



# 2011 Air Quality Progress Report for Gateshead Council

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

Date: April 2011

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<b>Report Reference No</b>	<a href="#">GCPR/2010</a>
<b>Date</b>	<a href="#">April 2011</a>

## Executive Summary

Gateshead Council's Progress Report 2011 has found that all of the air quality objectives in the Government's National Air Quality Strategy 2007 are met for all of the relevant pollutants, namely benzene, 1-3 butadiene, carbon monoxide, lead, nitrogen dioxide, PM10, and sulphur dioxide.

Additionally there are no new developments or changes in existing pollutant sources which may have a significant impact on pollutant concentrations in Gateshead.

The Council does not therefore intend to carry out detailed assessments for any of the relevant pollutants.

As there were no exceedences of the nitrogen dioxide objectives within the Portobello AQMA in 2008 and 2009, the Council also carried out a detailed assessment (DA) of NO<sub>2</sub> at Portobello with a view to revoking the Air Quality Management Area. The DA report will be submitted to Defra for appraisal, whilst the Council will continue to monitor for NO<sub>2</sub> with diffusion tubes in the Portobello area.

## Table of contents

<b>1</b>	<b>Introduction</b>	<b>6</b>
1.1	Description of Local Authority Area	6
1.2	Purpose of Progress Report	6
1.3	Air Quality Objectives	6
1.4	Summary of Previous Review and Assessments	8
<b>2</b>	<b>New Monitoring Data</b>	<b>111</b>
2.1	Summary of Monitoring Undertaken	111
2.2	Comparison of Monitoring Results with Air Quality Objectives	166
<b>3</b>	<b>New Local Developments</b>	<b>20</b>
<b>4</b>	<b>Implementation of Action Plans</b>	<b>21</b>
<b>5</b>	<b>Conclusions and Proposed Actions</b>	<b>333</b>
5.1	Conclusions from New Monitoring Data	33
5.2	Proposed Actions	<b>Error! Bookmark not defined.3</b>
<b>6</b>	<b>References</b>	<b>344</b>
	<b>Appendix</b>	<b>35</b>

**Appendices**

Appendix 1 Monthly NO<sub>2</sub> Diffusion Tube Results April 2010 - March 2011

**List of Tables**

Table 1.1	Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in England.
Table 2.1	Details of Automatic Monitoring Sites
Table 2.2	Details of Non-Automatic Monitoring Sites
Table 2.3a	Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with Annual Mean Objective
Table 2.3b	Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1-hour Mean Objective
Table 2.4	Results of Nitrogen Dioxide Diffusion Tubes
Table 2.5a	Results of PM <sub>10</sub> Automatic Monitoring: Comparison with Annual Mean Objective
Table 2.5b	Results of PM <sub>10</sub> Automatic Monitoring: Comparison with 24-hour Mean Objective
Table 4.1	Action Plan Progress

**List of Figures**

Figure 1.1:	Map of Town Centre AQMA Boundaries and Monitoring Locations
Figure 1.2:	Map of Portobello AQMA Boundaries and Monitoring Locations
Figure 2.1	Map of A1 Dunston Monitoring Location

# 1 Introduction

## 1.1 Description of Local Authority Area

Gateshead is a unitary authority with a population of just under 200,000 in the heart of North East England, bordering the cities of Newcastle and Sunderland and the unitary authorities of South Tyneside, Northumberland and Durham. Covering 142 square kilometres and stretching 21 kilometres along the south bank of the River Tyne it is the largest of the Tyneside Districts, with a mix of large urban and rural areas.

A substantial road and rail network covers the region which includes the A1(M) at Portobello, Birtley and the A1, which passes the MetroCentre, the largest out of town retail and leisure complex in Europe. A comprehensive network of bus services and regional and national rail systems operate within the Gateshead area, as well as a Metro light rail network. There are rail and road bridge crossings over the River Tyne, the roads suffering high traffic flows and congestion.

There are a total of 93 industrial processes registered under the Environmental Permitting Regulations 2010, 20 Part A1's, 4 Part A2's, and 69 Part B's. Proposals for substantial redevelopment of Gateshead town centre, including a hotel, retail units, a large supermarket and student accommodation, have received planning permission, and demolition of existing retail units and a multi storey car park is nearing completion.

## 1.2 Purpose of Progress Report

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 Local Air Quality Management (LAQM) in **England** are set out in the Air Quality (England) Regulations 2000 (SI 928), and the Air Quality (England) (Amendment) Regulations 2002 (SI 3043). They are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre  $\mu\text{g}/\text{m}^3$  (for carbon monoxide the units used are milligrammes per cubic metre,  $\text{mg}/\text{m}^3$ ). Table 1.1. includes the number of permitted exceedences in any given year (where applicable).

**Table 1.1 Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in England.**

<b>Pollutant</b>	<b>Concentration</b>	<b>Measured as</b>	<b>Date to be achieved by</b>
<b>Benzene</b>	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	5.00 $\mu\text{g}/\text{m}^3$	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 $\text{mg}/\text{m}^3$	Maximum daily 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

## 1.4 Summary of Previous Review and Assessments

Date	R&A Round	Stage/Report	Outcome/Comment
April 1999	1	R&A Stage 1 Tyne & Wear	Proceeded to Stage 3 for all pollutants except 1-3 butadiene
November 2000	1	R&A Stage 3 Gateshead	No exceedences of any of 6 pollutants investigated, therefore no AQMA's
May 2003	2	Updating & Screening Assessment	Exceedences of annual mean objective for NO <sub>2</sub> at 2 busy road junctions predicted by DMRB modelling. Proceeded to DA for NO <sub>2</sub> . Further investigations required for benzene - reported in 2005 Progress Report
January 2005	2	Detailed Assessment of NO <sub>2</sub>	AQMA required due to slight exceedence of NO <sub>2</sub> annual mean objective at Trinity Court in town centre (junction of A167 & A184)
April 2005	2	Air Quality Management Order	AQMA declared for whole of Gateshead town centre
April 2005	2	Annual Progress Report	Benzene & PM <sub>10</sub> assessed - AQO's found to be achieved at all relevant locations. Ref made to DA for NO <sub>2</sub> . No further NO <sub>2</sub> hotspots identified
March 2006	2	Further Detailed Assessment	AQMA declared for NO <sub>2</sub> found to still be justified, with no need to amend AQO exceedence areas
April 2006	3	Updating & Screening Assessment	AQO's found to be achieved for all pollutants, except for annual mean NO <sub>2</sub> - 3 exceedences found at locations outside of existing AQMA - one south of AQMA on A167, and 2 in Birtley.
April 2007	3	Detailed Assessment of NO <sub>2</sub> for Town Centre AQMA & Portobello	AQMA as declared found still be justified. AQMA's also found to be required at A167 Durham/Dryden Road junction, south of AQMA, and at Portobello, Birtley
January 2008	2	Air Quality Action Plan	For Town Centre AQMA
April 2008	3	Air Quality Management Orders	Variation Order to extend existing Town Centre AQMA southwards along A167 to include Durham/Dryden Road junction. AQMA declared for Portobello Tce, Birtley.
April 2008	3	Annual Progress Report	AQO's found to be achieved for all pollutants, except for annual mean NO <sub>2</sub> - Ref made to DA, Further DA and AQAP
April 2009	3	Further Detailed Assessment of NO <sub>2</sub>	Extension to Town Centre AQMA, and declaration of Portobello AQMA confirmed.
April 2009	4	Updating & Screening Assessment	A few exceedences of annual mean NO <sub>2</sub> AQO found within Town Centre AQMA only. None at Portobello, but AQMA not revoked. No exceedences of any of the other AQO's, therefore DA not required for any pollutant.
April 2010	4	Annual Progress Report & AQMA Action Plan Update	A few exceedences of annual mean NO <sub>2</sub> AQO found within Town Centre AQMA only. No exceedences of any of the other AQO's, therefore DA not required for any pollutant.
2010/11	4	Detailed Assessment of NO <sub>2</sub> (to be submitted to Defra for appraisal May 2011)	For Portobello, with a view to revocation of AQMA, due to no exceedences of NO <sub>2</sub> AQO for 2 years, & downward trend in NO <sub>2</sub> concentrations over 3 years.



