2011 Air Quality Progress Report for Coventry City Council

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

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Executive Summary

This latest Local Air Quality Management Progress Report provides information on the review and assessment of air quality in the borough. This review includes monitoring data collected during 2010 for the pollutants of nitrogen dioxide (NO_2). No monitoring data could be collected for PM_{10} due to data capture issues and technical problems.

Coventry declared a city-wide AQMA in late 2009, and as a consequence of that there are no exceedences of the air quality standards outside an AQMA. There are several areas that exceed the air quality standards across the city, though there are no new areas of exceedence that have not been identified in previous reports. It is hoped that with a new Action Plan to be completed in June 2012, concentrations in these areas can be reduced.

The only changes in local developments are two new biomass boilers and the airport now being closed to passenger flights. There have been no changes to road traffic or industrial sources.

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1 Introduction

1.1 Description of Local Authority Area

Coventry City Council is a unitary metropolitan authority situated in the West Midlands. The city covers 38.1 square miles and has a population of approximately 306,000. The city of Coventry is situated 95 miles northwest of London and 19 miles east of Birmingham. Coventry is near the M6, M69, M45 and M42, and is served by the A45 and A46 dual carriageways.

Typical sources of air pollution include emissions from the commercial and domestic sector, road traffic and industrial processes. Coventry is classed as a smoke control area making it an offence to emit smoke from a chimney caused by the use of an unauthorised appliance, or the burning of unauthorised fuel.

Coventry City Council regulates 89 industrial processes under the Environmental Permitting regime. In addition to this, the Environment Agency regulates 8 Part A1 installations within the city. The local authority regulates one Part A2 premises, a brickworks, and 88 other industrial installations of significance regulated under Part B of the Environmental Permitting Regulations 2007, including petrol filling stations and dry cleaners.

Previous reports within earlier rounds of Coventry City Council's review and assessment programme confirmed that emissions from road traffic are the major source of pollution within the city.

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 Standards and Objectives

The air quality standards 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 standards in units of microgrammes per cubic metre $\mu g/m^3$ (for carbon monoxide the units used are milligrammes per cubic metre, mg/m^3)

and the date by which they are to be achieved (the objectives). Table 1.1 includes the number of permitted exceedences in any given year (where applicable).

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

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

1.4 Summary of Previous Review and Assessments

This Progress Report continues round four of Coventry City Council's Review and Assessment cycle. The results of previous rounds are summarised below:

Round one, initiated in 1998, involved several stages:

- ***Stage 1 (Review and Assessment)*** involved the identification of the main sources of air pollution in and around Coventry, reviewing the levels of air pollutants for which prescribed standards and objectives had been set, and estimating the likely future levels.
- ***Stage 2*** required the local authority to provide further screening of pollutant concentrations within the area. The purpose of screening was to assess whether the air quality objectives would be achieved by the target date.
- ***Stage 3*** was a more complex assessment of monitoring and modelling.

For **Round Two** the review and assessment process was revised to include an **Updating and Screening Assessment (USA),** followed by a **Detailed Assessment** whenever necessary. The USA identified two locations in Coventry that were assessed to be unlikely to meet the annual mean objective for nitrogen dioxide by the target date of 2005. These were the Ball Hill area of Walsgrave Road and an area of the city centre including Trinity Street and the Burges. They were both designated as Air Quality Management Areas (AQMAs) in August 2003.

As exceedances of the Air Quality Objectives were predicted in the USA a **Detailed Assessment** was produced. The outcome of which was that the junction of Queensland Avenue and Allesley Old Road was also unlikely to meet the 2005 annual mean objective for NO_2 and was declared an AQMA in August 2004.

For **Round Three,** an **Updating and Screening Assessment** was completed in **2006**, which found that for the majority of pollutants, levels in Coventry still remain below the UK objectives. The exception to this was nitrogen dioxide where more areas were found to exceed the UK objective annual mean for 2005 and will require Detailed Assessment. These areas were:

- Foleshill Road
- London Road / Tollbar Island
- Radford Road / Beake Avenue junction (if residential property is introduced)
- Spon End / Hearsall Lane
- Stoney Stanton Road
- Croft Road, City Centre

The **2007 Detailed Assessment** found that all areas identified by the USA were confirmed as exceeding the UK objective for annual mean NO_2. Following DEFRA's suggestion that conjoining areas should be designated a single AQMA, the City Council had to consult and determine whether to:
a) designate the whole of Coventry an AQMA, or
b) designate two separate AQMAs; one covering the city centre and northern area of the city and one covering Tollbar End.

A **Progress Report** was produced in **2008**, which indicated exceedances of the NO_2 annual mean objective at the following locations:

- Stoney Stanton Road
- Foleshill Road / Longford Road
- Beake Avenue / Radford Road junction
- Tollbar End
- Croft Road / Victoria Road
- London Road near the Ringway
- Holyhead Road
- Fairfax Street

but not at Spon End / Hearsall Lane as indicated by the Detailed Assessment.

However the **Updating and Screening Assessment of 2009,** beginning the fourth round of review and assessment, found exceedence of NO_2 at Spon End/ Hearsall Lane as the **Detailed Assessment of 2007** had predicted but was not found to be the case in the **Progress Report of 2008.**

A city wide AQMA for nitrogen dioxide was declared, effective from 1st November 2009. Subsequent to this a further assessment must be completed within 12 months, together with an Air Quality Action Plan.

The 2010 **Progress Report** indicated that the following areas showed exceedences of the NO_2 annual mean objective:

- Ball Hill, Walsgrave Road
- Trinity Street
- Fairfax Street
- Queensland Avenue
- Tollbar End, London Road
- Foleshill Road

Despite this, however, concentrations of NO_2 had been steadily decreasing at the majority of locations across Coventry within the last few years. Coventry was to develop an Air Quality Action Plan subsequent to the declaration of the city-wide AQMA. The boundary of the city-wide AQMA is shown in Figure 1.1

Timescales for the submission of documents required under Local Air Quality Management (LAQM) are given in Box 1.3 of LAQM.TG (09). The documents published by Coventry City Council as part of its obligations under LAQM, are summarized in Table 1.2 below. Formal extensions to the submission of documents required under LAQM have been given by DEFRA, due to a lack of resources available within Coventry City Council as a result of financial restraints, and an ongoing service review. Details of formal extension deadlines are given in Table 1.3.

Table 1.2 Summary of previous Review and Assessment reports

Year	Type	Summary
1998	**Stage 1 (Round 1)**	The main sources of air pollution within and around Coventry City Council's boundary were identified, reviewing the levels of air pollutants for which prescribed standards and objectives have been set, and estimating the likely future levels.
2000	**Stage 2 (Round 1)**	Coventry City Council provided further screening of pollutant concentrations within the area. The purpose of screening was to assess whether the air quality objectives would be achieved by the target date.
2001	**Stage 3 (Round 1)**	Coventry City Council carried out a more complex assessment of monitoring and modelling which led to the declaration of the first two of the city's AQMAs.
2003	**Updating and Screening Assessment (Round 2)**	Two locations in Coventry were assessed to be unlikely to meet the annual mean objective for nitrogen dioxide by the target date of 2005. These were the Ball Hill area of Walsgrave Road and an area of the city centre including Trinity Street and the Burges. They were both designated as AQMAs in August 2003.
2004	**Detailed Assessment (Round 2)**	The junction of Queensland Avenue and Allesley Old Road was also unlikely to meet the 2005 annual mean objective for nitrogen dioxide by 2005 and was declared an AQMA in August 2004.
2006	**Updating and Screening Assessment (Round 3)**	For the majority of pollutants, levels in Coventry still remain below the UK objectives. The exception to this is nitrogen dioxide where more areas have been found to exceed the UK objective annual mean for 2005 and will need to proceed to Detailed Assessment. The USA also concluded that given the number of areas to proceed to Detailed Assessment it is highly likely that Coventry will have to declare further Air Quality Management Areas.
2007	**Detailed Assessment (Round 3)**	All areas identified by the Updating and Screening Assessment 2006 were confirmed as exceeding the UK objective for annual mean nitrogen dioxide.
2008	**Progress Report (Round 3)**	The Progress Report indicates exceedances of the NO_2 annual mean objective at a number of locations across the city.
2009	**Updating and Screening Assessment (Round 4)**	A number of locations outside the AQMAs continued to exceed NO2 objectives. Including Spon End/ Hearsall avenue as was indicated by detailed assessment of 2007 but not 2008 Progress Report.
2010	**Progress Report (Round 4)**	A city-wide AQMA was declared, effective from 1st November 2009. Several areas of Coventry continued to exceed the annual mean objective for NO_2.

