49.91</b>
	Manchester Road Crown Point	Yes	100	<b>41.23</b>
	Manchester Road Hyde	Yes	96	<b>46.96</b>
	Woolley Lane Hollingworth	Yes	100	<b>53.09</b>
	Dean Street Ashton	No	96	24.63
	Cavendish Mill Ashton	No	100	27.59
	Manchester Road Denton	Yes	100	<b>41.73</b>
	Oldham Road Ashton	Yes	100	30.61
	Lees Road Ashton	No	100	24.75
	Acres Lane Stalybridge	Yes	96	34.16
	George Lawton Hall Mossley	No	100	<b>41.94</b>
	Keane Street Ashton	Yes	87	29.11
	Oldham Road Ashton	Yes	100	<b>45.93</b>
	Waterton Lane Mossley	No	96	20.89
	Arundel Street Mossley	No	100	31.21
	Lees Road Mossley	No	96	25.44
	Stockport Road Mossley	No	100	36.19
	Stamford Road	No	100	<b>41.13</b>
	Argyle Street	No	87	25.89
	Stamford Street	No	96	37.61

*n.b. see appendix A for Bias adjustment details*





**Figure 2.1: 2008 Annual Average Nitrogen Dioxide Concentrations**



**Table 2.4b Results of Nitrogen Dioxide Diffusion Tubes**

Site ID	Location	Within AQMA?	Annual mean concentrations ( $\mu\text{g}/\text{m}^3$ ) Adjusted for bias		
			2006 *	2007 *	2008
	King Street Dukinfield	Yes	32.19	32.07	34.90
	Hyde Town Hall	No	29.67	30.32	34.57
	Thompson Road Denton	Yes	27.80	28.25	32.15
	Penny Meadow Ashton	Yes	42.01	44.71	<b>54.55</b>
	Green Lane Hollingworth	No	16.56	14.91	16.51
	Two Trees School Denton	No	19.39	19.00	19.00
	Guide Lane Audenshaw	Yes	39.78	44.69	<b>40.16</b>
	Market Street Hollingworth	Yes	62.10	65.69	<b>75.42</b>
	Manchester Road Ashton	Yes	19.36	40.98	<b>48.99</b>
	Park Parade Ashton	Yes	36.99	40.59	<b>41.30</b>
	Stamford Street Stalybridge	Yes	28.43	28.64	30.57
	Manchester Road Audenshaw	Yes	36.26	39.41	<b>41.83</b>
	Manchester Road Droylsden	Yes	31.67	35.13	37.76
	Manchester Road Denton	Yes	44.53	47.26	<b>49.91</b>
	Manchester Road Crown Point	Yes	36.72	41.99	<b>41.23</b>
	Manchester Road Hyde	Yes	40.63	45.97	<b>46.96</b>
	Woolley Lane Hollingworth	Yes	40.57	42.77	<b>53.09</b>
	Dean Street Ashton	No	24.65	22.87	24.63
	Cavendish Mill Ashton	No	22.12	25.79	27.59
	Manchester Road Denton	Yes	38.93	38.30	<b>41.73</b>
	Oldham Road Ashton	Yes	40.03	43.42	30.61
	Lees Road Ashton	No	23.62	22.27	24.75
	Acres Lane Stalybridge	Yes	29.67	30.85	34.16
	George Lawton Hall Mossley	No	28.94	27.19	<b>41.94</b>
	Keane Street Ashton	Yes	29.99	26.92	29.11
	Oldham Road Ashton	Yes	43.42	41.60	<b>45.93</b>
	Waterton Lane Mossley	No	-	18.90	20.89
	Arundel Street Mossley	No	-	26.87	31.21
	Lees Road Mossley	No	-	24.97	25.44
	Stockport Road Mossley	No	-	32.66	36.19
	Stamford Road Mossley	No	-	33.64	<b>41.13</b>
	Argyle Street Mossley	No	-	22.59	25.89

	Stamford Street Mossley	No	-	35.59	37.61
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### 2.2.3 PM<sub>10</sub>

Automatic monitoring for particulates is undertaken at 4 sites across the Borough. Table 2.5a and 2.5b below details annual mean concentrations and the number of days where the daily objective was breached for each of these sites. The data has been adjusted to a gravimetric equivalent using the Volatile Correction Model, as outlined in box 3.4 of Technical Guidance LAQM.TG(09). No correction data was available for 2006 or for the first part of 2007 resulting in the lower data capture rate at all 4 stations.

None of the stations exceeded the annual objective of 40 µg/m<sup>3</sup>. There were no breaches of the daily objective of 50µg/m<sup>3</sup> not to be exceeded more than 35 times per year.

**Table 2.5a Results of PM<sub>10</sub> Automatic Monitoring: Comparison with Annual Mean Objective**

Site ID	Location	Within AQMA?	Data Capture 2008 %	Annual mean concentrations (µg/m <sup>3</sup> )		
				2006 *	2007 *	2008
	Lumb Lane, Audenshaw	Y	99.2	-	19.5	19.2
	Water Street, Hyde	N	92.3	-	17.4	15.6
	Mottram Moor, Mottram	Y	75.9	-	21.1	20.5
	Two Trees Lane, Denton	N	96.2	-	15.1	15.3