Figure 1.1: Map of Town Centre AQMA Boundaries and Monitoring Locations

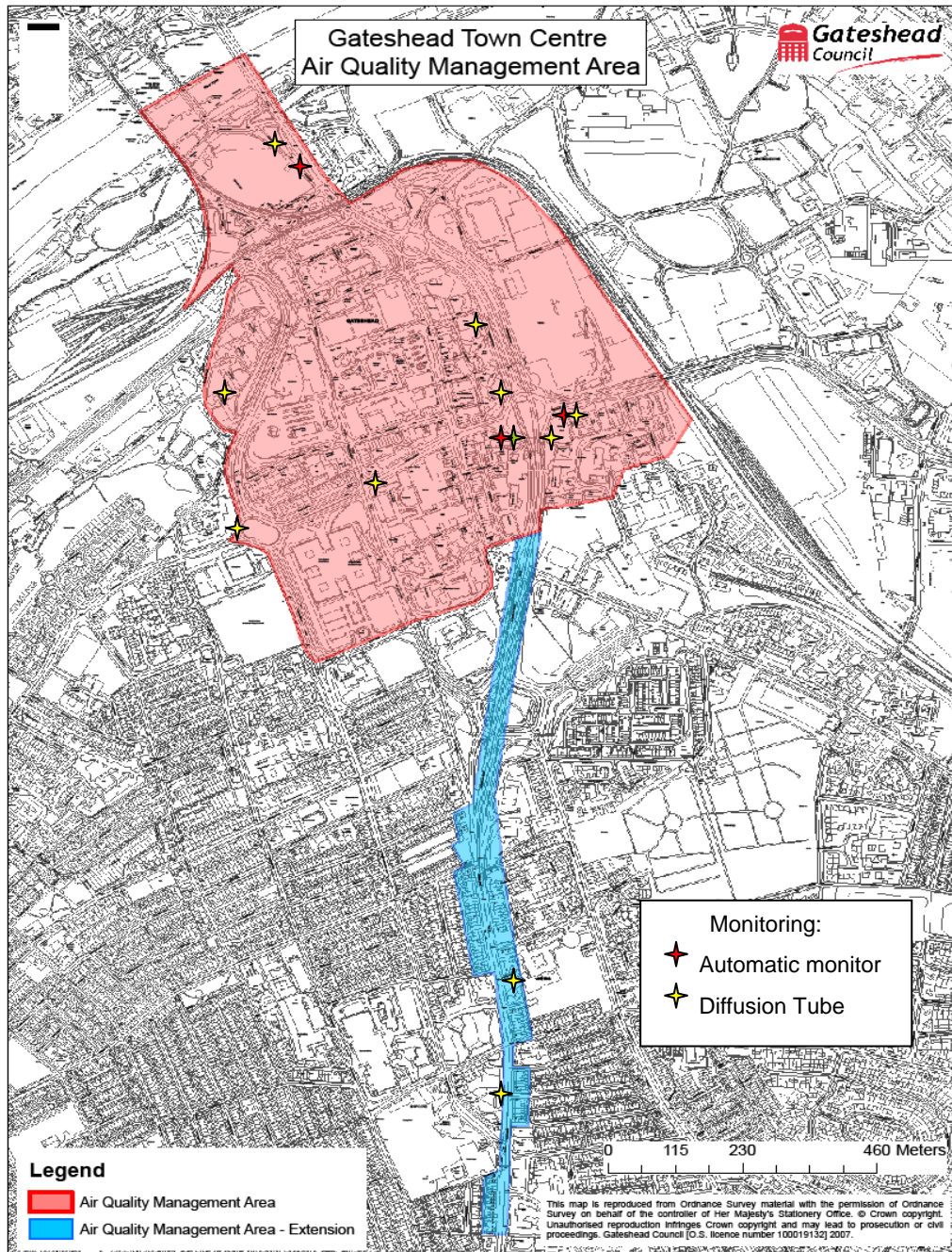
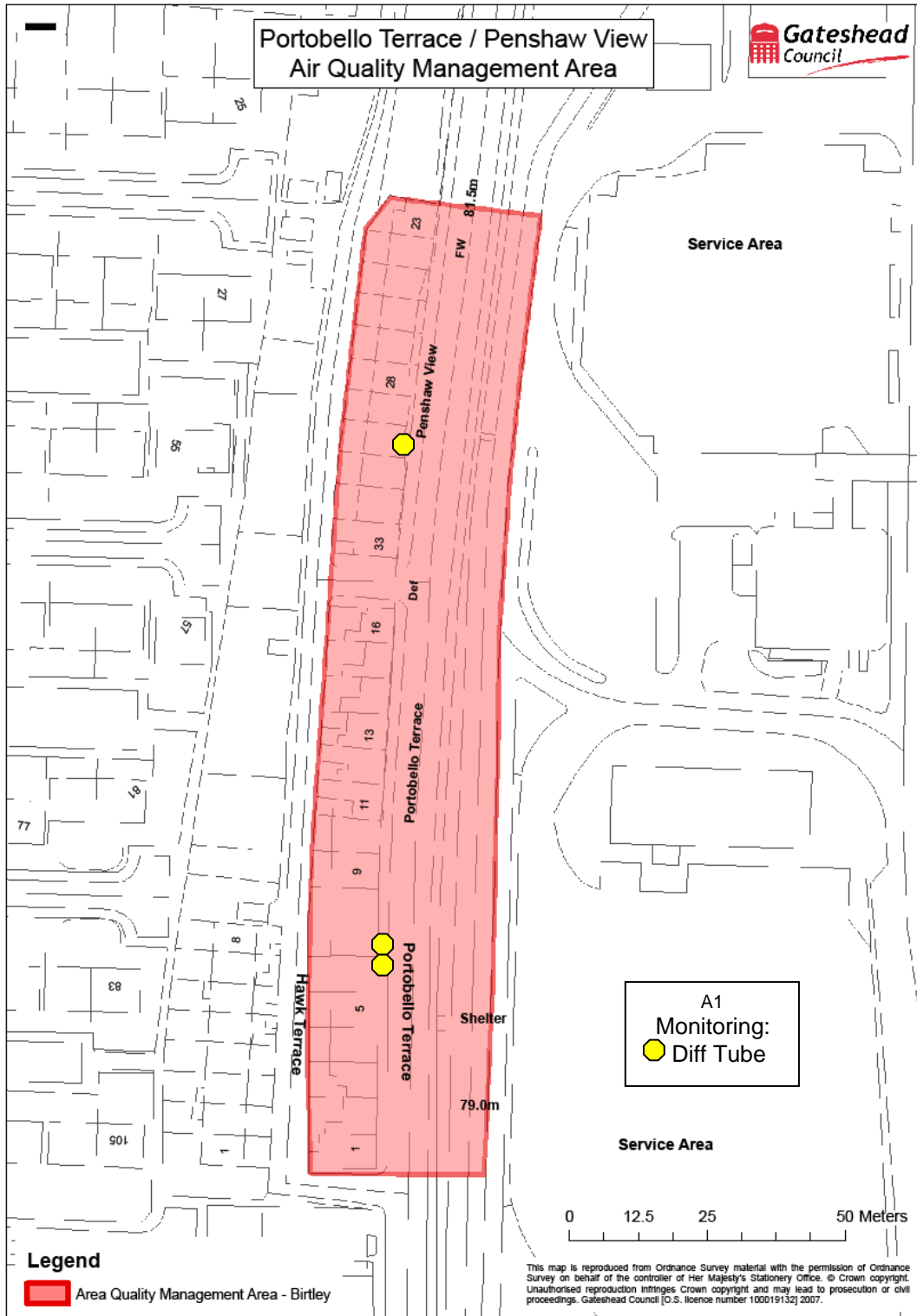