Table 1.3 Formal extension agreed by DEFRA for LAQM documents

Requirement	Extension Requested
Progress Report 2011	30th September 2011
Further Assessment	31st December 2011
Action Plan	30th June 2012
Updated Screening Assessment 2012	30th June 2012

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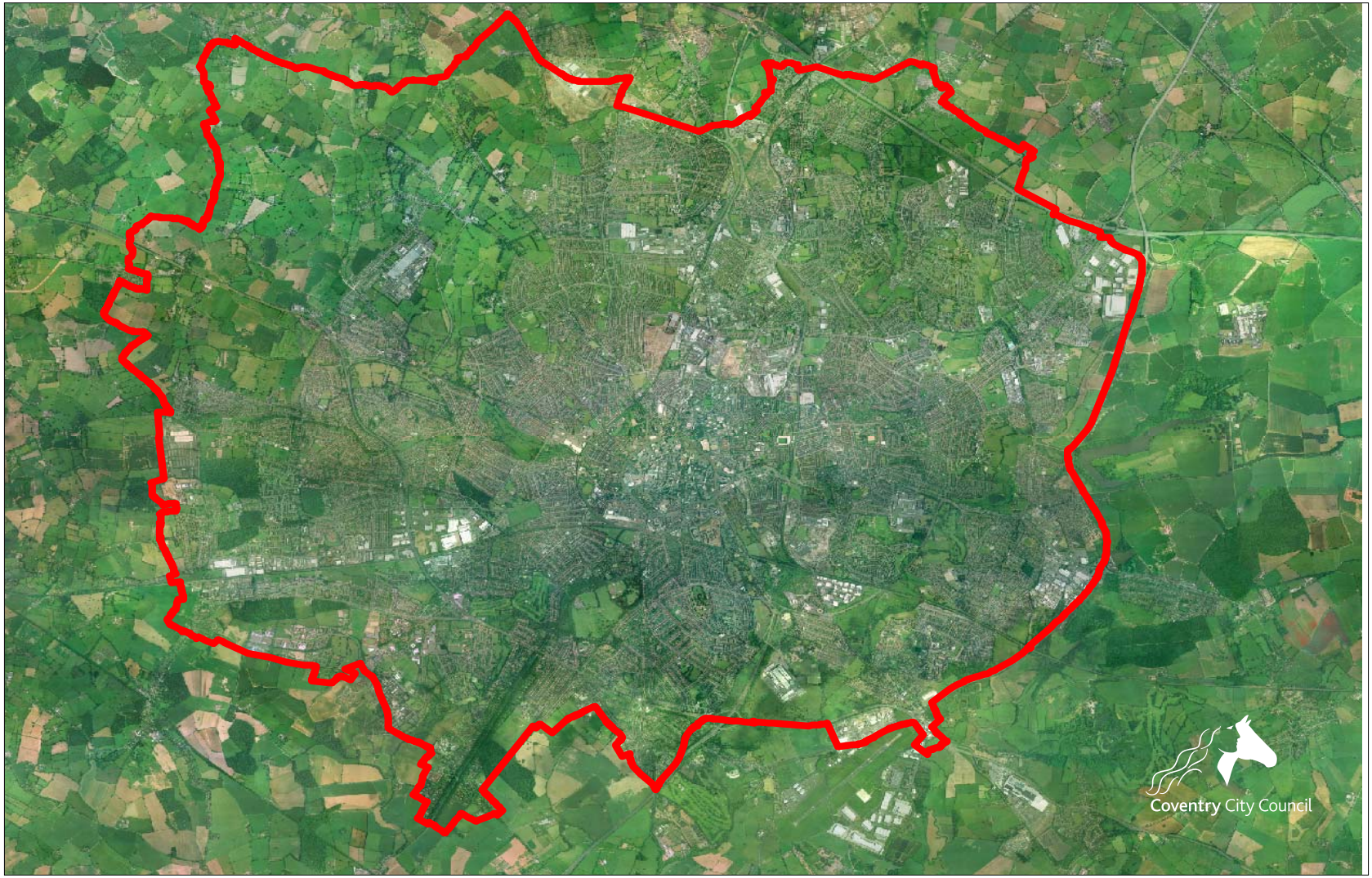

Figure 1.1 Coventry City Council's AQMA boundary

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

During 2010, we had consistent problems with the functionality of our monitoring equipment. Lack of resources within the council, and issues with the service engineer, resulted in faulty equipment not being identified and repaired as required. Data capture rates at 2 of our 4 automatic stations for 2010 were less than the 75% required by the guidance LAQM TG(09). Therefore, we give information of the location of all our continuous monitoring sites but will only be able to provide reliable continuous monitoring data for Foleshill Road and Ball Hill for 2010. Information regarding the locations and relevant exposure at the continuous monitoring stations are shown in Figure 2.1 and Table 2.1.

Since the last progress report, we have installed a new station at Hales Street in the city centre. This station has also had data capture issues and therefore 2010 data will not be reported.

A new service contract with our service engineers was signed in July 2011, which outlines specific service and repair responsibilities against which the service company will be assessed. Faults have been identified and in some cases replacement of whole analyser units has been required.

Professional technical support has also been provided by air quality colleagues at Birmingham City Council. We are confident that these actions will improve functionality and data capture for future periods.

2.1.2 QA/QC of automatic monitoring

Each NO_x analyser is operated according to manufacturers' instructions. Coventry City Council officers carry out calibration of the equipment every two weeks. Certified Calibration Gas is supplied by Air Liquide and this is used to obtain a span value for each analyser during the calibration. The equipment is also tested against zero air. The data is collected and scaled, and any instrumental drift is corrected during data processing. The filter is changed after every calibration. Engineers from Casella service the analysers at six monthly intervals.

A visual inspection of the TEOM analyser is carried out fortnightly, and the filter changed as required during routine site visits. All site visits are documented to ensure any problems are recorded and any works noted. All calibrations are recorded.

Figure 2.1 Map of Automatic Monitoring Sites

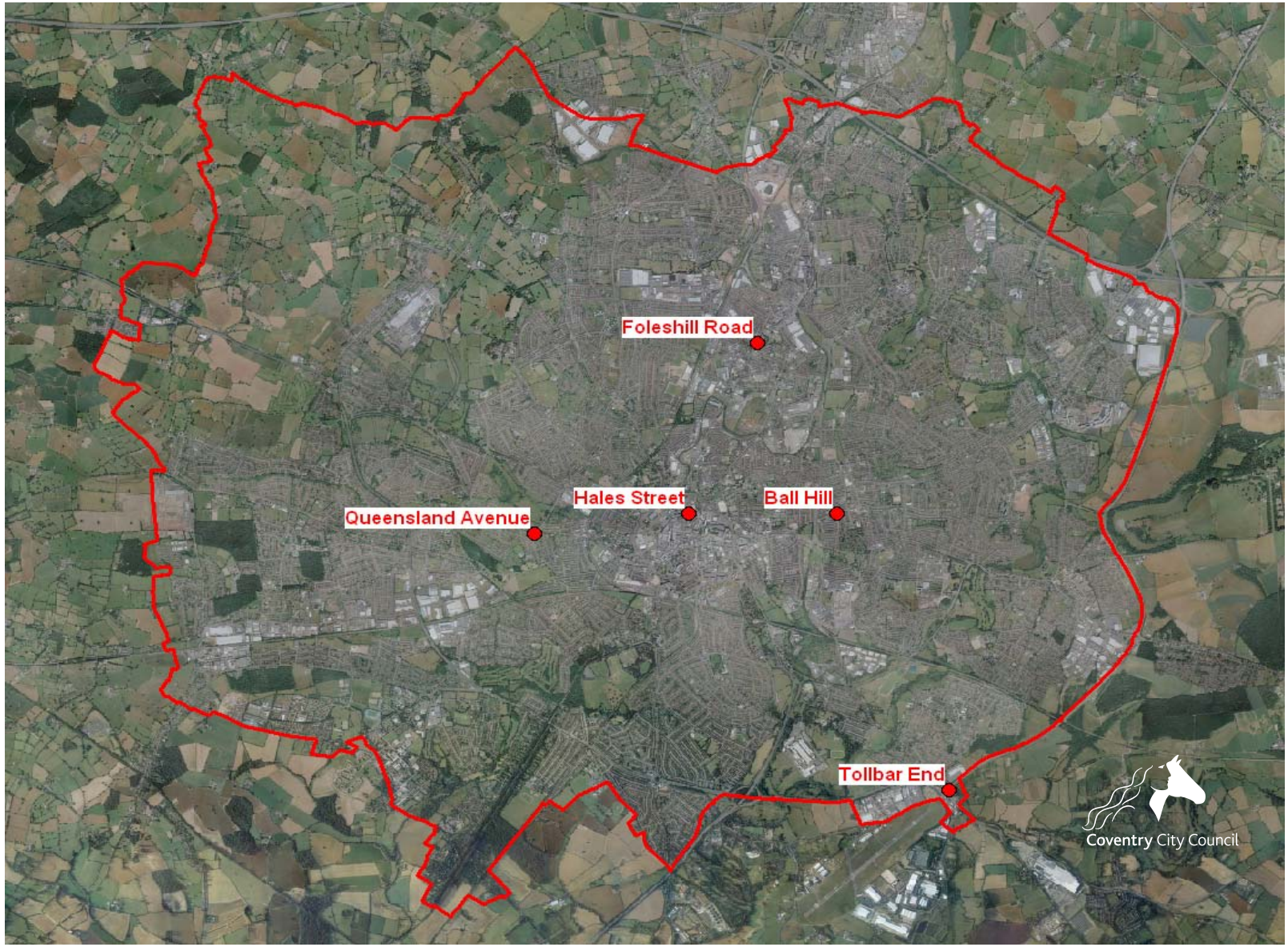

Table 2.1 Details of Automatic Monitoring Sites

Site Name	Site Type	OS Grid Ref		Pollutants Monitored	Monitoring Technique	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
Queensland Avenue	Roadside	X 431572	Y 279022	PM_{10} NO_2	TEOM-VCM method applied	Y	Y(9m)	3.5m	N
Foleshill Road	Roadside	X 434251	Y 281512	PM_{10} NO_2	TEOM-VCM method applied	Y	Y(9m)	6m	N
Ball Hill	Roadside	X 435129	Y 279282	NO_2	N/A	Y	Y(2.5m)	3.5m	N
Tollbar End	Roadside	X 436530	Y 275696	PM_{10} NO_2	FDMS	Y	Y(25m)	4.5m	N
Hales Street	Roadside	X 433414	Y 279279	NO_2	N/A	Y	Y (2m)	3.2m	N

2.1.3 Non-Automatic Monitoring Sites

Coventry City Council operate a network of 96 diffusion tubes around the city, as shown in Figure 2.2. The survey was expanded in December 2010 and all duplicate sites were converted to triplicate in order to assess the coefficient of variation of the tubes, due to differing results of duplicate tubes in past years. New tubes were also deployed at Bell Green, Far Gosford Street, Gulson Road and at residential locations near to the M6.