**Table 2.5b Results of PM<sub>10</sub> Automatic Monitoring: Comparison with 24-hour Mean Objective**

Site ID	Location	Within AQMA?	Data Capture 2008 %	Number of Exceedences of daily mean objective (50 µg/m <sup>3</sup> ) <i>If data capture &lt; 90%, include the 90<sup>th</sup> %ile of daily means in brackets.</i>		
				2006 *	2007 *	2008
	Lumb Lane, Audenshaw	Y	99.2	-	8 (33.5)	9
	Water Street, Hyde	N	92.3	-	7 (30.2)	2
	Mottram Moor, Mottram	Y	75.9	-	7 (34.2)	6 (33.4)
	Two Trees Lane, Denton	N	96.2	-	5 (25.8)	5

## 2.2.4 Sulphur Dioxide

Sulphur dioxide is monitored at one location in the Borough, at Two Trees School Denton. Monitoring data for 2008 is outlined in the table below. None of the sulphur dioxide objectives were breached, with the maximum recorded 15-minute mean  $72\mu\text{g}/\text{m}^3$ .

	No of 15 minute means $>266\mu\text{g}/\text{m}^3$	No of 1 hour means $>350\mu\text{g}/\text{m}^3$	No of 24hr means $>125\mu\text{g}/\text{m}^3$
Two Trees	0	0	0

## 2.2.5 Benzene

Following previous rounds of review and assessment where monitoring indicated ambient benzene concentrations to be well below the objective, no benzene monitoring is undertaken within the Borough.

## 2.2.6 Carbon Monoxide

Carbon monoxide is monitored at one location within the Borough, Two Trees School, Denton. The maximum 8 hour running mean was recorded at  $0.9\text{mg}/\text{m}^3$ .

Tameside MBC has measured concentrations of nitrogen dioxide above both the annual mean and the 1-hour objective at relevant locations outside of the AQMA. There are also monitoring sites within the AQMA that have not exceeded the annual objective, indicating that the boundary will need reviewing and therefore **will need to proceed to a Detailed Assessment**.

## 3 Road Traffic Sources

In accordance with DEFRA LAQM Technical Guidance TG(09) (DEFRA, 2009), the focus of this assessment was on areas where vehicle exhaust emissions may give rise to ambient pollutant concentrations which are at risk of exceeding the Air Quality Objectives. In all cases, attention is required for NO<sub>2</sub> concentrations and, in some cases, PM<sub>10</sub>.

This assessment did not consider locations within the existing AQMA boundary, as they had previously been assessed. Road traffic sources were investigated using the emissions inventory data provided by the Greater Manchester Transport Unit (GMTU). Comparisons between 2005 and 2008 traffic flows were used in order to address the following scenarios. Comparisons were produced for all links and junctions within Tameside in the GMTU model, which includes all motorways, slip roads, trunk and A roads and minor roads in the network.

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

Narrow, congested streets reduce speeds and result in slow moving traffic. Where buildings flank these streets, dispersion of exhaust emissions can be restricted, resulting in elevated pollutant concentrations. This assessment is for nitrogen dioxide only, in line with DEFRA guidance.

Roads with two way annual average daily traffic (AADT) flows greater than 5000 vehicles per day and speeds less than 25km/h were investigated. 12 links of this type were identified outside the current AQMA. However, none of these roads met the definition of narrow as described within TG09.

Tameside MBC confirms that there are no new/newly identified congested streets with a flow above 5,000 vehicles per day and residential properties close to the kerb, that have not been adequately considered in previous rounds of Review and Assessment.

No further assessment is required.

### 3.2 Busy Streets Where People May Spend 1-hour or More Close to Traffic

Short term exposure to elevated concentrations of nitrogen dioxide needs to be considered along busy roads where members of the public may spend time visiting shops, bars, cafes etc. The 1 hour air quality objective for nitrogen dioxide is 200µg/m<sup>3</sup> which should not be exceeded more than 18 times per year.

63 links were identified within Tameside but outside of the current AQMA, where two way traffic AADT exceeds 10,000 vehicles per day. Further analysis revealed that none of these links were in areas where individuals were likely to spend at least 1 hour in an outside location.

Tameside MBC confirms that there are no new/newly identified busy streets where people may spend 1 hour or more close to traffic.

No further assessment is required.

### 3.3 Roads with a High Flow of Buses and/or HGVs.

Routes with a higher proportion of bus and HGV movements are likely to experience higher nitrogen dioxide and particulate concentrations at the roadside. However, there are no routes within Tameside that meet the TG09 criteria of vehicular flows less than 20,000 vehicles per day with 20% or more of the vehicles using the road being either buses and/or HDV's.

Tameside MBC confirms that there are no new/newly identified roads with high flows of buses/HDVs.

No further assessment is required.

### 3.4 Junctions

Pollutant concentrations can be higher at junctions where traffic is often standing and or slow moving, with the combined effects of two or more roads joining each other. Initially, investigations identified 355 junctions within Tameside with a 2008 AADT flow >10,000 vehicles per day. The assessment considered both nitrogen dioxide and particulate emissions.

This number was then narrowed to identify junctions whose through flows were less than 10,000 vehicles per day in 2005, i.e. junctions who had not been covered in the previous USA. 8 junctions meeting these criteria were identified within Tameside, 6 of which were outside the current AQMA; these were;

- Smallshaw Square – Henrietta Street, Ashton
- Wakefield Road – Springbank Lane, Ashton
- Oldham Road – Katherine Street, Ashton
- Werneth Low Road – Joel Lane – Higham Lane, Hyde
- Great Norbury Street – Chapel Street – Hyde
- Market Street – Union Street – Hyde

DMRB assessments were undertaken for each of these junctions and the details are shown in appendix B . None of the above junctions failed any of the particulate or nitrogen dioxide air quality objectives.