Figure 1.2: Map of Portobello AQMA Boundaries and Monitoring Locations



## **2 New Monitoring Data**

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

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

Gateshead Council measured nitrogen dioxide concentrations using real-time chemiluminescent monitors at four roadside sites during 2010-11, three within the Town Centre AQMA, at Trinity Court, Lychgate, and Bottle Bank, and one on the A1 South slip road at Dunston. Their locations are shown on the maps in Figs 1.1 & 1.3. All of the sites are roadside and situated closer to the road traffic pollution source than the nearest relevant receptors which are residential properties.

The use of a real time monitor, which had been used for the purposes of the Detailed Assessment and Further Detailed Assessment of NO<sub>2</sub> within the Portobello AQMA, was discontinued for 2010. Results from the monitor for 2008 & 2009 showed that NO<sub>2</sub> concentrations were well below the annual AQO, and there were no exceedences of the 1 hour AQO for either year. The monitor was moved off site for use by one of the other Tyne & Wear local authorities (the air quality unit being owned by 4 of the T& W authorities and shared on a rota basis).

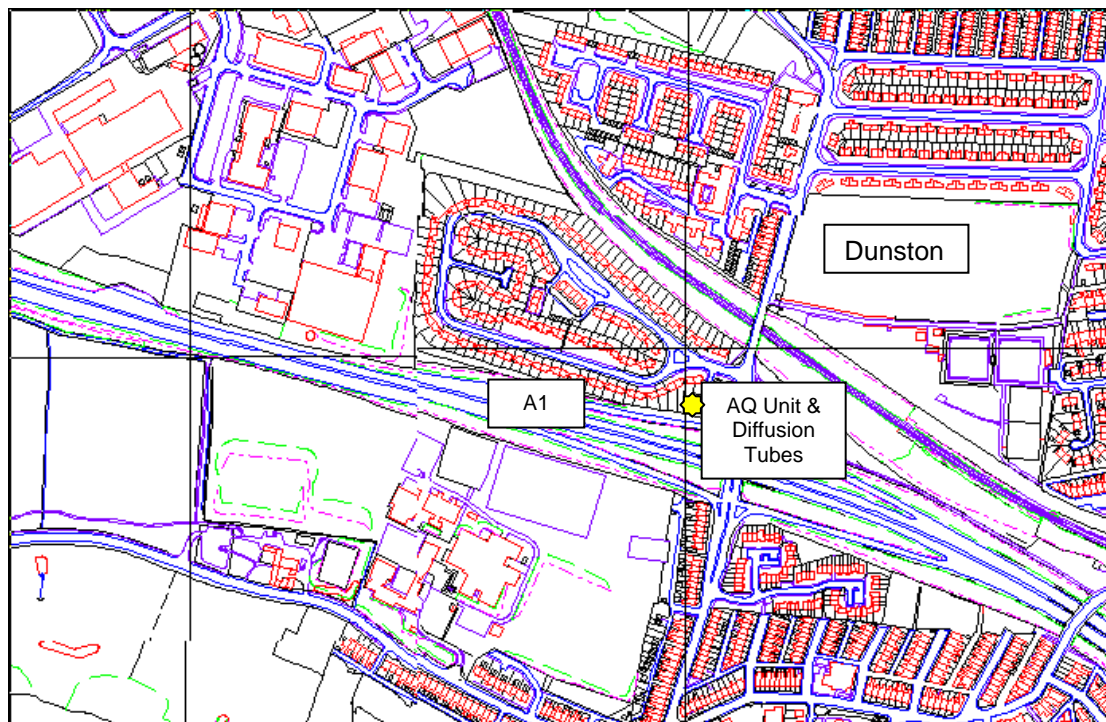
PM<sub>10</sub> concentrations are measured using TEOM samplers at the Lychgate and A1 Dunston sites. The PM<sub>10</sub> monitors are located in self contained mobile units together with the NO<sub>2</sub> monitors.

#### **QA/QC Automatic Monitoring**

The automatic monitors are operated by a suitably trained officer and are serviced twice per year in accordance with manufacturer's instructions. Services and repairs are carried out by Cassella Measurement. Calibrations and filter changes are carried out at two-week intervals, and Lychgate, and the A1 Dunston monitors also have an automatic daily calibration feature. Ratification of the monitoring data is carried out by Casella Eti, and the ratified data is made available on the Tyne & Wear air quality website: [www.air-quality.net](http://www.air-quality.net)

As PM<sub>10</sub> concentrations are measured using TEOM samplers, the King's College Volatile Correction Model (VCM) to correct the data has been applied by Casella Eti to estimate gravimetric concentrations.