Details of the locations of NO_2 diffusion tubes can be found in Table 2.2.

Coventry City Council use Gradko International for analysis of diffusion tubes. The preparation method used is 20% TEA in water.

The diffusion tube results have been bias adjusted using the National Diffusion Tube Bias Adjustment Factor Spreadsheet, as Coventry's continuous monitoring stations have not had sufficient data capture to produce a robust adjustment factor. From the National Diffusion Tube Bias Adjustment Factor Spreadsheet, 39 Local Authorities submitted results for 2010 using the same laboratory and preparation method, and therefore the adjustment factor of 0.9 is considered to be representative.

QA/QC of non-automatic monitoring

Grakdo International are part of the Workplace Analysis Scheme for Proficiency (WASP), and in 2010 they achieved a Good rating. The tubes are stored and deployed according to the manufacturer's instructions and field and fridge blanks are used each month to ensure that no contamination has occurred.

Figure 2.2 Map of Non-Automatic Monitoring Sites

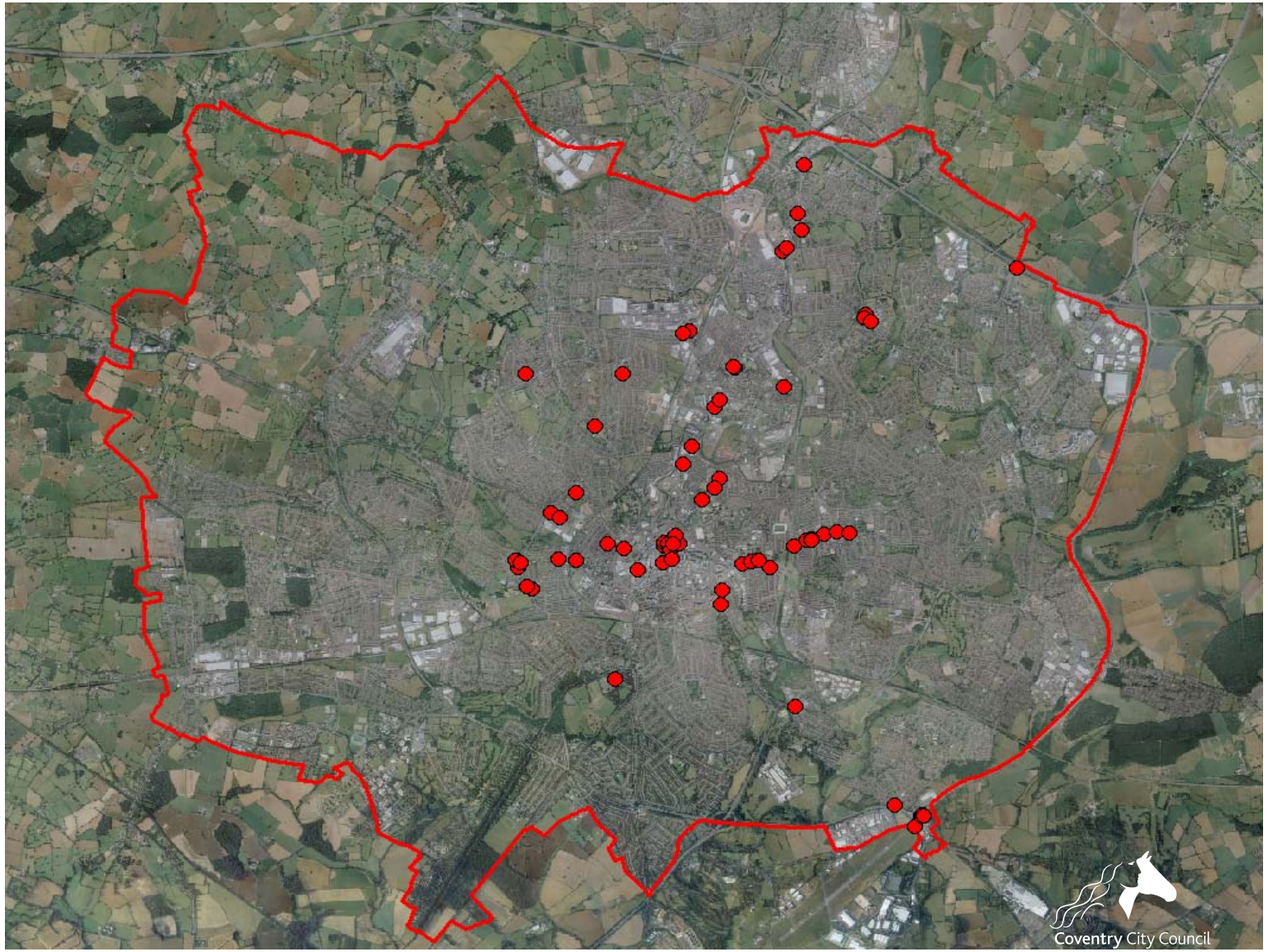

Table 2.2 Details of Non- Automatic Monitoring Sites

Site ID	Location	Site Type	OS grid ref		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?
			X	Y				
6Nd	Holyhead Road	Roadside	431990	279644	Y	Y(7.2m)	3.4	Y
6Ndd	Holyhead Road	Roadside	431990	279644	Y	Y(7.2m)	3.4	Y
6N*	Holyhead Road	Roadside	431990	279644	Y	Y(7.2m)	3.4	Y
CCO1*/1N	Holyhead Road	Roadside	432105	279578	Y	Y(7.2m)	3.1	Y
CCO3/3N*	Holyhead Road	Urban background	432299	279898	Y	Y(5.8m)	N/A	N/A
CCO4/5N*	Holyhead Road	Urban background	431683	281446	Y	Y(6.9m)	1.2	N/A
HR1	Holyhead Road	Façade	432683	279240	Y	Y(0m)	5.8	Y
BH1	Ball Hill	Roadside	434966	279204	Y	Y(5.2m)	2.6	Y
BH2a	Ball Hill	Façade	435126	279286	Y	Y(0m)	3.9	Y
BH4	Ball Hill	Roadside	435331	279358	Y	Y(3.5m)	1.3	Y
BH6i	Ball Hill	Roadside	435184	279298	Y	Y(1m)	4.5	Y
BH6ii	Ball Hill	Roadside	435184	279298	Y	Y(1m)	4.5	Y
BH6iii	Ball Hill	Roadside	435184	279298	Y	Y(1m)	4.5	Y
BH9	Ball Hill	Roadside	435645	279371	Y	Y(2m)	0.1	Y
BH10	Ball Hill	Roadside	435189	279281	Y	Y(2m)	0.1	Y
BH11	Ball Hill	Roadside	435189	279281	Y	Y(2m)	0.1	Y
BH12	Ball Hill	Roadside	435189	279281	Y	Y(2m)	0.1	Y
BGH1	City Centre	Façade	433370	278990	Y	Y(0m)	1.8	Y
BUR2i	City Centre	Roadside	433398	279168	Y	Y(7.7m)	0.5	Y
BUR4i	City Centre	Roadside	433387	279199	Y	Y(2m)	0.01	Y
BUR4ii	City Centre	Roadside	433387	279199	Y	Y(2m)	0.01	Y
BUR4iii	City Centre	Roadside	433387	279199	Y	Y(2m)	0.01	Y

Site ID	Location	Site Type	OS grid ref		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?
			X	Y				
BUR6	City Centre	Roadside	433373	279257	Y	Y(1.8m)	1	Y
HS1	City Centre	Roadside	433467	279267	Y	Y(24.6m)	0.9	Y
HS2	City Centre	Roadside	433420	279236	Y	Y(2m)	35	Y
TS1	City Centre	Roadside	433465	279154	Y	Y(3m)	3.6	Y
TS2	City Centre	Roadside	433496	279241	Y	Y(3.7m)	4.4	Y
CL1	City Centre	Façade	433471	279043	Y	Y(0m)	21	Y
FS1	City Centre	Roadside	433569	279234	Y	Y(4.9m)	1	Y
CR4	City Centre	Roadside	433052	278897	Y	Y(0m)	2.3	Y
CR4a	City Centre	Roadside	433052	278897	Y	Y(0m)	2.3	Y
CR4b	City Centre	Roadside	433052	278897	Y	Y(0m)	2.3	Y
LON4	Tollbar End	Roadside	436520	275705	Y	Y(26.3m)	5.9	Y
LON5	Tollbar End	Roadside	436520	275705	Y	Y(26.3m)	5.9	Y
LON6	Tollbar End	Roadside	436520	275705	Y	Y(26.3m)	5.9	Y
LON7i	Tollbar End	Façade	436540	275727	Y	Y(0m)	19.4	Y
LON7ii	Tollbar End	Façade	436545	275713	Y	Y(0m)	18.3	Y
LON8a	Tollbar End	Façade	436551	275703	Y	Y(0m)	17.9	Y
LON12	London Road	Façade	434075	278450	Y	Y(0m)	5.1	Y
LON13	London Road	Façade	434987	277129	Y	Y (0m)	7.1	Y
STL1	Tollbar End	Roadside	436203	275841	Y	Y(17.1m)	12	Y
STL2	Tollbar End	Roadside	436203	275841	Y	Y(17.1m)	12	Y
STL3	Tollbar End	Roadside	436203	275841	Y	Y(17.1m)	12	Y
SE1	Spon End	Roadside	432084	279042	Y	Y(0m)	3.4	Y
SE1d	Spon End	Roadside	432084	279042	Y	Y(0m)	3.4	Y
SE1dd	Spon End	Roadside	432084	279042	Y	Y(0m)	3.4	Y
SE3	Spon End	Façade	432303	279028	Y	Y(0m)	0	Y
QAV01	Queensland Avenue	Roadside	431595	278991	Y	Y(0m)	5.3	Y