Tameside MBC has assessed new/newly identified junctions meeting the criteria in Section A.4 of Box 5.3 in TG(09), and concluded that it will not be necessary to proceed to a Detailed Assessment.

### **3.5 New Roads Constructed or Proposed Since the Last Round of Review and Assessment**

Since the 2006 USA report no new roads have been constructed or proposed.

Tameside MBC confirms that there are no new/proposed roads.

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

Work was undertaken to identify roads with 2008 AADT flows greater than 10,000 vehicles per day and an increase in traffic flow between 2005 and 2008 of greater than 25%. 5 links were identified as meeting these criteria in Tameside but all of them are within the current AQMA.

Tameside MBC has assessed new/newly identified roads with significantly changed traffic flows, and concluded that it will not be necessary to proceed to a Detailed Assessment.

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

All bus stations were assessed during previous rounds of the review and assessment process and were deemed not to be a problem.

Tameside MBC confirms that there are no relevant bus stations in the Local Authority area.



## 4 Other Transport Sources

### 4.1 Airports

Tameside MBC confirms that there are no airports in the Local Authority area.

### 4.2 Railways (Diesel and Steam Trains)

#### 4.2.1 Stationary Trains

Stationary locomotives, both diesel and coal fired, are potentially significant sources of nitrogen dioxide and sulphur dioxide in areas close to the point of emission. A screening approach was adopted to identify areas where locomotives may be regularly stationary for periods of 15 minutes or more and where there was potential for regular outdoor exposure of individuals within 15m of these stationary locomotives.

Two railway stations were assessed within the Borough, Ashton and Stalybridge. Both stations are surrounded by car parks and commercial/industrial land. There are no residential properties within 300m of either station's platforms.

Locomotives are not regularly stationary at either station for a period of 15-minutes or more.

Tameside MBC confirms that there are no locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.

#### 4.2.2 Moving Trains

Nitrogen dioxide concentrations may be elevated alongside sections of track that have a large number of diesel locomotive movements along them. DEFRA guidance TG09 lists lines which experience this type of heavy traffic. Should background nitrogen dioxide concentrations along these lines be greater than  $25\mu\text{g}/\text{m}^3$ , further investigation is required. No lines within Tameside match these criteria.

Tameside MBC confirms that there are no locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.

## **4.3 Ports (Shipping)**

Tameside MBC confirms that there are no ports or shipping that meet the specified criteria within the Local Authority area.

## 5 Industrial Sources

### 5.1 Industrial Installations

Industrial sources are controlled by the Environment Agency (EA) or the Local Authority (LA) under the Environmental Permitting Regulations. LA's also have some control over smaller industrial and commercial sources through the Clean Air Act 1993, with it's associated control of stack heights.

As a result of these controls, there are relatively few industrial sources that likely to contribute significantly to annual and mean pollutant concentrations. There is however, the possibility for them to influence the exceedences of short term objectives. Many of these sources have been addressed during previous rounds of review and assessment and all pollutants within the LAQM regime have been considered.

This section covers four potential emission sources;

- Industrial Installations
- Major fuel (petrol) storage units
- Petrol stations
- Poultry farms

#### 5.1.1 New or Proposed Installations for which an Air Quality Assessment has been Carried Out

No new or proposed installations have opened or are proposed since the previous round of the review and assessment process.

Tameside MBC confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

#### 5.1.2 Existing Installations where Emissions have Increased Substantially or New Relevant Exposure has been Introduced

Tameside MBC confirms that there are no industrial installations with substantially increased emissions or new relevant exposure in their vicinity within its area or nearby in a neighbouring authority.

### **5.1.3 New or Significantly Changed Installations with No Previous Air Quality Assessment**

Tameside MBC confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

## **5.2 Major Fuel (Petrol) Storage Depots**

There is evidence to suggest that major fuel depots may be a source of benzene. There are no major fuel depots with Tameside.

There are no major fuel (petrol) storage depots within Tameside MBC's administrative area.

## **5.3 Petrol Stations**

The main source of benzene emissions in the UK is petrol engined vehicles, petrol refining and the distribution and uncontrolled emissions from petrol station forecourts without vapour recovery systems. There is some evidence that petrol station emissions may produce exceedences of the air quality objective, especially if located next to a busy road.

There are 18 petrol stations regulated in Tameside. Emissions from petrol stations were assessed in previous review and assessments and there has been significant changes to sales throughputs at these sites since the assessment were undertaken.

Tameside MBC confirms that there are no petrol stations meeting the specified criteria.

## **5.4 Poultry Farms**

In previous rounds of review and assessment a small number of local authorities identified potential exceedences of the PM<sub>10</sub> UK Air Quality Objective due to emissions from poultry farms. Poultry farms that meet the following criteria will need further assessment;

- 400,000 birds if housed in mechanically ventilated units;
- 200,000 birds if housed in naturally ventilated units
- 100,000 birds for any turkey unit.

No farms within the borough met the above criteria.

Tameside MBC confirms that there are no poultry farms meeting the specified criteria.

## **6 Commercial and Domestic Sources**

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

Biomass burning can lead to an increase in PM<sub>10</sub> emissions, due to the process of combustion – aerosol formation from volatile materials distilled from the wood is also an issue. Compared to conventional gas-burning, biomass burning can also result in an increase in the overall NO<sub>x</sub> emissions due to the fuel derived portion that is not present in gas combustion.