Figure 2.1 Map of A1 Dunston Monitoring Location



**Table 2.1 Details of Automatic Monitoring Sites**

Site Name	Site Type	OS Grid Ref	Pollutants Monitored	Monitoring Technique	In AQMA ?	Relevant Exposure ?	Distance to kerb of nearest road	Worst-case Location ?
Trinity Ct	Roadside	X 425781 Y 563055	NO2	Chemiluminescent	Y	Y (8m)	10m	Y
Lychgate Ct	Roadside	X 425912 Y 563108	NO2  PM10	Chemiluminescent  TEOM	Y	Y (6m)	7m	Y
Bottle Bank	Roadside	X 428265 Y 554970	NO2	Chemiluminescent	Y	Y (8m)	2.5m	Y
A1 Dunston	Roadside	X 422510 Y 561928	NO2  PM10	Chemiluminescent  TEOM	N	N (16M)	9m	Y

### 2.1.2 Non-Automatic Monitoring Sites

Monthly average nitrogen dioxide concentrations are measured at a large number of sites in Gateshead using passive diffusion tubes. Monitoring sites in the AQMA's and the A1 Dunston site are shown in Figs 1.1, 1.2 & 2.1. Most of the sites are located roadside, and represent residential exposure. The majority of the tubes are located on the property façade of the nearest relevant receptors, or are sets of triplicate tubes co-located with automatic monitors.

Only four of the monitoring sites produced less than 12 months worth of data during the monitoring period, only one of these producing less than 9 months worth. The full results are shown in Appendix A.

Eighteen diffusion tubes were discontinued for 2010:-

Tube 13 was in close proximity to tube 12, with similar and usually lower results, and additionally more often subjected to vandalism;

Tubes 43-45 were all in close proximity and year on year showed consistently low results (below  $30 \mu\text{g}/\text{m}^3$ , well below the AQO of  $40 \mu\text{g}/\text{m}^3$ );

Tubes 50 & 51 were located in close proximity to tube 52, with all 3 tubes giving consistently low results, well below the AQO – tube 52 being retained due to being the least subject to vandalism;

Tubes 54 & 64 showed consistently low results well below the AQO and year on year reductions in NO<sub>2</sub> to below (below  $30 \mu\text{g}/\text{m}^3$ ) in 2009;

Tubes 60 & 62 were in close proximity to tube 61, with all tubes having similar consistently low results (below  $30 \mu\text{g}/\text{m}^3$ ), well below the AQO - tube 61 has been retained due to it being located closest to a major road system;

Tubes 68-70 were triplicate tubes co-located with an automatic monitor on Portobello Terrace, which has since been moved off site;

Tube 72 was located on a commercial as opposed to residential property, and together with tubes 75 & 76 was in close proximity to tubes 47 & 71 which showed the worst results for that location (results for tubes 75 & 76 being below  $30 \mu\text{g}/\text{m}^3$ );

Tubes 81, 82 & 84 showed consistently low results year on year (below  $30 \mu\text{g}/\text{m}^3$ ) and were in close proximity to tubes 80 & 83 which have been retained.

### QA/QC NO<sub>2</sub> Diffusion Tubes

The diffusion tubes (20% TEA in water) are supplied and analysed by Gradko laboratory, which participates in the WASP QA/QC procedure. The Council changed laboratory to Gradko laboratory from April 2010, hence the monitoring period for the purposes of this report is April 2010 to March 2011.

All of the monitoring data presented in this report have been adjusted to account for diffusion tube bias - the correction factor of 0.92 from the R&A helpdesk website: spreadsheet version number 04/11 was used. Out of the 34 studies for Gradko laboratory for which tube precision was available, all but three, including all four Gateshead sites, showed good precision.

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

Site Name	Site Type	OS Grid Ref	In AQMA ?	Relevant Exposure?	Distance to kerb of nearest road	Worst-case Location ?
Priory Court	Roadside	425737 563251	Y	Yes 0 metres	10 metres	Y
Peareth Ct	Roadside	425770 563135	Y	Yes 0 metres	10 metres	Y
Trinity Ct	Roadside	425781 563055	Y	Yes 0 metres	7 metres	Y
Trinity Ct AQUnit*	Roadside	425753 563061	Y	Yes 8 metres	10 metres	Y
Lychgate Ct AQ Unit*	Roadside	425883 563103	Y	Yes 6 metres	8.5 metres	Y
Monk Ct	Urban bkground	425855 562994	Y	Yes 0 metres	20 metres	N
Dryden Rd	Roadside	425760 561641	Y	Yes 0 metres	6 metres	Y
Durham Rd Gateshead 1	Roadside	425751 562214	Y	Yes 0 metres	8.5 metres	N
Durham Rd Gateshead 2	Roadside	425788 561966	Y	Yes 0 metres	7 metres	N
Durham Rd Low Fell	Roadside	425759 561612	Y	Yes 0 metres	5 metres	N
Hill St Bottle Bank	Roadside	425447 563528	Y	Yes 1.5 metres	3.5 metres	Y
Bottle Bank AQ Unit*	Roadside	425425 563555	Y	Yes 8 metres	3 metres	Y
Team Vale Villas,	Urban bkground	425297 562886	N	Yes 0 metres	12 metres	N
Coatsworth Road	Roadside	425034 562736	N	Yes 0 metres	6 metres	N
Coach Road	Urban bkground	423765 560510	N	Yes 0 metres	8.5 metres	N
Westway, Dunston	Urban bkground	423086 561543	N	Yes 0 metres	20 metres	N
A1 Dunston AQ Unit*	Roadside	422513 561925	N	No 16 metres	4 metres	Y
North Dene Birtley	Urban bkground	427187 557230	N	Yes 0 metres	8.5 metres	N
Portobello Terrace	Roadside	428254 554988	Y	Yes 0 metres	1.5 metres	Y
Portobello Tce AQ Unit*	Roadside	428264 554969	Y	No 13 metres	3 metres	N
Penshaw Vw Portobello	Roadside	428259 555077	Y	Yes 0 metres	1.5 metres	N

\* Triplicate tube location with automatic monitor

## 2.2 Comparison of Monitoring Results with Air Quality Objectives

### 2.2.1 Nitrogen Dioxide

#### Automatic Monitoring Data

Automatic monitoring results for the full 12 months monitoring period from April 2010 to March 2011, together with the results from 2008 and 2009 for comparison purposes, are shown in tables 2.3a and 2.3b. The results show that there are no exceedences of either of the air quality objectives, although concentrations have increased compared to previous years. Data capture was over 90% for all of the monitoring locations.

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

Site ID	Location	Within AQMA?	% Data Capture 2010-11	Annual mean Concentrations ( $\mu\text{g}/\text{m}^3$ )		
				2008	2009	2010-11
A1	Lychgate	Y	90.3	33	33	36
A2	Trinity Ct	Y	98.5	31	31	36
A3	Bottle Bank	Y	96.5	34	32	36
A5	A1 Dunston	N	99.3	34	38	38

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

Site ID	Location	Within AQMA?	% Data Capture 2010-11	Number of exceedences of hourly mean AQO ( $200\mu\text{g}/\text{m}^3$ )		
				2008	2009	2010-11
A1	Lychgate	Y	90.3	0	0	1
A2	Trinity Ct	Y	98.5	0	0	0
A3	Bottle Bank	Y	96.5	0	0	0
A5	A1 Dunston	N	99.3	0	0	2



### Diffusion Tube Monitoring Data

Diffusion tube monitoring results for the full 12 months monitoring period from April 2010 to March 2011, together with the results from 2008 and 2009 for comparison purposes, are shown in tables 2.4. The results show that there were no exceedences of the annual mean air quality objective either within or outside of the AQMA's for 2010-11. Exceedences of the annual mean air quality objective for 2008 and 2009 are highlighted in bold.