Site ID	Location	Site Type	OS grid ref		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?
			X	Y				
QAV01d	Queensland Avenue	Roadside	431595	278991	Y	Y(0m)	5.3	Y
QAV01dd	Queensland Avenue	Roadside	431595	278991	Y	Y(0m)	5.3	Y
QAV6	Queensland Avenue	Roadside	431573	279020	Y	Y(0m)	1.1	Y
QAV7	Queensland Avenue	Roadside	431573	279020	Y	Y(10.8m)	1.1	Y
QAV8	Queensland Avenue	Roadside	431573	279020	Y	Y(10.8m)	1.1	Y
QAV12	Queensland Avenue	Façade	431704	278680	Y	Y(0.7m)	5.2	Y
QAV13	Queensland Avenue	Façade	431763	278657	Y	Y(0m)	4.9	Y
R1	Foleshill Road	Roadside	434250	281513	Y	Y(13.2m)	5.1	Y
R2	Foleshill Road	Roadside	434250	281513	Y	Y(13.2m)	5.1	Y
R3	Foleshill Road	Roadside	434250	281513	Y	Y(13.2m)	5.1	Y
R4	Foleshill Road	Façade	434233	281526	Y	Y(0m)	0	Y
R5	Foleshill Road	Façade	433716	280503	Y	Y(0m)	3.7	Y
R6	Foleshill Road	Façade	433617	280276	Y	Y(0m)	4.9	Y
R6a	Foleshill Road	Façade	433617	280276	Y	Y(0m)	4.9	Y
R6b	Foleshill Road	Façade	433617	280276	Y	Y(0m)	4.9	Y
R8	Foleshill Road	Façade	433992	281008	Y	Y(0m)	4.3	Y
R9	Foleshill Road	Roadside	434059	281105	Y	Y(4.5m)	4.9	Y
LR1	Longford Road	Façade	434836	283030	Y	Y(0m)	5.6	Y
LR2	Longford Road	Façade	434880	283077	Y	Y(0m)	4.2	Y
LR3	Longford Road	Façade	435016	283515	Y	Y(0m)	8.5	Y
LP1	Longford Park Urban BG	Urban background	435083	283316	Y	N/A	N/A	N/A
BR1	Longford Road	Roadside	435094	284156	Y	Y(0m)	4.9	Y
HL1	Holbrook Lane	Roadside	433690	281987	Y	Y(0m)	3.5	Y
BRN2	Burnaby Road	Façade	433605	281965	Y	Y(0m)	5.5	Y
BRN2a	Burnaby Road	Façade	433605	281965	Y	Y(0m)	5.5	Y
BRN2b	Burnaby Road	Façade	433605	281965	Y	Y(0m)	5.5	Y

Site ID	Location	Site Type	OS grid ref		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?
			X	Y				
BA1	Beake Avenue/Radford Road	Roadside	432531	280769	Y	Y(7.5m)	2.2	Y
BA1d	Beake Avenue/Radford Road	Roadside	432531	280769	Y	Y(7.5m)	2.2	Y
BA1dd	Beake Avenue/Radford Road	Roadside	432531	280769	Y	Y(7.5m)	2.2	Y
SS1	Stoney Stanton Road	Façade	434062	280082	Y	Y(0m)	3.1	Y
SS2	Stoney Stanton Road	Façade	433994	279969	Y	Y(0m)	4.5	Y
SS3	Stoney Stanton Road	Façade	434842	281272	Y	Y(0m)	0	Y
SS5	Stoney Stanton Road	Façade	433847	279814	Y	Y(0m)	3	Y
AUN1	Memorial Park	Urban background	432785	277475	Y	N/A	116.4	N/A
AUN2	Memorial Park	Urban background	432785	277475	Y	N/A	116.4	N/A
AUN3	Memorial Park	Urban background	432785	277475	Y	N/A	116.4	N/A
EH1	Earlsdon High Street	Façade	431978	278050	Y	Y(0m)	4.6	Y
EH2	Earlsdon High Street	Roadside	431932	278005	Y	Y(3m)	4.7	Y
EH3	Earlsdon High Street	Façade	431950	277998	Y	Y(0m)	5.5	Y
EH4	Earlsdon High Street	Roadside	431971	278022	Y	Y(3m)	3.1	Y
BELL1	Bell Green	Façade	435849	282211	Y	Y (0m)	1.7	Y
BELL2	Bell Green	Façade	435826	282158	Y	Y (0m)	5.7	Y
WL1	Woodway Lane (M6)	Façade	437692	282814	Y	Y (0m)	12.55	Y
CH1	Jubilee Crescent	Façade	432877	281436	Y	Y (0m)	8.9	Y
FGS1	Far Gosford Street	Façade	434330	278973	Y	Y (0m)	2.9	Y
FGS2	Far Gosford Street	Façade	434450	279001	Y	Y (0m)	5.1	Y
FGS3	Far Gosford Street	Façade	434530	279026	Y	Y (0m)	2.4	Y
GR1	Gulson Road	Façade	434678	278922	Y	Y(0m)	4.5	Y

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide

Automatic Monitoring Data

As mentioned in previous sections, data capture from two of Coventry's continuous monitoring stations in 2010 was too low to be used as a representative annual mean. Therefore it is only concentrations from the Ball Hill and Foleshill Road stations that are reported in Table 2.3 and Table 2.4. Monitoring data have been ratified using the procedures given in Appendix 1 of LAQM.TG(09) Any exceedences of the annual mean standard of 40µg/m^3 are highlighted in bold.

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

Site ID	Within AQMA?	Relevant public exposure? Y/N	Data Capture for full calendar year 2010 %	Annual Mean (Limit 40 µg/m^3)		
				2008	2009	2010
Ball Hill	Y	Y	93%	**42.2**[1]	**42.3**[2]	**49.0**
Foleshill Road	Y	Y	75%	32.1[3]	34.9[4]	39.8

Ball Hill shows an exceedence of the air quality standard for the last three years, with reasonable data capture rates across that time. Concentrations have risen across the three years, and have risen quite sharply since 2009 to well above the air quality standard of 40µg/m^3.

2010 data for Foleshill Road shows the concentration being very close to the air quality standard. However, data capture rates are lower than previous years and therefore this value may not be reliable. Previous years indicate that concentrations at this site are well below the air quality standard. Despite the poorer data capture in 2010, the general trend suggests that air quality at Foleshill Road may be deteriorating.

[1] Data capture 80%
[2] Data capture 90%
[3] Data capture 95%
[4] Data capture 87%

Table 2.4 Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1-hour Mean Objective

Site ID	Within AQMA?	Relevant public exposure? Y/N	Data Capture for full calendar year 2010 %	Number of exceedences of hourly mean (200 μg/m^3)		
				2008	2009	2010
Ball Hill	Y	Y	93%	0 (144)	0	0
Foleshill Road	Y	Y	75%	0	7 (173)	0 (144.7)

In 2010 there were no exceedences of the hourly mean at Ball Hill. At Foleshill Road, the data capture was below 90% and therefore the 99.8th percentile of the hourly data was calculated. This was below the air quality standard of 200 μg/m^3 and therefore this indicates that no breach of the standard has occurred.

Diffusion Tube Monitoring Data

Two diffusion tubes were removed from the survey in 2010; CC04/5N* and BUR2i. CC04/5N* was removed as it was not a true urban background site as in accordance with the guidance LAQM/TG09; it was within 10m of a road and therefore was not an urban background site. BUR2i was discontinued as the lamppost in the city centre to which it was attached was removed.

Results of diffusion tube monitoring are shown in Table 2.5. Values in bold are those that are greater than 40µg/m^3; values in italics have a data capture of less than 90%. Tubes with a data capture less than 75% have had their values omitted from the table.

Details of bias adjustment factors used is given in the footnotes below. For further information about bias adjustment, please see Appendix A.

Table 2.5 Results of Nitrogen Dioxide Diffusion Tubes

Site ID	Location	Within AQMA?	Relevant public exposure? Y/N	Single/ Triplicate?	Data Capture 2010 %	2010 Annual Mean Bias adjusted distance corrected to façade where applicable (µg/m3)	Annual Mean Concentrations (µg/m^3)	
							2009	2008
6Nd	Holyhead Road	Y	Y(7.2m)	Triplicate	100%	34.62	32.89	38.77
6Ndd	Holyhead Road	Y	Y(7.2m)	Triplicate	/	/	***/***	***/***
6N*	Holyhead Road	Y	Y(7.2m)	Triplicate	92%	34.62	32.89	38.77
CCO1*/1N	Holyhead Road	Y	Y(7.2m)	Single	/	33.89	***/***	***/***
CCO3/3N*	Holyhead Road	Y	Y(5.8m)	Single	/	21.18	***/***	***/***
CCO4/5N*	Holyhead Road	Y	Y(6.9m)	Single	/	/	***/***	***/***
HR1	Holyhead Road	Y	Y(0m)	Single	/	***/***	***/***	***/***
BH1	Ball Hill	Y	Y(5.2m)	Single	100%	**40.16**	36.32	38.77
BH2a	Ball Hill	Y	Y(0m)	Single	83%	**45.81**	44.34	***46.69***
BH4	Ball Hill	Y	Y(3.5m)	Single	100%	**41.05**	39.58	43.15
BH6i	Ball Hill	Y	Y(1m)	Triplicate	/	**44.71**	***/***	***/***