An assessment of biomass combustion sources ranging from 50kW to 20MW was undertaken. No biomass boilers meeting this criteria were identified.

Tameside MBC confirms that there are no biomass combustion plant in the Local Authority area.

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

There is potential that many small biomass combustion installations (including domestic solid-fuel burning), whilst individually acceptable, could in combination lead to unacceptably high PM<sub>10</sub> concentrations, particularly in areas where PM<sub>10</sub> concentrations are close to or above the objectives. Investigation to date has failed to identify any biomass installations within the Borough.

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

Domestic solid fuel burning can give rise to exceedences of the sulphur dioxide objective in close proximity to the emission source. Emissions from coal burning or smokeless fuel are defined as significant, if in an area of approximately 500m<sup>2</sup>, more than 50 houses burn coal/smokeless fuel as their primary source of heat.

Areas of domestic fuel burning were considered in previous rounds of Review and Assessment and no significant areas of coal/smokeless fuel burning were identified. There has been no change to this position.

Tameside confirms that there are no areas of significant domestic fuel use in the Local Authority area.

## 7 Fugitive or Uncontrolled Sources

Dust emissions from a range of fugitive and uncontrolled sources can give rise to elevated PM<sub>10</sub> concentrations.

Dust can arise from the passage of vehicles over unpaved ground and from the passage of vehicles along public roads that have been affected by dust and dirt tracked out from dusty sites. It also arises from the handling of dusty materials, the cutting of concrete etc. There is also wind blown dust from stockpiles and dusty surfaces.

Tameside MBC does not have any areas whereby fugitive or uncontrolled sources of dust are expected to significantly impact upon nearby receptors. There have been no recorded complaints with regard to dust nuisance within the Borough since the previous round of Review and Assessment.

Tameside MBC confirms that there are no potential sources of fugitive particulate matter emissions in the Local Authority area.

## 8 Conclusions and Proposed Actions

### 8.1 Conclusions from New Monitoring Data

Nitrogen dioxide diffusion tube monitoring data has demonstrated that at some locations within the current AQMA, ambient concentrations of nitrogen dioxide have been below the annual mean Air Quality Objective for several years.

Detailed emissions dispersion modelling was last undertaken for Greater Manchester (GM) as a whole in 2002, for a forecast year of 2005. ADMS-Urban was used to model the county based on the 2001 emissions inventory database and forecasts of changes in emissions such as road traffic sources to 2005. The modelled average mean NO<sub>2</sub> concentrations were used to define the current AQMA by the GM authorities. Since that work was undertaken there have been a number of significant enhancements to the point and area source inventory and to traffic modelling in GM. The enhancements are described in detail below.

#### **Point and area source emissions inventory enhancements:**

- Emission factors for all Part A and Part B processes reviewed, categorised and documented by Royal Haskoning;
- Point source data inputs made consistent with the emission factors using standard units;
- Web-based point source data input system implemented for EHOs across GM for easier data entry. This also allows central administration of data entry progress, new emission factors and processes etc;
- Update and recalculation of agricultural, electricity and domestic and commercial combustion emissions.

#### **Traffic modelling enhancements:**

- The 2002 link-based assignment model (implemented using the TRIPS assignment package) has been replaced by a much more accurate junction-based assignment model (implemented using the SATURN assignment package) which explicitly models the delays which occur at junctions. The scope of the network has also been expanded to include almost all roads with bus services.
- The 2002 trip matrix was built to represent a 2001 base year using an existing trip matrix (originally based on data collected in the early 1990s) supplemented by roadside interviews at 68 sites across GM undertaken in 1999 before the opening of the Denton to Middleton section of the M60. This has been replaced by a new matrix based on data from over 400 roadside interview survey sites, undertaken in the period 2001-2004, and the 2001 census journey-to-work data for commuting trips. This data reflects the trip making patterns which emerged after the completion of the M60 (in October 2000) and, therefore should be more accurate than the 2002 matrix.
- The 2002 matrix was factored to 2005 using a single factor derived from the National Road Traffic Forecast (NRTF). A new traffic demand model has been developed for Greater Manchester that forecasts growth at ward level, and any future year matrices

will be factored from the present based on this forecast of ward level growth. A priori this is more accurate than the single (NRTF) growth that was used to factor the 2002 matrix to 2005.

- The 2005 forecast of emissions from traffic on minor roads was based on building an all roads network from Meridian (an Ordnance survey product) and then subtracting the flows from the roads included in the TRIPS model. This method has now been replaced by a more accurate and consistent method based on building a true minor roads network from the Integrated Transport Network (the Ordnance Survey's current road centreline product) and then assigning trips from their origins/to their destinations from the points where they meet/leave the SATURN network.

- The 2005 forecast of cold start emissions assumed that the additional emissions from a cold start were concentrated at the origin of the trip. However, using SATURN it is possible to determine the roads that vehicles will traverse as their engines warm up and then distribute the additional (cold start) emissions along these roads, thus giving a more realistic distribution of these emissions. This approach has now been adopted as standard practice.

Taken together these enhancements, coupled with real world changes in emissions patterns since 2002, mean that there is a compelling case for repeating the dispersion modelling for GM. Therefore, it is proposed that Tameside MBC proceed to a Detailed Assessment to investigate the potential for amending the AQMA boundary.

## 8.2 Conclusions from Assessment of Sources

The USA has not highlighted any significant changes in new local developments, non-road transport, industrial installations, commercial/domestic pollutant sources, fugitive emissions or residential and commercial development which could significantly reduce local air quality within the Borough. Therefore, no further assessment is considered to be necessary for these emission sources.