Twelve months worth of data was obtained for all but four of the monitoring locations, with 11 months for tubes 47 & 71; 10 months for tube 52; and 8 months for tube 53 (for which three of the lost months were summer months, which could explain the larger increase in the annual mean concentration compared with the majority of the other tubes).

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

Site ID	Location	Within AQMA?	% Data Capture 2010-11	Annual mean concentrations ( $\mu\text{g}/\text{m}^3$ ) (bias adjusted)		
				2008 <sup>a</sup>	2009 <sup>b</sup>	2010-11 <sup>c</sup>
2	Priory Court	Y	100	31	31	30
37	Lychgate AQ Unit*	Y	100	33	32	33
42	Trinity Court	Y	100	<b>40</b>	<b>40</b>	39
53	Hill St (Bottle Bank)	Y	67	36	36	39
55	Trinity AQ Unit*	Y	100	31	29	30
59	Peareth Court	Y	100	29	31	31
61	Monk Court	Y	100	26	25	25
63	Bottle BankAQ Unit*	Y	100	36	34	34
47	Dur/Dryden Road	Y	92	<b>39</b>	<b>41</b>	38
71	Durham Rd Low Fell	Y	92	31	33	34
80	DurhamRd Gtshd 1	Y	100	21	23	26
83	DurhamRd Gtshd 2	Y	100	31	32	31
10	Portobello Terrace	Y	100	38	36	37
16	Portobello Terrace	Y	100	38	36	37
74	Penshaw View	Y	100	33	32	33
4	NorthDene, Birtley	N	100	27	27	29
12	CoachRd,Lobley Hill	N	100	24	26	28
31	Westway, Dunston	N	100	26	25	29
35	A1 Dunston AQU*	N	100	33	34	37
46	Team Vale Villas	N	100	31	28	29
52	Bensham Road / Coatsworth Road	N	83	27	28	32

\* Mean concentration of triplicate tube exposure

<sup>a</sup> Bias Adjustment Factor (BAF) = 0.77; <sup>b</sup> BAF = 0.81; <sup>c</sup> BAF = 0.92

## 2.2.2 PM<sub>10</sub>

PM10 results from both real time monitoring locations for the 12 month monitoring period April 2010 to March 2011, together with the results from 2008 and 2009 for comparison purposes, are given in tables 2.5a and 2.5b. Results show that both of the air quality objectives were met, with concentrations well below the 40µg/m<sup>3</sup> annual mean objective level, and only two exceedences of the 50µg/m<sup>3</sup> 24-hour mean at each monitoring location. Table 2.5b shows a significant improvement in the 24 hour mean objective, and a downward trend for 2008- 2010/11.

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

Site ID	Location	Within AQMA?	% Data Capture 2010-11	Annual mean concentrations (µg/m <sup>3</sup> )		
				2008	2009	2010-11
A1	Lychgate	Y	93.7	23	20	22
A5	A1 Dunston	N	97.8	22	21	22

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

Site ID	Location	Within AQMA?	% Data Capture 2010-11	Number of exceedences of daily mean AQO (50 µg/m <sup>3</sup> )		
				2008	2009	2010-11
A1	Lychgate	Y	93.7	10	8	2
A5	A1 Dunston	N	97.8	6	6	2

### **2.2.3 Other Pollutants**

Gateshead Council does not carry out monitoring for any of the other relevant pollutants as there are no significant sources of these pollutants, or likelihood of any of the air quality objectives being exceeded in the Gateshead area.

### **2.2.4 Summary of Compliance with Air Quality Objectives**

Gateshead Council has examined the results from monitoring in the borough. There are no exceedences of any of the air quality objectives for NO<sub>2</sub> and PM<sub>10</sub> at any of the monitoring locations, either within or outside of the AQMA's.

### **3 New Local Developments**

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

Gateshead Council 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 Implementation of Action Plans

**Table 4.1 Action Plan Progress**

**Theme 1: MANAGING THE HIGHWAY NETWORK**

Option	Status of measure	Funding available/cost	Timescale for implementation/ Lead Service
Congestion charging and road tolls	Transport innovation study completed. Study concluded that Tyne and Wear scheme is not appropriate at the current time. Could become an issue if major interventions requiring significant investment/funding arise. Smarter choices and UTMC workstreams pursued by T&W partners-these should have some impact in AQMA.	No current funding or activity	Not currently applicable Lead service - Transport & Highways  No change
Parking Strategy	Proposed town centre redevelopment is likely to have major impacts on the location and numbers of car parking spaces in the town centre. UDP policy now requires any new parking to be charged. Discussions underway with Newcastle on development of consistent approach within central area.	Not applicable	Lead service -Transport & Highways  An early draft joint Newc/Gtshd Parking Strategy has been developed. This issue will also be addressed by the LDF Joint Core Strategy with Newcastle.
Specific Bus Corridors including Bus Lanes, or segregation of buses	Corridor improvement schemes carried out for town centre approaches on Old Durham, Road, Durham Road and Bensham Road as part of first LTP. Further improvements being considered: <ul style="list-style-type: none"> <li>• modifications to junctions around town centre;</li> <li>• dedicated bus link from old Sunderland Road – outline design completed, funding bid submitted to DfT as part of Tyne and Wear PT major business case scheme;</li> <li>• re-opening of High Level Bridge to southbound traffic as bus only - completed;</li> <li>• ongoing audit of ‘Superoute’ corridors and programme of improvements to public transport corridors - further corridor impvmts as part of submitted major scheme bid (see above)</li> </ul>	LTP public transport funds co-ordinated by Nexus  DfT funding is being sought for old Sunderland Road bus link (with Nexus and other Tyne & Wear LA's) following failed major scheme bid.	Lead service -Transport & Highways  On-going - Further improvements identified as part of LTP3

Option	Status of measure	Funding available/cost	Timescale for implementation/ Lead Service
Reduce capacity of roads (reallocation of roadspace)	High Level Bridge now closed permanently to general traffic. Feasibility of removal of flyover to east of town centre being investigated further. However high traffic volumes and strategic nature of routes mean that scope for major action is likely to be limited	Funding for studies into feasibility of removal of flyover made available.	Lead service -Transport & Highways  Feasibility study of Gateshead Highway top deck removal and road redesign to form a more attractive boulevard is underway. Report due after May 2011.
Increase capacity of roads	Study indicated any significant work is likely to be high cost with limited benefit. Some options worthy of further consideration but little likelihood of significant progress in short term	N/A	No change
Higher priority for pedestrians (in terms of highway space)	To be implemented through the town centre pedestrian/ cycle strategy. Subways at Arthur St, Chandless, Argyle Estate and Bensham Rd removed, improvements to Coulthards Lane implemented. Removal of Sunderland Road subways part of bid identified above	Gateshead Highway (Sunderland Rd) subway formed part of public transport major scheme bid	Lead service -Transport & Highways  Major scheme bid was unsuccessful. On-going minor improvements will be part of LTP programme.
Higher priority for cyclists (re highway space)	Part of town centre pedestrian/cycle strategy – improvements to pedestrian network highlighted above have/will incorporate provision for cyclists	As above	Lead service -Transport & Highways  On-going
Decriminalised parking enforcement	Implemented July 2007		Lead service -Transport & Highways  No change
Bus re-regulation	Government proposals for improved regulation set out in draft Local Transport Bill	Revenue implications for Nexus. See Section on bus quality contracts under Theme 3	Lead service -Transport & Highways working in partnership with Nexus  No change
High Occupancy Vehicle lanes	Not to be implemented	N/A	No change
Coordination of road works	Already being implemented under the Traffic Management Act 2004 – Netwk Mngmt Duty	N/A	Lead service -T & H  On-going