Site ID	Location	Within AQMA?	Relevant public exposure? Y/N	Single/ Triplicate?	Data Capture 2010 %	2010 Annual Mean Bias adjusted distance corrected to façade where applicable (µg/m3)	Annual Mean Concentrations (µg/m^3)	
							2009	2008
BH6ii	Ball Hill	Y	Y(1m)	Triplicate	100%	**47.86**	41.76	***45.12***
BH6iii	Ball Hill	Y	Y(1m)	Triplicate	/	**/**	**/**	**/**
BH9	Ball Hill	Y	Y(2m)	Single	100%	29.02	28.50	/
BH10	Ball Hill	Y	Y(2m)	Triplicate	100%	**43.88**	**40.54**	**36.68**
BH11	Ball Hill	Y	Y(2m)	Triplicate	100%	**43.39**	38.70	*35.43*
BH12	Ball Hill	Y	Y(2m)	Triplicate	100%	**41.84**	39.97	36.73
BGH1	City Centre	Y	Y(0m)	Single	100%	38.34	33.16	*38.05*
BUR2i	City Centre	Y	Y(7.7m)	Single	/	/	33.34	/
BUR4i	City Centre	Y	Y(2m)	Triplicate	92%	39.14	28.58	/
BUR4ii	City Centre	Y	Y(2m)	Triplicate	100%	37.01	31.42	/
BUR4iii	City Centre	Y	Y(2m)	Triplicate	92%	35.00	30.00	/
BUR6	City Centre	Y	Y(1.8m)	Single	/	**/**	36.00	/
HS1	City Centre	Y	Y(24.6m)	Single	92%	**43.06**	**53.95**	**39.61**
HS2	City Centre	Y	Y(2m)	Single	100%	33.58	32.59	32.75
TS1	City Centre	Y	Y(3m)	Single	100%	**50.68**	**47.51**	**48.39**
TS2	City Centre	Y	Y(3.7m)	Single	83%	**48.38**	**47.41**	**48.06**
CL1	City Centre	Y	Y(0m)	Single	100%	32.83	31.79	*33.35*
FS1	City Centre	Y	Y(4.9m)	Single	92%	**57.07**	**56.72**	**51.96**
CR4	City Centre	Y	Y(0m)	Triplicate	100%	39.72	37.21	39.49
CR4a	City Centre	Y	Y(0m)	Triplicate	100%	37.61	36.63	41.90
CR4b	City Centre	Y	Y(0m)	Triplicate	/	/	**/**	**/**
LON4	Tollbar End	Y	Y(26.3m)	Triplicate	92%	29.96	30.53	35.56
LON5	Tollbar End	Y	Y(26.3m)	Triplicate	92%	30.00	31.17	36.52
LON6	Tollbar End	Y	Y(26.3m)	Triplicate	92%	30.12	31.01	35.64
LON7i	Tollbar End	Y	Y(0m)	Single	100%	32.99	33.31	44.41
LON7ii	Tollbar End	Y	Y(0m)	Single	100%	27.65	26.13	37.17
LON8a	Tollbar End	Y	Y(0m)	Single	100%	26.51	27.40	36.86
LON12	London Road	Y	Y(0m)	Single	92%	38.34	39.40	42.42

Site ID	Location	Within AQMA?	Relevant public exposure? Y/N	Single/ Triplicate?	Data Capture 2010 %	2010 Annual Mean Bias adjusted distance corrected to façade where applicable (µg/m3)	Annual Mean Concentrations (µg/m^3)	
							2009	2008
LON13	London Road	Y	Y (0m)	Single	/	/	***/***	***/***
STL1	Tollbar End	Y	Y(17.1m)	Triplicate	83%	31.52	32.84	33.29
STL2	Tollbar End	Y	Y(17.1m)	Triplicate	83%	31.11	35.61	32.29
STL3	Tollbar End	Y	Y(17.1m)	Triplicate	/	/	***/***	***/***
SE1	Spon End	Y	Y(0m)	Triplicate	100%	37.86	35.62	39.91
SE1d	Spon End	Y	Y(0m)	Triplicate	92%	**41.53**	38.86	37.85
SE1dd	Spon End	Y	Y(0m)	Triplicate	/	/	***/***	***/***
SE3	Spon End	Y	Y(0m)	Single	100%	36.81	35.16	40.30
QAV01	Queensland Avenue	Y	Y(0m)	Triplicate	100%	**41.05**	38.29	45.61
QAV01d	Queensland Avenue	Y	Y(0m)	Triplicate	92%	**41.49**	38.91	42.70
QAV01dd	Queensland Avenue	Y	Y(0m)	Triplicate	/	/	***/***	***/***
QAV6	Queensland Avenue	Y	Y(0m)	Triplicate	83%	25.84	25.74	33.99
QAV7	Queensland Avenue	Y	Y(10.8m)	Triplicate	100%	26.13	27.23	30.73
QAV8	Queensland Avenue	Y	Y(10.8m)	Triplicate	100%	26.19	26.17	29.91
QAV12	Queensland Avenue	Y	Y(0.7m)	Single	100%	37.90	**43.33**	**39.74**
QAV13	Queensland Avenue	Y	Y(0m)	Single	92%	37.15	38.84	37.85
R1	Foleshill Road	Y	Y(13.2m)	Single	100%	29.37	29.76	*31.86*
R2	Foleshill Road	Y	Y(13.2m)	Single	92%	29.92	29.20	31.50
R3	Foleshill Road	Y	Y(13.2m)	Single	100%	29.32	29.38	31.94
R4	Foleshill Road	Y	Y(0m)	Single	100%	36.77	32.95	39.13
R5	Foleshill Road	Y	Y(0m)	Single	75%	**42.15**	**43.78**	**46.03**
R6	Foleshill Road	Y	Y(0m)	Triplicate	92%	**48.98**	**48.91**	**53.08**
R6a	Foleshill Road	Y	Y(0m)	Triplicate	100%	**48.30**	**46.30**	**50.04**
R6b	Foleshill Road	Y	Y(0m)	Triplicate	/	/	***/***	***/***
R8	Foleshill Road	Y	Y(0m)	Single	75%	38.30	47.69	***38.42***
R9	Foleshill Road	Y	Y(4.5m)	Single	75%	34.63	36.88	*38.95*
LR1	Longford Road	Y	Y(0m)	Single	92%	**42.85**	**44.92**	**45.34**
LR2	Longford Road	Y	Y(0m)	Single	75%	**42.60**	**41.56**	**43.33**
LR3	Longford Road	Y	Y(0m)	Single	83%	**40.63**	34.72	*41.93*

Site ID	Location	Within AQMA?	Relevant public exposure? Y/N	Single/ Triplicate?	Data Capture 2010 %	2010 Annual Mean Bias adjusted distance corrected to façade where applicable (µg/m3)	Annual Mean Concentrations (µg/m^3)	
							2009	2008
LP1	Longford Park Urban BG	Y	N/A	Single	/	/	***/***	***/***
BR1	Longford Road	Y	Y(0m)	Single	100%	37.23	35.62	41.53
HL1	Holbrook Lane	Y	Y(0m)	Single	100%	37.98	41.91	***40.89***
BRN2	Burnaby Road	Y	Y(0m)	Triplicate	92%	36.47	37.01	36.49
BRN2a	Burnaby Road	Y	Y(0m)	Triplicate	100%	36.39	35.78	38.52
BRN2b	Burnaby Road	Y	Y(0m)	Triplicate	/	/	***/***	***/***
BA1	Beake Avenue/Radford Road	Y	Y(7.5m)	Triplicate	83%	34.89	37.65	*34.01*
BA1d	Beake Avenue/Radford Road	Y	Y(7.5m)	Triplicate	100%	36.30	36.47	35.31
BA1dd	Beake Avenue/Radford Road	Y	Y(7.5m)	Triplicate	/	/	***/***	***/***
SS1	Stoney Stanton Road	Y	Y(0m)	Single	100%	38.39	34.79	40.32
SS2	Stoney Stanton Road	Y	Y(0m)	Single	100%	38.76	38.46	*39.79*
SS3	Stoney Stanton Road	Y	Y(0m)	Single	92%	37.74	36.61	40.35
SS5	Stoney Stanton Road	Y	Y(0m)	Single	83%	**40.06**	38.36	42.82
AUN1	Memorial Park	Y	N/A	Triplicate	100%	21.82	17.24	*43.32*
AUN2	Memorial Park	Y	N/A	Triplicate	100%	20.46	16.96	*46.68*
AUN3	Memorial Park	Y	N/A	Triplicate	100%	21.72	17.16	*44.61*
EH1	Earlsdon High Street	Y	Y(0m)	Single	100%	37.23	***/***	***/***
EH2	Earlsdon High Street	Y	Y(3m)	Single	100%	34.96	***/***	***/***
EH3	Earlsdon High Street	Y	Y(0m)	Single	83%	30.02	***/***	***/***
EH4	Earlsdon High Street	Y	Y(3m)	Single	100%	32.90	***/***	***/***
BELL1	Bell Green	Y	Y (0m)	Single	/	***/***	***/***	***/***
BELL2	Bell Green	Y	Y (0m)	Single	/	/	***/***	***/***
WL1	Woodway Lane (M6)	Y	Y (0m)	Single	/	***/***	***/***	***/***
CH1	Jubilee Crescent	Y	Y (0m)	Single	/	/	***/***	***/***
FGS1	Far Gosford Street	Y	Y (0m)	Single	/	***/***	***/***	***/***
FGS2	Far Gosford Street	Y	Y (0m)	Single	/	/	***/***	***/***
FGS3	Far Gosford Street	Y	Y (0m)	Single	/	***/***	***/***	***/***
GR1	Gulson Road	Y	Y(0m)	Single	/	/	***/***	***/***

2.2.2 PM_{10}

Three of Coventry's five continuous monitoring stations monitor for PM_{10}. The Foleshill Road and Queensland Avenue stations monitor PM_{10} using a Tapered Element Oscillating Microbalance (TEOM), whereas the Tollbar End station uses a TEOM with Filter Dynamics Measurement System (FDMS) which measures the volatile component of atmospheric particles.

Due to data capture issues and technical problems with the analysers, we have been unable to produce any robust data within the preferred data capture limits (>75%) and therefore we are unable to report any concentrations for either the annual mean or the 24 hour mean for PM_{10}. However, based on local knowledge of traffic flows and topography, it is unlikely that either the annual or 24 hour mean for PM_{10} has been exceeded.