## 8.3 Proposed Actions

The USA has identified the need to proceed to a Detailed Assessment for annual mean NO<sub>2</sub>. This is required in order to establish whether the current AQMA boundaries should be amended. **Tameside MBC therefore proposes to proceed to a Detailed Assessment in 2010.**



## 9 References

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Cook A (2008) Analysis of the relationship between annual mean nitrogen dioxide concentration and exceedences of the 1-hour mean AQS Objective, AEA Energy and Environment, May 2008

Department for Environment Food and Rural Affairs (2007). The Air Quality Strategy for England Scotland, Wales and Northern Ireland, July 1997.

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Laxen D. & Marner B. (2003). Analysis of the Relationship between 1-hour and annual mean NO<sub>2</sub> at UK roadside and kerbside monitoring sites. Air Quality Consultants Ltd.

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Tameside MBC, Review and Assessment of Air Quality, Detailed Assessment Report, July 2004.

Tameside MBC, Review and Assessment of Air Quality, Updating Screening and Assessment Report, October 2006.

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## **Appendices**

Appendix A: QA/QC Data

Appendix B: DMRB Calculations

Appendix C: Local Air Quality Action Plan Update

## Appendix A: QA:QC Data

### Diffusion Tube Bias Adjustment Factors

Nitrogen dioxide monitoring is undertaken using passive diffusion tubes, which consist of a polycarbonate tube, with stainless steel discs coated with Triethanolamine. The tubes are analysed by Eurofins Laboratories, using UKAS accredited method AQ/01, by extracting the nitrogen dioxide into an aqueous solution as nitrate and reaction with sulphanilamide into an orthophosphate solution.

Tameside MBC uses a local bias adjustment factor calculated from a co-location study at our Two Trees monitoring station to adjust our nitrogen dioxide diffusion tube data.

### Factor from Local Co-location Studies (if available)

Tameside MBC undertakes a co-location study at the automatic monitoring station at Two Trees. The site is classed as urban background. The table below outlines the annual means and bias for the site.

Real Time Result	Tube 1	Tube 2	Average	Bias Adj Factor
19.00	23.35	21.62	23.56	0.81

### Discussion of Choice of Factor to Use

The bias adjustment factor obtained from this study compares well with those undertaken by other authorities using the same laboratory over the same time period for preparation and analysis of the tubes, with a range of results from 0.78 to 1.02 and a recommended factor of 0.83.

A sensitivity analysis using both factors was undertaken. The different factors did not make any difference to the number of tubes failing the annual average air quality objective. In light of this fact and the fact that Tameside MBC had already decided to progress to a detailed assessment for nitrogen dioxide, a decision to use the locally generated adjustment factor was used.

### PM Monitoring Adjustment

Adjustments were made to the particulate monitoring results using the Volatile Correction Model as described in box 3.4 of Technical Guidance LAQM.TG(09).

### QA/QC of automatic monitoring

Details of the QA/QC used at each of the automatic monitoring stations is given in the table below;

Site	Calibration Frequency	Data QA/QC Undertaken by	Site QA/QC Undertaken by	Comments
Two Trees	Fortnightly	Netcen Calibration Club	Netcen Calibration Club	
Audenshaw	Daily (automatically)	Tameside MBC	Tameside MBC Supporting U	
Hyde	Daily (automatically)	Tameside MBC	Tameside MBC Supporting U	
Mottram	Daily (automatically)	Tameside MBC	Tameside MBC Supporting U	

## Appendix B: DMRB Calculations

The DMRB Screening tool was used to predict exceedences of the short term hourly Air Quality Objective for NO<sub>2</sub> (200 µg.m<sup>3</sup> of which 18 exceedences are allowed per year). Although DMRB does not predict short term NO<sub>2</sub> exceedences, research on behalf of DEFRA (Laxen and Marner, 2003) has shown that when the annual mean NO<sub>2</sub> concentration is predicted to be over 60µg.m<sup>3</sup>, it is likely that the hourly Objective will also be exceeded; the converse is also assumed.

### Input Data

Background pollutant concentrations for NO<sub>x</sub>, NO<sub>2</sub> and PM<sub>10</sub> were obtained for the 1 km x 1 km grid squares for the sites listed below were obtained from the UK Air Quality Archive.

Traffic data was obtained from the Greater Manchester Transportation Unit (GMTU) and the model was run in accordance with the methodology outlined in "Guidance for running DMRB screening model" issued in April 2009. The results are displayed in the table below.

Location/ Receptor	Grid Ref	Background Concentrations			
		Year	NO <sub>x</sub>	NO <sub>2</sub>	PM <sub>10</sub>
Wakefield Road Stalybridge	397300 400200	2008	27.0942	19.16508	13.65788
Oldham Road Ashton	393720 399650	2008	48.24702	29.48557	16.62057
Market Street Hyde	395120 394430	2008	38.94223	24.98336	14.93137
Gt Norbury Street Hyde	394390 395100	2008	38.94223	24.98336	14.93137
Mount Street Hyde	395100 394850	2008	23.97899	16.81541	13.0085
Smallshaw Road Ashton	394680 400800	2008	36.15176	24.28185	15.00398