## Theme 2: EMISSIONS MANAGEMENT

Option	Status of measure	Funding available/cost	Timescale for implementation/ Lead Service
Encouragement of low emission/ zero emission vehicles	Low emission QuayLink buses in operation on town centre-Quays service. QuayLink contract to be renewed. High level Euro engine diesel buses to be used.	Ongoing commitment from Gtshd & Newc Councils, and Nexus.	Lead service -Transport & Highways  New QuayLink contract in place; new buses contain enhanced Euro V engines (lower emissions than previous hybrid QuayLink buses).
Emissions standards for buses	Go Ahead now has relatively modern fleet. Improvements being pursued in Newcastle should have some knock on improvements in Gateshead.	Bus operator capital investment programmes	Lead service -Transport & Highways, and Gateshead Strategic Partnership  No change
Enforcing idling engines legislation	Unlikely to be a major issue	N/A	N/A
Delivery times outside peak hour	Unlikely to be major issue.	N/A	N/A
Route enforcement for HGVs	Tyne and Wear Freight Quality Partnership may investigate in the future as part of its remit. FQP has developed maps (paper and online) to provide information to haulage companies about recommended routes, restrictions and facilities.	N/A	No change. Freight Quality Partnership is ongoing. Recent European conference held in Tyne & Wear as part of CIVITAS initiative
Taxis – use licensing system to improve emissions	The Council has brought in an age policy for Hackney Carriages and Private Hire Vehicles. This will have the added bonus of reducing emissions. Implemented 17/07/07	N/A	Lead service – Environmental Health  No change
Use of Low Emission delivery vehicles/ times of deliveries	Unlikely to be implemented	N/A	N/A Times of deliveries to new town centre development will be limited. Tesco comply with a delivery vehicle standard.

Option	Status of measure	Funding available/cost	Timescale for implementation/ Lead Service
Target HGVs – freight consolidation (freight node/hub), encourage use of rail freight	There are plans to implement a hub in Newcastle. This is primarily for Newcastle shops however may have knock-on benefits to shops in Gateshead. It may also have some impact on HGV/LGV through traffic in Gateshead. No current plans for a hub in Gateshead.	N/A	Lead service -Transport & Highways  Still under discussion
Low Emission Zone	Not currently under consideration.	N/A	No change
Speed restrictions	Speed limits in place on roads around town centre	LTP block funded programme	Lead service -Transport & Highways  No change
Better Traffic Light Signal Coordination (SCOOT)	As an outcome from the TIF study an urban traffic and management control (UTMC) project is underway. This will implement a central traffic management facility with automated and manual intervention to improve travel time reliability and travel information. Traffic signals are a key element of UTMC. Phase 1 (Vision and technical specification) completed. Phase 2 (supply of system and setting up central Tyne and Wear management centre) underway.	Congestion reduction reward funding, LTP block funding, developer contributions. Anticipated costs: £250,000 capital and £250,000 annual revenue costs.	Lead services -Transport & Highways, Tyne & Wear transport partners, Newcastle City Council contractor through role as lead authority for T&W LTP.  UTMC expected to go live in May 2011. Will include UTC (SCOOT), CCTV, traffic flows and may include AQ monitoring.
Vehicle Ban in Town Centre	Not to be implemented	N/A	No change
Roadside Emissions Testing	Not to be implemented	N/A	No change



**Theme 3: PROMOTION AND PROVISION OF ALTERNATIVES**

Option	Status of measure	Funding available/Cost	Timescale for implementation/ Lead Service
Express commuter buses	Implementation of express routes would depend upon bus companies - currently limited number	LTP funding for improvements to bus routes. Costs of service provsn to be borne by the operators	Lead service -Transport & Highways  On-going
Trams	Not to be implemented	N/A	No Change
Guided Buses	No current proposals	N/A	No change
Park and Ride	To be implemented through both bus and metro. Funding bid (outlined above) includes P&R sites at Follingsby and Watergate Park.	Major scheme funding bid submitted to DfT in 2010, awaiting programme entry.	2008-2014 Lead service -T & H  Major scheme funding was unsuccessful. Alternative sources for funding will be sought but are limited in current economic climate.
Promotion of Cycling	To be implemented through cycle strategy. Ongoing implementation through annual LTP programme	LTP block funding	Lead service -Transport & Highways  On-going. Local Sustainable Travel Fund (LSTF) bid will include promotion of cycling; early bid focuses on school travel
Annual Travel Card Discount	To be implemented by Nexus. Also introduced for Council employees	Council scheme is self funding. Costs of travel cards are recovered from staff salary deductions.	Lead service -Transport & Highways  On-going

Option	Status of measure	Funding available/Cost	Timescale for implementation/ Lead Service
Quality Bus Contracts	Investigation underway. Potential major cost issues. Local Transport Act measures seek to simplify process for implementing quality contracts. Unknown if partners will pursue this course of action as yet - <a href="#">Nexus are continuing to investigate opportunities</a>	N/A	Lead Service - Nexus
Travel Plans for businesses/schools	Programme of school travel plans in progress. Council travel plan in place for 5 years. TIF outcome resulted in implementation of Tyne & Wear Smarter Choices team. Travel plan and school travel plan coordinators employed by Council.	Major resource issues in extending coverage significantly. Commitment to fund part time travel plan co-ordinator for Baltic Business Quarter. May secure Developer contributions for sustainable transpt initiatives	Lead service -Transport & Highways  <a href="#">Council has implemented Travel Matters, a resource website for school travel. Further funding for this is included in LSTF bid. Council works with developers to promote employer travel plans. Council travel plan remains in place and now includes pool car scheme.</a>
Increase Pedestrian Areas	Trinity Square redevelopment is to include predominantly pedestrian areas within the site. Major upgrading of West Street proposed. No significant further pedestrianisation likely in the short term	Unclear at this stage as dependent on RDS	Lead service - Environmental Strategy, and Transport & Highways  <a href="#">No change</a>
Car Sharing Scheme and Vehicle Pool Scheme for Council employees	Being promoted within the Council. Vehicle Pool Scheme currently tendering for vehicles/services	Funding of purchase of vehicles and ongoing operating costs	Lead service -Transport & Highways  <a href="#">Car pool scheme now in place and electric pool car currently available for Development and Enterprise group. Online car sharing scheme in place.</a>