2.2.3 Sulphur Dioxide

Sulphur dioxide is not currently monitored by Coventry City Council.

2.2.4 Benzene

Benzene is monitored by DEFRA as part of the Non-Automatic Hydrocarbon Network at Coventry's Memorial Park. This location is not representative of public exposure. The annual mean for benzene in 2010 was 0.6 µg/m^3 and is therefore significantly below the annual mean objective of 5 µg/m^3.

2.2.5 Summary of Compliance with AQS Objectives

Coventry City Council has examined the results from monitoring within the city area. The Council declared a city wide AQMA for NO_2 in November 2009. Consequently there are no locations outside of the AQMA exceeding the objectives at relevant locations and no need to proceed to a Detailed Assessment.

3 New Local Developments

3.1 Road Traffic Sources

Coventry City Council has carried out an evaluation of the following road traffic pollution sources:

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

The Council can confirm that there have been no significant developments in any of these areas since the completion of the last progress report.

3.2 Other Transport Sources

Coventry Airport stopped running passenger flights in December 2009, but continues to operate cargo services. This may have a benefit on local air quality. However, there are talks of reinstating passenger services from Coventry Airport, which may be something to consider in the next round of review and assessment.

3.3 Industrial Sources

Coventry City Council has carried out an evaluation of the following industrial sources:

- Industrial installations: new or proposed installations for which an air quality assessment has been carried out.
- Industrial installations: existing installations where emissions have increased substantially or new relevant exposure has been introduced.
- Industrial installations: new or significantly changed installations with no previous air quality assessment.
- Major fuel storage depots storing petrol.
- Petrol stations.
- Poultry farms.

The Council can confirm that there have been no significant developments in any of these areas since the completion of the last progress report.

3.4 Commercial and Domestic Sources

There were two new biomass installations in Coventry in 2010; at Stivichall School and Stanton Bridge School. These will be considered in the next USA.

Coventry City Council has identified the following new or previously unidentified local developments which may impact on air quality in the Local Authority area.

Stivichall School biomass boiler
Stanton Bridge School biomass boiler
Airport closed for passenger flights

These will be taken into consideration in the next Updating and Screening Assessment, scheduled for 2012.

4 Local Transport Plans and Strategies

The latest Local Transport Plan for the West Midlands, LTP3, has been released in 2011; therefore any air quality strategies within the new LTP will not have affected 2010 concentrations. LTP3 will be discussed in more detail during the next round of review and assessment.

5 Implementation of Action Plans

Progress towards Coventry City Council's first Action Plan of 2007 is shown in **Error! Reference source not found.**. After designation of a city-wide AQMA in 2009, an Action Plan was due to be completed in 2010. However, due to our data monitoring issues we have had difficulty in obtaining enough robust data to conduct a detailed assessment. However, further modelling work can be undertaken using data from our non-automatic sites to establish relevant exposure, and whether this will inform the future Action Plan required. A formal extension for submission of this Action Plan has been given by DEFRA, until 30th June 2012. The new Action Plan will focus on measurable objectives. A summary of progress with the 2007 Action Plan is given below.

In **Error! Reference source not found.** actions highlighted in green have been completed, those in amber are ongoing and red not completed.

Table 5.1 Action Plan Progress

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
1.1	**Pool Meadow**	Make greater use of Pool Meadow Bus Station by creating a two-way bus and bicycle only route across the currently pedestrianised areas under the Frank Whittle Arch between Hale Street and Fairfax Street.	Coventry City Council - City Development Directorate – project Champions Office	Buses now able to access bus station under Whittle Arch		**Completed**	Links into other actions relating to re-design of roads in city centre AQMA
1.2	**Relocation of Taxi ranking**	Relocating taxi rank to remove source of emissions in congested street canyon The Burges in city centre AQMA	Coventry City Council **-** Major Projects Dept.	Taxi rank now relocated to Trinity Street		**Completed**	Links into other actions relating to re-design of roads in city centre AQMA

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
1.3	**Feasibility study into long-terms options for cutting congestion**	West Midlands study looking at road charging schemes to reduce congestion based on Transport Innovation Funding (TIF)	West Midlands Metropolitan Authorities, external agencies and Centro	No Transport Innovation Fund (TIF) bid made by the West Midlands in 2008		**None**	Now Links to Local Transport Plan 3 objectives – • Smarter Management (of the road network and more coordinated working between planners and transport operators) • Smarter Choices (TravelWise initiatives to discourage driver-only car trips) • Smarter Investment (making best use of the very limited funds we are likely to receive for the foreseeable future
2.1	**Bus Showcase Route**	A showcase route along the Walsgrave / Ansty Road corridor covered by the Ball Hill AQMA – reduction in congestion	Coventry City Council City Development Directorate (Transport Delivery Unit)	Improvements to bus lanes, bus shelters, passenger information parking restrictions completed		**Completed**	See action 5.1
2.2	**Park and Ride**	Investigation of further sites for east and west park and ride services to complement the existing north and south park and ride sites.	Coventry City Council City Development Directorate (Transport Delivery Unit)	Suitable locations not identified – looking at improving existing park and ride facilities in North of city		**Ongoing investigation of suitable sites**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
2.3	**On-street parking enforcement**	Decriminalised parking powers will be used by Coventry City Council to reduce illegal parking which restricts traffic flows	Coventry City Council City Services (Network Management)	Civil Enforcement Officers in post – approx 30 thousand penalty charge notices issued in 2008/9 across the city		**Completed with ongoing enforcement**	
2.4	**On-street parking management**	Revised layouts will be implemented by Coventry City Council to restrict the potential for obstructive parking	Coventry City Council City Development Directorate (Transport Delivery Unit)	Locations and orientation of parking bays has been changed to reduce double parking and resulting congestion in Ball Hill AQMA		**Completed**	
2.5	**Traffic Signal Control**	Improved signalisation of the Ball Hill/Clay Lane junction to ease the passage of vehicles and reduce delay and congestion – Ball Hill AQMA	CCC City Development Directorate (Transport Delivery Unit)	Completed		**Completed**	
2.6	**Junction layout**	Restriction of some turning movements on Clay Lane / Brays Lane to ease traffic flows and reduce delays and congestion – Ball Hill AQMA	Coventry City Council City Development Directorate (Transport Delivery Unit)	Completed but junction not working effectively and needs to be revisited		**Completed but also ongoing – further work currently limited by funding**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
2.7	**Off Street parking**	Review off street parking tariffs in the Ball Hill AQMA to encourage use of public car off street park	Coventry City Council City Development Directorate (Transport Delivery Unit)	Redesign of existing car park and signage has increased usage in addition to more user friendly charging scheme		**Completed**	
2.8	**Re-Routing traffic**	Re-directing traffic from the M6/M69 down the A444 or wider roads with less residential exposure than the Ball Hill corridor and AQMA	Coventry City Council City Services (Network Management)	Signage completed for out of city direction – inwards needs reviewing with Highways Agency		**Outward signage completed – review need for inward signage to be changed with Highways Agency**	
3.1	**Bus Showcase route**	Bus Showcase Corridor along Hearsall Lane on edge of Queensland Avenue AQMA	Coventry City Council City Services (Network Management)	Not completed – funding not secured		**None**	
3.2	**Junction improvement at Queensland Avenue/ Allesley Old Road**	Junction improvement to reduce congestion and emissions in AQMA	Coventry City Council City Services (Network Management)	Not completed – funding not secured. Maybe revisit when look at use of urban traffic management system to improve traffic flows – this ongoing in 2010		**Ongoing – will be addressed when funding available**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
4.1	**Enforcement of idling vehicles legislation**	Reduction of emissions from idling traffic in AQMA's	Coventry City Council City Services Directorate (Environmental Services)	Feasibility study underway looking at legal powers and what other local authorities are doing – politically sensitive so not implemented as yet. More work ongoing		**Delayed due to resource issues. Will be reconsidered in 2012**	
4.2	**Improve the Council fleet**	Look for opportunities to purchase/use greener vehicles with lower emissions	Coventry City Council	Fundamental Service Review ("Moving On") ongoing looking at vehicle fleet management across the Council. First phase underway looking at the Council's non-passenger fleet such as refuse trucks. Also linked to savings targets so not just air quality driven project	The Council has purchased 45 electric vehicles as part of an ongoing program to replace its fleet vehicles. These will be in use from September 2010	**End 2011**	
4.3	**Expanding a city network of low emission vehicles**	Continue to pursue the current research and development projects aimed at encouraging low emission vehicles	Coventry City Council- City Development Directorate & City Services	Network of charging points installed by EON as part of Cable Project between Birmingham and Coventry City Council's		**Ongoing**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
4.4	**Improve bus emissions**	Introduce buses with less emissions	Centro and large fleet operators in Coventry – e.g. Travel Coventry, Stage Coach and Mike Decourcey Travel Ltd	Introduction of electric buses in Coventry on a trial basis - De'Courcy bus company	Ongoing work to agree partnership between Cento, Coventry City Council and De'Courcy	**End March 2011**	
4.5	**Improvements in taxi fleet**	Introduce newer vehicles with less emissions	Coventry City Council City Development Directorate (Taxi licensing)	Coventry age policy for taxi renewal is 10 years, less than the 15 years in other cities such as London. Any Hackneys over 5 years old are checked every 6 months for emissions		**Ongoing enforcement of age policy**	
5.1	**Prime Lines**	The development of bus showcase corridors across the city to increase modal shift to public transport. Improvements include new shelters, buses, bus lanes and real time information at bus stops	Coventry City Council City Development Directorate (Transport Delivery Unit	9 corridors completed Looking at funding for 2 other Primeline routes		**Completed**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
5.2	**Bus lane enforcement**	Reducing/preventing use of lanes by vehicles other than buses, taxis and bikes	Coventry City Council City Development Directorate (Transport Delivery Unit)	Parking attendants have been recruited to enforce bus lane provisions. Surveillance cameras now in use and have been issuing warning letters to offenders. More active enforcement from end September 2010 with fines being issues		**Ongoing**	
5.3	**Bus Rapid Transit**	High frequency limited stop bus service similar to tram linking large developments in city	Coventry City Council City Development Directorate (Transport Delivery Unit)	Funding not secured so not completed		**None**	
5.4	**Coventry Station Transport Hub**	Mixed use development around the railway station that will address key transport issues such as pedestrian access to the city centre, provision for Prime Lines and Coventry Rapid Transit, and improved bus/rail interchange	Coventry City Council City Development Directorate/ Private Development Partner	"Friargate" development at planning stages. Originally planned for implementation by 2012 but now possible phasing envisaged to generate money to continue development		**Completion by end of 2014**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
5.5	**Canley/ Western access**	Improving access to Warwick University corridor/South of city as result of large developments	Coventry City Council, external agencies and Centro	Funding not secured so not completed		**None**	
5.6	**Park and Ride**	Investigation of further sites for east and west park and ride services to complement the existing north and south park and ride sites.	Coventry City Council City Development Directorate (Transport Delivery Unit)	Suitable locations not identified – looking at improving existing park and ride facilities in North of city		**Ongoing**	**See action 2.2**
6.1	**Red Routes**	Provide a network of Red Routes that introduce strict controls on vehicle stopping, parking and loading, and are designed to improve the flow of traffic, together with local environmental improvement works.	CCC City Development Directorate (Transport Delivery Unit)	Work completed as part of Primeline works.		**Completed**	**See action 5.1 - Primelines**