Location/ Receptor	Link number	Distance from link centre to receptor (m)	Traffic flow & speed		Traffic composition		
			AADT (combined, veh/day)	Annual average speed (km/h)	Road type (A,B,C,D)	Total % LDV (<3.5t GVW)	Total % HDV (>3.5t GVW)
Wakefield Road, Ashton	1	17	10420	43	B	93.3	6.7
Oldham Road Ashton	2	20	10235	22	A	90.8	9.2
Market Street Hyde	3	10	10195	17	A	93.5	6.5
Great Norbury Street Hyde	4	18	10102	44	B	97.1	2.9
Mount Street Hyde	5	11	10145	41	B	97.4	2.6
Smallshaw Road Ashton	6	8	10099	30	B	97.0	3.0

**Results**

Receptor ID	Easting, m	Northing, m	Road increment NO <sub>x</sub> µg m <sup>-3</sup>	Background	Total NO <sub>2</sub> µg m <sup>-3</sup>	Road NO <sub>2</sub> µg m <sup>-3</sup>	Background PM <sub>10</sub> µg/m <sup>3</sup>	Annual Mean PM <sub>10</sub> µg/m <sup>3</sup>	No of days > 50µg/m <sup>3</sup>
				NO <sub>x</sub>					
Wakefield Road Stalybridge	397300	400200	10.71	27.09424	25.19	4.58	13.65788	14.77	0.00
Oldham Road Ashton	393720	399650	19	48.24702	38.04	7.08	16.62057	18.85	2.14
Market St Hyde	395120	394430	21.86	38.94223	31.54	8.75	14.93137	17.70	1.18
Gt Norbury St Hyde	394390	395100	7.01	38.94223	34.11	2.74	14.93137	15.75	0.24
Mount St Hyde	395100	394850	8.39	23.97899	26.34	3.55	13.0085	14.05	0.00
Smallshaw Lane Ashton	394680	400800	7.41	36.15176	28.99	3.06	15.00398	16.37	0.44

Results of DMRB modelling

## **Appendix C: Air Quality Action Plan Progress Report**

### **The Greater Manchester Air Quality Action Plan.**

Greater Manchester, with a population of almost 2.5 million people, is one of the largest conurbations in the country. The 10 member authorities, Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan recognise that a joint approach to dealing with air quality in such a large conurbation is the best environmental option.

The Local Authorities have cooperated in the production of their individual review and assessments of air quality, each of which showed that without any action to control air quality, exceedences of the annual average nitrogen dioxide objective and, to a lesser extent, the daily particulate objective are likely in many urban areas across Greater Manchester.

Accordingly authorities have co-ordinated the declaration of Air Quality Management Areas (AQMAs) within their districts. The AQMAs reflect the highly built up areas of the conurbation and the major transport contribution to the elevated levels of air pollution. A study into the sources and concentrations of the pollution showed that for the nitrogen dioxide annual mean objective to be met by 2005, total nitrogen oxide emissions would need to be reduced by about 30% in town centres and central urban locations across the conurbation.

The 10 Greater Manchester Authorities worked together to produce the Air Quality Action Plan, which covered the whole of Greater Manchester and detailed the measures that would be taken across the area and summarises how the Plan would be evaluated. The plan was published and formally accepted by DEFRA in June 2004. Related annexes accompanied it for each of the 10 district authorities providing a more detailed, local focus to the wider actions and strategies.

### **Integration into the Local Transport Plan (LTP).**

Local transport authorities are required to produce an LTP as a 5-year programme for delivering transport infrastructure and services that achieve transport objectives at the national and local level. The Greater Manchester authorities submitted their second joint Local Transport Plan (LTP2) in March 2006. National statutory guidance on LTP2 has stated that the new Local Transport Plans should concentrate on delivering outcomes that are relevant to the authorities achieving the four priorities of road safety, congestion, accessibility and air quality.

Therefore, because road transport is the major source of air pollution within the Greater Manchester area and the majority of our AQMAs are traffic related integration of the action plan measures which deal with traffic management and congestion relief into the LTP was felt to be an appropriate way forward. A multi-disciplinary team of officers from the GM authorities integrated air quality into LTP2 and the related progress reports.

Emissions from industrial sources and domestic fuel burning contribute towards a much lower proportion of ground level pollution concentrations than road traffic. Emissions from these sources may not lead to exceedences of the air quality objectives on their own, but in combination with other sources they do contribute to the problem. Action to address

emissions from non-transport sources is being taken by the Greater Manchester Authorities through a separate but complimentary process, to the GM LTP2.

Changes in air quality within Greater Manchester are measured directly at monitoring stations throughout the area. Trends in annual average nitrogen dioxide concentrations are displayed in each of the local annexes.

### **Implementation of the Plan**

The plan is also linked to community and environmental plans, including Local Agenda 21, development planning and energy conservation. This integrated approach was founded upon partnership working between member authorities and between the relevant professional disciplines including environmental health, planning and transport engineers and has been essential to the implementation of the plan.

### **Progress to Date**

Progress on the regional Air Quality Action Plan has been reported on separately to DEFRA. If you would like a copy of the regional plan, please contact the author of this report.

Progress on Tameside's local annex of the plan is outlined in the following table.