Option	Status of measure	Funding available/Cost	Timescale for implementation/ Lead Service
Use of car parking charges to encourage alternatives	UDP policy for charges in centres approved. Charges for Civic Centre parking under consideration. Key issues re: new car park as part of town centre redevelopment		Lead service -Transport & Highways  Ongoing
Home Zones	Unlikely to have major impact on town centre	N/A	No change
Subsidise public transport	Significant subsidy already in place through ITA, principally concessionary fares for older people on bus & metro. Major increase in subsidy unlikely in absence of new source of funding	None at present	Lead service -Transport & Highways, and Nexus No change
Create extra capacity on trains/ metro/ buses	This is principally a commercial operation consideration. Nexus review of secured services network is complete and will become operational in Gateshead in May 2011, already operational in some districts.	N/A	Lead services -Transport & Highways & Nexus
Flexible work times/school hours/ home working	Within council already implemented; externally may be implemented as part of travel plan initiatives by employers	N/A	Lead service - Transport & Highways  No change
More use of river transport	Not to be implemented – River Bus study showed unlikely to be viable	N/A	No change

**Theme 4: INFORMATION AND EDUCATION**

Option	Status of measure	Funding available/Cost	Timescale for implementation/ Lead Service
Provision of real time information at bus stops	Limited real time information operational in Coatsworth Road area and on QuayLink. Major delays to roll out due to technical and operational problems. Plan to include in future phase of UTMC project.	Nexus funded initiative	Lead service -Transport & Highways, working in partnership with Nexus  No change
Target schools & parents with info campaigns	School travel plan officers, Tyne and Wear Smarter Choices team and Be Air Aware campaign all work with schools on this issue.  Smarter Choices and Be Air Aware programmes now complete. Travel Matters website includes materials for subscribing schools.	See also section on travel plans under Theme 3  Future programmes likely to be part of LSTF bid.	Lead service -Transport & Highways
Target businesses (in conjunction with Travel Plans)	Travel plan officer no longer in post. Contact with businesses is mainly through development management process. See above re: Smarter Choices programme	See Section on travel plans under Theme 3	Lead service -Transport & Highways
Health promotion	To be implemented as part of health promotion programmes already underway in Gateshead		Lead Services - Community Based Services, and Health & Social Care Partnership  Ongoing
One off events (e.g. in town without my car)	Bike Week and Public Transport exhibitions held in Council premises annually  Recent events held at Saltwell Park Show. Cycle NE programme of cycle events and activities for the NE coordinated and published by Gateshead Council.	Small cost within existing budgets. No ongoing funding currently identified	Lead service -Transport & Highways  Ongoing

Option	Status of measure	Funding available/Cost	Timescale for implementation/ Lead Service
Intelligent Transport Systems (UTMC)	See Traffic Signals improvements outlined above. Gateshead was a case study site for the EPSRC funded Message project lead by Newcastle University. This trialled low cost air quality sensors, mesh technology and e-science. Now concluded but ongoing liaison including support for research continues with University.	Funding for UTMC available for approx 4 yrs thru congestion reduction reward funding. Longer term revenue funding to be determined. Engineering and Physical Sciences Research Council (EPSRC) funding was available for Message project.	Throughout 2006-2014  Lead service -Transport & Highways  <a href="#">See above</a>
Education regarding safety on public transport	LTP is committed to improve actual and perceived levels of security through proactive use of more staffing and CCTV	Nexus funded initiative	Lead service -T & H in partnership with Nexus  <a href="#">Nexus activity – on-going</a>
Information about car parking on VMS	Initial system in place in Quays area. Potential to extend to town centre.  <a href="#">Existing system being maintained and will be part of UTMC. Opportunities to expand it are being sought through development management process</a>	Extension of the variable message system would be subject to resources being available to fund the infrastructure and the ongoing costs of monitoring and maintenance. See above for UTMC funding. Further funding options may be sought through DC process.	Throughout 2006-14+  Lead service -Transport and Highways  <a href="#">On-going</a>

Option	Status of measure	Funding available/Cost	
Target Developers	Travel Plans routinely required for all major developments. Developers who have to create a Travel Plan are required to provide information to end-users.	Funded through developments	On-going
Provision of info on 'High Pollution Days'	Air quality data identified as component of UTMC project.	See UTMC above	On-going
Production of newsletters and posters	Cycle North East literature produced by Gateshead on behalf of Tyne & Wear partners. Literature provided for Council employees on sustainable travel in paper, Council internet and Intranet formats. Tyne & Wear Smarter choice team and BeAirAware produce marketing and promotional material and activities incl traditional media and internet (social networking). School travel and road safety material also produced.	LTP2 and Tyne and Wear Congestion Reward Funding	Cycle NE is on-going. Travel Matters website has been introduced. Smarter choices/Be Air Aware programme under review (see above).

## Theme 5: PLANNING

Option	Status of measure	Funding available/Cost	Timescale for implementation/ Lead Service
Include cycle facilities in new developments	Ongoing – Council has adopted cycling strategy, and considered within UDP. Also encouraged through development control process.	From developers through Section 106 agreements; some LTP funding	Lead service -T & H, and DC  Council cycling strategy currently under review. On-going development management process
Consideration of the location of essential services, housing, employment	As in emerging UDP. Individual allocations e.g. housing around issues of sustainability and accessibility. Regeneration Delivery Strategy will examine location of uses within the town centre with the aim of delivering a vibrant mixed use centre	No funding required	Lead services - Planning & Environmental Strategy, and Development Control  On going
More trees in the Town Centre	General policy – ENV 44 relates to protection of existing trees. Regeneration Delivery Strategy will make recommendations on soft landscaping within the town centre and how such improvements can be secured through new development	N/A	Lead Services - Development Control, and Planning & Environmental Strategy  On going
Strengthen joint working between local authorities	T&W policy officer group now includes air quality subgroup. City Region officers transport group also in place  Climate change liaison is also now in place.	No funding required	Lead Services -Transport & Highways and Environmental Health  On-going,
Local Development Frameworks need to identify AQMAs	LDF (Newcastle/Gateshead Urban Core Strategy and Area Action Plan) currently under consultation - air quality and AQMA's incorporated	No funding required	Timescale of the development of Local Development Frameworks. Lead Service - Planning & Environmental Strategy  No change

Option	Status of measure	Funding available/Cost	Timescale for implementation/ Lead Service
Encourage mixed use developments	Already being implemented – planning approval recently given for mixed use in town centre redevelopment	No funding required	Lead Service -Planning and Environmental Strategy  On-going implementation
Undertake air quality assessments of relevant new developments	NSCA guidance considered at pre-application stage and for applications.	Developers fund air quality assessments where required	Lead Service - Development Control  On going
Supplementary Planning Guidance for Tyne and Wear	Regional Spatial Strategy to be revoked, probably by end 2011. The UDP 2007 is gradually being replaced by the emerging LDF – Gateshead is working jointly with Newcastle CC in producing an Urban Core Strategy and Area Action Plan - Air Quality to be addressed in these, probably linked to health & wellbeing. The core strategy will be supplemented in future by a site allocation DPD (Development Plan Document) which is likely to contain more detailed development management policies, including AQ.	N/A	Lead Service - Planning and Environmental Strategy  No timetable as yet, though aim is for Core Strategy and Area Action Plan to be adopted by Spring 2013, and DPD's shortly after
Use of a protocol for planning applications – Air Quality to be a material consideration in applications	Implemented	N/A	Lead Services – DC, and Environmental Health  Ongoing implementation



## **5 Conclusions and Proposed Actions**

### **5.1 Conclusions from New Monitoring Data**

The results from automatic monitoring carried out by Gateshead Council show that for the monitoring period April 2010 - March 2011 all of the air quality objectives have been achieved at all monitoring locations, both within and outside of the existing Air Quality Management Areas, for both NO<sub>2</sub> and PM<sub>10</sub>.