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
6.2	**Urban Traffic Control (UTC)**	Upgrade the UTMC system as part of Prime Lines which should improve the efficiently of the highway network (i.e. smooth flow).	Coventry City Council City Development Directorate (Transport Delivery Unit)	Upgrade completed. Ongoing review to use system more effectively		**Completed**	
6.3	**Route Resigning**	Upgrade road direction signs along all major radial routes in the City (e.g. signs to the ring road and car parks) to decrease unnecessary mileage, improve journey planning and reduce emissions.	Coventry City Council City Development Directorate (Transport Planning)	Completed		**Completed**	
6.4	**Variable Message Signs (VMS)**	Use of VMS to show a comparison of bus speeds against traffic speeds and also real time air quality information to help persuade people to use public transport and alternative routes	Coventry City Council City Development Directorate	4 VMS's in use around city particularly for events at Ricoh Arena to direct traffic away from close residential areas and to allocated parking		**Ongoing review**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
6.5	**General Highway Improvements**	Traffic management schemes to deliver minor highway improvement works such as road markings, sign and junction improvements	Coventry City Council City Development Directorate (Transport Planning)	Ongoing improvements		**Ongoing**	
7.1	**Cycling**	Promote cycling as a lower polluting means of transport including new cycle lanes as part of the National Cycle Network and the local cycle network, and cycle parking	Coventry City Council City Development Directorate (Transport Planning)	Ongoing promotion. 2 cycle paths built at Broad Lane and Allard Way		**Ongoing**	
7.2	**Walking**	Promote walking as a lower polluting means of transport.	Coventry City Council City Development Directorate (Transport Planning)	Ongoing promotion. Program of removing barriers to walking routes for disabled people such as improving crossing points		**Ongoing**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
7.3	**Travel Plans**	Require green travel plans with all major planning applications as well as continue to work with schools on school-based travel plans	Coventry City Council City Development Directorate (Planning and Strategic Transportation)	Ongoing requirement through planning process and section 106 agreements		**Ongoing**	
7.4	**Safer Routes to School initiative**	Encouraging school children and staff to use more sustainable forms of travel to get to school and back, through safer routes for walking and cycling	Coventry City Council City Development Directorate (Strategic Planning)	11 primary schools have "walking buses". Promotion of walking through Walk to School Week in May 2010		**Ongoing**	
7.5	**Safer Routes to Work initiative**	Encouraging employees in the city to use more sustainable forms of travel to get to school and back, through safer routes for walking and cycling	Coventry City Council City Development Directorate (Strategic Planning)	Council Healthy Walks Team ongoing promotion. Participation in Walk to Work week in April 2010		**Ongoing**	**See action 7.3**

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
8.1	**Planning Supplementary Document on air quality**	Ensure consistency in dealing with planning applications and that any developments likely to have an impact on air quality are dealt with in an appropriate matter , in the long term bringing about significant improvements in air quality	Coventry City Council City Development Directorate (Strategic Planning) and Environmental Services	Being discussed as a regional policy/document at West Midlands level		**Ongoing**	
8.2	**Energy Efficiency measures**	Continue programme of energy efficiency improvements in the domestic sector.	Coventry City Council Housing and Policy Services and City Development Directorate	Ongoing program to provide energy efficiency heating and insulation through grant assistance. Signposting customers to Energy Savings Trust.	Participation in Switch It Off Campaign in November 2009	**Ongoing**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
8.3	**Control of Industrial emissions**	Active regulation its processes under the Pollution Prevention and Control Act 2000. In addition the Council will survey its district for further premises requiring regulation under the above legislation	Coventry City Council City Services Directorate (Environmental Protection)	Ongoing inspection program to assess compliance with permit conditions. Enforcement policy in place to deal with permit breaches		**Ongoing**	
8.4	**Emissions from domestic sources**	Enforce the provisions of the Clean Air Act 1993 as applied to stack height provision and dark smoke offences	Coventry City Council City Services Directorate (Environmental Protection)	Ongoing advice and enforcement		**Ongoing**	
8.5	**Control of Bonfires**	Enforce the provisions of the Clean Air Act 1993 and part III of the Environmental Protection Act 1990 regarding emissions from bonfires	Coventry City Council City Services Directorate (Environmental Protection)	Ongoing advice and enforcement		**Ongoing**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
8.6	**ISO14001**	Coventry City Council has adopted ISO14001 within its Public Protection Division with various commitments relating to vehicle and building emissions	Coventry City Council City Services Directorate	ISO1400 standard still in place. Regular internal and external audits to ensure system followed		**Ongoing**	
8.7	**Public Information**	Raise awareness of Air Quality through the Light-Art-Installation on the top of Coventry Point	Coventry City Council City Development Directorate (Regeneration Services)	Implemented		**Ongoing**	
8.8	**Public Awareness**	Raise public awareness of air pollution through newsletters and displays around the city	Coventry City Council City Services Directorate (Environmental Protection)	Ongoing through use of website. City wide public consultation on city wide AQMA in 2009		**Ongoing**	

No.	Measure	Focus	Lead authority	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
8.9	**Sustainable Education Development**	Education on sustainability to schools in Coventry. This can cover air pollution issues, as well as providing info about the cities' environment as a whole	CCC City Services Directorate	Sustainable Schools Steering Group run projects based on framework of areas including air quality		**Ongoing**	
8.10	**Planning applications**	Coventry City Council's development plan	Coventry City Council City Development Directorate (Planning and Transportation) and Environmental Health	Ongoing consultation and imposition of planning conditions where applications are likely to have an adverse effect on air quality		**Ongoing**	

6 Conclusions and Proposed Actions

6.1 Conclusions from New Monitoring Data

Monitoring data for 2010 has identified that the following areas are in exceedence of the air quality standard:

- Ball Hill, Walsgrave Road
- Hales Street, Fairfax Street and Trinity Street in the City Centre
- Queensland Avenue
- Foleshill Road
- Longford Road

All of these locations are within the city-wide AQMA and therefore the AQMA will not be revoked.

Generally, the majority of locations have decreased in concentration since 2008. 84% of sites have a lower concentration of NO_2 since 2008. When compared to 2009 monitoring results, however, only 53% of locations have decreased in concentrations of NO_2, which suggests that between 2009 and 2010 concentrations at some locations are increasing. However, the general trend is for decreasing concentrations across the city. This may be due to increasing improvements in vehicle technologies or the effects of the current recession and the rising cost of motoring encouraging people to use alternative forms of transport.

PM_{10} monitoring was not reliable in 2010 and no reliable data is available, however Coventry has never been in exceedence of the air quality standard for PM_{10} and therefore it is expected that the same would have applied in 2010. Coventry's AQMA was declared for NO_2 only, therefore there is no PM_{10} exceedence in Coventry.

Further assessment of the areas of exceedence will be undertaken to establish relevant exposure and inform action planning.

6.2 Conclusions relating to New Local Developments

There have been few changes in local developments in Coventry to impact air quality. The closure of the airport to passenger flights is expected to have made an improvement in air quality. These changes will be addressed in the next Updating and Screening Assessment.

6.3 Proposed Actions

Coventry City Council are currently working on the Air Quality Action Plan to accompany the designation of a city-wide AQMA in late 2009. Due to data management issues it has been difficult to begin modelling work to assess the current state of air quality in our problem areas and predict the benefits of any traffic or fleet management schemes. However, plans have been put in place to improve

this situation and work can now begin on the Further Assessment and required Action Plan, in line with the extensions agreed with DEFRA.

7 References

National Diffusion Tube Bias Adjustment Factor Spreadsheet, http://laqm.defra.gov.uk/documents/Diffusion_Tube_Bias_Factors-v09_11.xls, version 04/11.

Local Air Quality Management Technical Guidance LAQM.TG(09), http://www.defra.gov.uk/publications/files/pb13081-tech-guidance-laqm-tg-09-090218.pdf, February 2009.

WASP – Annual Performance Criteria for NO2 Diffusion Tubes used in Local Air Quality Management (LAQM), 2008 onwards, and Summary of Laboratory Performance in Rounds 104-108, http://laqm.defra.gov.uk/documents/Summary_of_Laboratory_Performance_in_WASP_R104-108.pdf , September 2010.