GM LTP2 AQ Ref.	District Action Plan Measure	Original timescale for Completion	Progress with measure	Outcome to date	Comments
<b>Transport</b>					
<b>D7</b>	Metrolink Eastern Extension	Preliminary work begun. Completion date for Phase 3a to Droylsden is expected to be Spring 2012.	Manchester Piccadilly to Droylsden town centre extension to be built as part of Metrolink Phase 3A, for which funding is now agreed. Droylsden to Ashton town centre extension to be undertaken as part of Phase 3B, funding for which is currently being sought through the establishment of the Greater Manchester Transport Fund.	None. This is a major long term project for which the outcome will be a significant reduction in car miles.	Metrolink remains the single most important public transport measure to improve air quality (and tackle climate change too).  The expansion of the metrolink system to its full extent dependent upon the establishment of the Greater Manchester Transport Fund.
<b>E1</b>	<b>A671/A627 Rochdale/Oldham Ashton-under-Lyne /Hyde Quality Bus Corridor and A627/A560 Hyde/Stockport Quality Bus Corridor.</b>	Short / Medium (2003-2006)	Works on QBC's now complete.	Bus Lanes introduced and bus stops upgraded.  Total of 61 bus stops and 1.185km of bus lane completed.  SCOOT system installed in Ashton town centre and Hyde town centre SCOOT system extended to Newton St/Dukinfield Rd junction in Hyde.	Scheme complete.



Tameside MBC - England

GM LTP2 AQ Ref.	District Action Plan Measure	Original timescale for Completion	Progress with measure	Outcome to date	Comments
E1	<b>A635 Manchester/Ashton-under-Lyne /Stalybridge Quality Bus Corridor</b>	Medium	Works on QBC's now complete.	<p>Total of 65 bus stops have been upgraded to QBC standard and 0.36km of bus lane have been provided.</p> <p>SCOOT system installed in Ashton and Stalybridge town centres, between Ashton and Stalybridge and between Ashton and the M60.</p>	Scheme complete
E1	<b>A57 Manchester/Denton/Hyde Quality Bus Corridor.</b>	Medium	Works on QBC's now complete.	<p>Bus stops have been upgraded to QBC standard - 32 bus stops in total. 1.41km of bus lanes have been provided on this QBC.</p> <p>SCOOT system provided between Denton town centre and M60.</p> <p>An additional 17 upgraded QBC bus stops provided on Mottram Road and Woolley lane between Hyde town centre and the Derbyshire boundary funded from SEMMMS in 2006/07 and 2007/08.</p>	Scheme complete.
	<b>Ashton Northern Bypass</b>	2008	Stage 2 progressing, main work to commence at the end of 2009 and be completed in 2013.	<p>Stage 1 opened December 2000. Further work on land acquisition undertaken.</p> <p>Public Inquiry held early 2008</p>	The bypass will divert traffic away from Ashton town centre.

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				and a positive outcome provided in August 2008.  Development of the business case is now underway for submission in June 2009.	
E2	Examine the potential for Metrolink 'Park and Ride' at Ashton Moss.	Ongoing	Agreement has been secured to site a station on Ashton Moss.	Planning permission for the site has been granted	Awaiting completion of Metrolink
	<b>A57/A628 Mottram to Tintwistle Bypass and Glossop Spur Local Road Element.</b>	Medium (Estimated 2011)	Environmental Impact Assessment has been completed.  Public Inquiry started summer 2007, but progress has been adjourned indefinitely pending the publication of revised evidence by the Highways Agency and TMBC.  4NW wish to delay the start of the scheme by at least 4 years until 2016/17. Following this decision the HA has withdrawn from the current Inquiry and will restart the statutory process subject to further advice to Ministers by 4NW.	Main work expected to commence in 2013/14 with completion in 2015/16.	Completion date is subject to statutory procedures being completed.  Progress of Public Inquiry was indefinitely delayed to enable further analysis of revised information by Highways Agency.  The HA has now withdrawn from the current Inquiry and will restart the statutory process subject to further advice to Ministers by 4NW.  No current date for the recommencing of the Inquiry.

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D7/E1	<b>SEMMMS 'transport change' measures (See 8.22)</b>	Short / Medium	<p>Travel plans agreed with schools within the SEMMMS area of the Borough.</p> <p>Process of reviewing the earliest school travel plans undertaken before 2006 is underway.</p> <p>The majority of the bus stops within the SEMMMS area have been upgraded.</p>	<p>Total 145 Bus stops not located on the QBC have been upgraded.</p> <p>Agreed travel plans with all primary and secondary schools within the SEMMMS area of the Borough.</p>	Ongoing annual programmes of bus stop improvements and implementation of measures identified within School Travel Plans.
E7	<b>Improved pedestrian/cycling environment.</b>	Ongoing	<p>Improved pedestrian facilities are an outcome of both the QBC and school travel plans.</p> <p>Advance stop lines at traffic signals introduced throughout the borough.</p> <p>Tameside has partnered Sustrans to open section of cycle route NCN66 between Ashton town centre and Park Bridge using route of Ashton to Oldham rail line. Tameside is working with British Waterways, Derbyshire</p>	<p>3 cycle counters have recently been installed across the Borough and they are measuring an increase in numbers cycling.</p> <p>A Tameside Cycle Forum has been introduced and meets regularly.</p> <p>Total of 90 cycle parking stands provided in town centres, leisure facilities etc. Secure cycle storage facilities provided at 50% of primary and 75% of secondary schools.</p> <p>New and updated cycle maps produced in partnership with</p>	<p>Provision for cyclist made as part of the QBC programme</p> <p>New and upgraded pedestrian crossing facilities have been provided as part of the QBC programme.</p> <p>New and improved pedestrian facilities identified through the school travel plans are being provided.</p>