Diffusion tube results for NO<sub>2</sub> have also shown no exceedences of the annual mean objective at any of the monitoring locations.

### **5.2 Proposed Actions**

As all of the air quality objectives have been achieved Gateshead Council does not intend to progress to a Detailed Assessment for any of the pollutants.

As there have never been PM<sub>10</sub> exceedences, and concentrations and the number of allowed exceedences of the 24 hour objective have always been well below the air quality objectives, the Council has decided, due to efficiency savings, to discontinue monitoring of this pollutant.

As concentrations of NO<sub>2</sub> for Portobello show a downward year on year trend from 2007 to 2009, and have now been below the annual AQO for three years, the Council has carried out a detailed assessment of this pollutant with a view to revoking the Air Quality Management Area. The DA report will be submitted to Defra for appraisal upon completion. Monitoring of NO<sub>2</sub> using diffusion tubes will however continue in the Portobello area.

The next course of action for the Council will be submission of an Updating & Screening Assessment in April 2012, and to this end, both automatic and diffusion tube monitoring for nitrogen dioxide will continue at most of the existing monitoring locations, particularly within the AQMA's, throughout 2011.

## **6       References**

Defra LAQM website - National Bias Adjustment Factor Spreadsheet No 04/11:

Gateshead Council:

Updating & Screening Assessment 2009

Further Detailed Assessment of NO2 2009

Annual Progress Report 2010

Town Centre Air Quality Action Plan 2008

Draft LDF Urban Core Strategy & Area Action Plan 2011

## Appendix

### Appendix A: Monthly NO2 Diffusion Tube Results April 2010 - March 2011

Tube No.	2010-11	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan 2011	Feb	March
2	Priory Ct	32.4	30.3	26.6	24.8	26.96	29.4	34.88	36.06	41.75	33.56	38.19	37.67
3	MelbournCt	40.78	38	34.8	28.4	33.2	38.8	50.69	49.1	52.07	45.17	45.01	52.37
4	North Dene	32.69	30.9	25	19.8	27.18	25.1	30.49	42.59	44.04	41.16	30.99	30.59
10	PortobelTce	38.01	40.6	38.3	33.2	33.73	40.9	43.99	46.54	50.8	44.24	41.85	32.42
12	Coach Rd	33.48	33.6	32.5	20.6	22.59	29	27.75	40.96	35.96	28.63	32.76	33.88
16	PortobelTce	40.42	38.8	41.1	31.6	33.46	37.9	50.57	52.15	43.1	40.44	41.62	35.16
31	West Way	35.35	35	32.9	18.1	24.76	29.9	30.27	42.71	36.58	35.4	27.93	32.42
35	A1 Dunston	40.18	28.2	29.3	32.8	30.11	39.4	45.29	53.42	43.76	37.94	50.53	50.78
37	LychgateAQU	36.13	30.7	28.8	24.8	29.08	35	26.7	44.19	50.3	46.29	31.49	41
38	LychgateAQU	39.59	33.2	28.7	25.3	31.78	29.5	40.37	38.98	44.4	38.9	40.96	39.38
39	lychgateAQU	36.88	32	29.6	24.4	31.07	30.5	35.91	41.21	39.89	44.59	41.19	39.64
40	A1 Dunston	37.15	33.9	28.8	33.6	29.87	41.6	39.52	52.28	49.91	40.07	52.13	45.1
41	A1 Dunston	35.59	29.7	30.6	33	32.44	36	36.59	53.22	51.79	45.52	48.08	49.33
42	Trinity Ct	41.53	45.4	41.6	33.7	36.36	41.2	44.59	42.04	42.06	45.41	46.56	46.65
45	Brisbane	23.55		26.2	18.1	23.3	26.6	29.62	31.4	29.62	37.9	20.54	24.55
46	TeamValeVils	33.97	28.3	29.1	20.5	24.34	31.2	32.75	32.68	36.34	34.86	35.82	35.1
47	Dryden Rd	43.92	40.5	35.6	32.8	37.26		40.9	52.41	49.95	47.06	34.6	41.47
52	Bensham Rd	37	31.9	30.8	25.6			28.44	38.36	38.48	33.92	36.83	41.53
53	Curzon (Hill St)	41.32	40.1				39.99	50.05	40.68		41.18	46.5	43.42
55	Trinity AQ Unit	31.02	34.4	30.3	23.9	26.86	29.39	28.5	41.14	34.69	39.65	14.21	35.22
56	Trinity AQ Unit	33.91	32.4	33	22.6	27.06	30.2	31.88	36.2	37.49	33.05	35.22	32.37
57	Trinity AQ Unit	36.36	35	34.4	22.5	26.83	28.67	30.72	34.29	45.43	37.71	32.39	35.43
59	Peareth Ct	32.75	14.3	29	24.9	28.48	30.68	36.97	42.29	42.4	41.98	38.23	38.06
61	Monk Ct	27.03	22.9	23.1	19.4	21.4	23.06	31.79	28.07	35.35	30.99	31.9	29.78
63	BottleBankAQU	31.84	33.2	34	35.7	29	34.01	38.94	37.48	39.31	39.37	39.77	38.52
65	BottleBankAQU	36.44	35.1	32.1	29	32.58	35.03	38.54	35.85	38.63	41.3	45.56	41.32
66	BottleBankAQU	41.33	35.5	34.4	32.6	30.79	36.05	38.24	37.12	36.65	48.03	53.94	40.31
71	DurhamRd LF1	38.35	30.1	30.7	26.2	30.5	33.8	35.76		60.33	42.24	32.66	40.11
74	Penshaw View	34.38	34.9	37	25.4	31.75	36.23	32.97	36.25	45.67	37.02	37.86	42.97
80	Dur Rd Gthd 1	26.15	23.8	23.6	18.2	19.54	24.96	29.48	31.83	37.79	35.15	35.9	32.12
83	Dur Rd Gthd 2	33.6	29.3	32.3	26.1	25.61	32.82	30.56	36.46	40.04	41.99	38.2	35.92