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			CC/Stockport/Cheshire CC to promote and develop NCN66 Peak Forest Canal cycle route.  Cycle routes linking the main towns within Tameside are under development and will be implemented 2009/10.	other Greater Manchester districts.  The number of accessible pedestrian crossings in Tameside has been increasing and is now 87%.  The percentage of Public Rights of Way in Tameside that are easy to use has increased to 95% in 2007/08.  96 20 mph zone Traffic Regulation Orders have been introduced.	
E11	Home Zones	Completed	Completed	Ashton West End and Haughton Green Home Zones have been completed.	No further Home Zone proposals at present.
A8/D5	Promote the use of clean, attractive, safe and affordable public transport	Ongoing	Promotion via a range of methods including support of local and national campaigns, development of travel plans etc	Promotion of In Town Without My Car Day – issue of free bus and train tickets	Refer to GMPTE
<b>Travel Plans</b>					
E8	Develop local authority travel plan.	Short	The measures identified within the action plan	Local Authority Travel Plan has been completed and adopted.	Car sharing initiative, cycle purchase and use

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			have been implemented.  Development of updated travel plan is currently underway.	An action plan has been devised to implement the travel plan.	initiative, and subsidised travel ticket scheme in place
E8	<b>Facilitate company travel plans.</b>	Ongoing	A consultant has been employed to act as Travel Coordinator.  The Travel co-ordinator has commenced a programme of developing travel plans with companies in the borough.	It is a condition on planning applications for large developments to have a plan in place.	
E8	<b>Facilitate school travel plans.</b>	Ongoing	Template for schools to develop plans available on the Tameside web site.  Work underway with schools to introduce measures identified within travel plans.  Borough wide initiatives run each year including, Dinosaur trail competition, Walk Once a Week (WOW), Cycle Once a Week (COW) and Speed Pledge.	All 107 primary and secondary schools now have travel plans in place.  61% of primary school children and 42% of secondary school children walk/cycle to school. 39% of secondary school children use public transport to/from school. The use of the car to/from both primary and secondary schools is now beginning to decline.	Project on-going  The school travel plans that were undertaken before 2006 are now the subject of a review.

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<b>Council Fleet Vehicles</b>					
E5	<b>Investigate feasibility of LPG / alternative fuels for Council fleet</b>	Medium	<p>A new contract has been negotiated for the supply of Council Fleet vehicles.</p> <p>New fuel additives trials to take place Aug 2008 for 6 months</p> <p>All new Council vehicles will be euro 4 and above.</p>	<p>100% of fleet now replaced with euro 3 or better.</p> <p>HGV fleet fitted with CRT emission filters.</p> <p>Projected savings on fuel costs = £20K and emissions = 30MT CO<sub>2</sub></p>	<p>New hybrid vehicles now operational for patroller service monitoring taking place of performance</p> <p>New sweeper fleet expected late 2008 with euro 4 engines</p> <p>Trails of electric refuse bin lift planned for June/July 07</p> <p>Trail completed and proved product to be unreliable at this time manufacturers to carry out more work on operational issues</p>
E5	<b>Ensure that the Councils vehicle fleet is properly maintained and operating efficiently.</b>	On going	<p>A new contract has been negotiated for the supply of Council Fleet vehicles</p> <p>VOSA vehicle inspection training given to staff in 2005. Positive effect on pass rates realised. Pass rate for 2005 was 75%</p>	<p>All new council vehicles will be euro 4 and above</p> <p><b>New Council fleet now fully implemented and operational</b></p>	<p><b>Ongoing product training.</b></p> <p><b>Depot now completed and operational</b></p> <p><b>New investment of 8k into advanced vehicle diagnostic equipment</b></p> <p><b>New National risk scoring system for MOT and operators licence puts us in the</b></p>

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			FTA audits	Audits carried out with improving performance in operator licence compliance being realised	green
<b>Emissions From Industry</b>					
NTA1	Work with Tameside Business Environment Association to promote environmental good practice in businesses	Completed	TBEA assisted 61 businesses with environmental issues in 2005/6.	Project completed, funding ended.	
NTA2	Industrial Air Pollution Control	Ongoing	From 2006/2007 inspections became risk based depending upon the operator	Inspection targets met in 2006/07 and 2007/08  71 inspections during 2006/07  66 inspections during 2007/08  74 Inspections during 2008/09	

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<b>Emissions from Households</b>					
NTA3	Continue to implement, develop and monitor Tameside's Home Energy Conservation Act (HECA) Strategy.	2010	17.17% overall improvement reported from 1996 to the end of March 2006	<p>The HECA Report from 2005/06 indicated a 5.53% improvement in energy efficiency from 01/04/05 to 31/03/06</p> <p>Figures for 01/04/06 to 31/03/07 were not reported as Tameside is an excellent authority, estimated to be around the 2% mark.</p>	
NTA4	Enforce smoke control provisions.	Ongoing	In 2008/09 the Environmental Protection section dealt with 157 complaints regarding smoke nuisance	Joint Greater Manchester promotional material has been produced to increase public awareness around	



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<b>Planning and Air Quality</b>					
NTA5	<b>Air Quality impact assessment required for large housing and other sensitive development located within the AQMA</b>	Ongoing	0 developments required air quality impact assessments during the period 1 <sup>st</sup> April 2008 to the 31 <sup>st</sup> March 2009.	All planning applications that require a Transport Assessment also require an air quality impact assessment.	
NTA6	<b>The promotion of sustainable development consistent with planning guidance and UDP policies.</b>	Ongoing	<b>Sustainable Design and Construction Guide adopted in October 2005.</b>	<b>The submission of Sustainability Statements are now required with planning applications for major development.</b>	