8 Appendices

Appendix A: Quality Assurance/Quality Control of data

Diffusion Tube Bias Adjustment Factors

The bias adjustment for 2009 was taken from the National Diffusion Tube Bias Adjustment Factor spreadsheet, as due to issues with automatic monitoring data it was not possible to obtain a local bias adjustment factor. There were 33 studies that contributed and therefore the adjustment factor of 0.9 is thought to be representative.

Spreadsheet Version Number: 03/10

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies

This spreadsheet will be updated in late September 2010 on the R&A website

Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods

Whenever presenting adjusted data, you should state the adjustment factor used

This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

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Step 1:	Step 2:	Step 3:	Step 4:
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is not shown, we have no data for this method at this laboratory	If a year is not shown, we have no data[2]	If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Review and Assessment Helpdesk 0117 328 3668 aqm-review@uwe.ac.uk.

Analysed By[1]	Method (To undo your selection, choose (All) from the pop-up list)	Year[5] (To undo your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m3)	Automatic Monitor Mean Conc. (Cm) (µg/m3)	Bias (B)	Tube Precision[6]	Bias Adjustment Factor (A) (Cm/Dm)
Gradko	20% TEA in Water	2009	UB	Sandwell MBC	12	29	27	5.9%	S	**0.94**
Gradko	20% TEA in Water	2009	R	Sandwell MBC	11	42	40	5.8%	S	**0.95**
Gradko	20% TEA in Water	2009	R	Rushmoor BC	10	35	33	6.2%	G	**0.94**
Gradko	20% TEA in Water	2009	K	AEA Tech Intercomparison	12	121	107	12.6%	G	**0.89**
Gradko	20% TEA in Water	2009	R	Cheshire West & Chester Council	11	41	37	10.0%	G	**0.91**
Gradko	20% TEA in Water	2009		**Overall Factor[3] (33 studies)**				**Use**		**0.90**

Figure 8.1. A screenshot of the National Diffusion Tube Bias Adjustment Factor spreadsheet, showing the laboratory, preparation method and factor used.

QA/QC of automatic monitoring

Each NO_X analyser is operated according to the manufacturers' instructions. Coventry City Council personnel carry out calibration every two weeks. Certified Calibration Gas is supplied by Air Liquide and this is used to obtain a span value for each analyser during the calibration. The data is collected and scaled, and any instrumental drift is corrected during data processing. The filter is changed after every calibration. Engineers from Casella service the analysers at six monthly intervals.

A visual inspection of the TEOM analyser is carried out fortnightly, and the filter changed as required during routine site visits.

All site visits are documented to ensure any problems are recorded and any works noted. All calibrations are recorded.

QA/QC of diffusion tube monitoring

The test laboratory currently used by Coventry City Council is Gradko International Ltd. Gradko participates in the Workplace Analysis for proficiency (WASP) scheme managed by the Health and Safety Laboratory.

For 2010 Gradko laboratory has demonstrated good performance with regard to WASP performance criteria.

Appendix B: Monthly NO_2 Diffusion Tube Results 2010

Raw results	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Raw Annual Mean NO2 (µg/m3)	Bias Adjusted Annual Mean NO2 (µg/m3)	Data Capture %
6Nd	47.76	59.78	53.72	55.85	36.18	43.20	35.42	39.39	47.04	46.90	46.55	50.41	46.85	43.10	100%
6Ndd	/	/	/	/	/	/	/	/	/	/	/	48.55	48.55	44.67	8%
6N*	47.76	59.78	53.72	55.85	36.18	43.20	35.42	39.39	47.04	46.90	46.55	50.41	46.85	43.26	100%
CC01*/1N	57.15	58.51	49.59	48.71	39.46	45.00	31.78	30.18	52.31	43.24	38.92	/	44.99	41.39	92%
CC03/3N*	33.60	37.40	23.34	/	/	15.11	13.09	16.42	22.48	28.36	32.68	/	23.03	21.18	92%
CC04/5N*	32.52	37.53	24.33	23.80	17.44	15.85	14.35	16.69	20.43	24.35	26.01	/	24.72	22.74	75%
HR1	/	/	/	/	/	/	/	/	/	/	/	66.95	66.95	61.60	8%
BH1	53.69	56.20	44.89	45.47	34.63	37.16	31.95	39.60	41.32	39.43	47.61	51.87	43.65	40.16	100%
BH2a	54.75	62.26	46.12	54.28	41.00	45.68	34.63	/	/	47.52	49.89	61.79	49.79	45.81	83%
BH4	59.25	61.99	58.43	56.34	47.86	45.56	36.76	41.24	49.45	57.47	64.56	69.64	54.05	49.72	100%
BH6i	59.09	58.82	44.46	52.43	52.71	52.82	38.03	46.08	47.64	54.25	49.61	73.05	52.42	48.22	100%
BH6ii	56.05	62.91	59.35	53.34	62.44	47.38	46.51	44.76	47.87	57.07	71.48	66.95	56.34	51.84	100%
BH6iii	/	/	/	/	/	/	/	/	/	/	/	66.89	66.89	61.54	8%
BH9	51.40	51.62	43.02	43.02	37.64	36.22	31.70	39.65	41.60	44.53	45.61	66.25	44.35	40.81	100%
BH10	59.47	53.95	44.89	53.89	52.35	40.60	36.17	37.85	43.46	41.41	49.80	58.56	47.70	43.88	100%
BH11	48.13	55.19	46.54	48.08	50.58	41.15	27.97	36.37	45.62	46.30	55.78	64.27	47.17	43.39	100%
BH12	47.76	54.60	47.22	48.47	46.17	46.85	31.17	37.60	38.57	44.56	45.43	57.31	45.48	41.84	100%
BGH1	46.96	43.90	45.86	44.24	45.68	34.79	28.34	40.52	39.79	42.53	43.87	43.65	41.68	38.34	100%
BUR2i	/	/	/	/	28.65	24.53	24.31	28.15	28.68	/	/	/	26.86	24.72	42%
BUR4i	50.01	51.83	38.98	33.88	/	58.68	22.90	33.05	44.25	35.54	41.85	57.03	42.54	39.14	92%
BUR4ii	42.73	49.90	37.58	39.46	40.36	34.75	30.28	36.19	33.80	39.79	40.30	57.55	40.22	37.01	100%
BUR4iii	/	58.63	34.57	33.88	36.28	34.85	27.82	32.32	30.49	35.90	44.26	49.49	38.04	35.00	92%
BUR6	54.57	54.44	49.13	/	/	/	/	35.43	42.72	40.64	44.94	47.11	46.12	42.43	67%
HS1	69.15	57.21	44.84	43.65	/	38.53	28.32	34.59	42.30	51.85	47.48	56.96	46.81	43.06	92%
HS2	43.17	55.42	37.84	43.65	31.22	28.15	22.51	26.78	26.16	37.24	42.90	42.97	36.50	33.58	100%
TS1	57.17	64.40	55.80	55.75	52.78	46.74	38.57	47.53	55.71	53.85	59.43	73.29	55.09	50.68	100%
TS2	61.78	54.00	59.98	51.08	50.87	42.91	/	/	46.95	55.17	54.05	49.08	52.59	48.38	83%

Raw results	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Raw Annual Mean NO2 (µg/m3)	Bias Adjusted Annual Mean NO2 (µg/m3)	Data Capture %
CL1	38.19	38.98	37.88	35.03	34.07	33.05	23.95	28.50	27.57	34.20	39.43	57.36	35.68	32.83	100%
FS1	/	81.67	67.61	71.64	56.67	53.91	52.44	63.20	57.36	69.15	54.82	53.88	62.03	57.07	92%
CR4	41.50	47.93	45.35	42.42	39.10	32.58	32.56	34.08	42.40	56.21	47.73	56.18	43.17	39.72	100%
CR4a	43.70	55.04	42.00	43.41	42.01	32.33	27.18	36.07	33.07	32.13	44.80	58.80	40.88	37.61	100%
CR4b	/	/	/	/	/	/	/	/	/	/	/	54.01	54.01	49.69	8%
LON4	53.87	61.32	63.06	53.18	41.34	42.57	45.71	50.59	38.01	55.30	51.80	/	50.61	46.57	92%
LON5	53.45	55.37	56.40	54.40	37.87	41.71	37.19	51.54	45.98	58.90	65.30	/	50.74	46.68	92%
LON6	59.59	60.25	57.33	55.00	43.19	54.77	34.71	46.38	52.16	/	42.86	55.25	51.04	46.96	92%
LON7i	49.16	43.94	50.76	46.81	36.46	43.73	36.50	51.58	43.44	46.34	46.42	56.86	46.00	42.32	100%
LON7ii	41.21	42.57	44.85	42.50	29.47	35.56	34.40	39.20	41.78	45.08	43.38	40.74	40.06	36.86	100%
LON8a	48.30	40.91	41.54	37.56	29.48	29.05	29.14	39.40	31.49	37.42	39.15	40.15	36.97	34.01	100%
LON12	/	52.28	47.26	42.23	34.20	36.26	33.78	39.19	40.49	38.63	43.27	50.79	41.67	38.34	92%
LON13	/	/	/	/	/	/	/	/	/	/	/	39.97	39.97	36.77	8%
STL1	47.37	56.85	60.15	48.95	31.81	38.43	38.55	/	53.99	47.52	/	51.67	47.53	43.73	83%
STL2	48.65	51.45	59.98	46.69	42.46	41.95	43.49	45.79	52.10	34.26	/	/	46.68	42.95	83%
STL3	/	/	/	/	/	/	/	/	/	/	/	47.09	47.09	43.33	8%
SE1	50.07	45.71	46.84	44.36	39.69	31.26	25.11	33.68	34.56	38.97	55.15	48.39	41.15	37.86	100%
SE1d	46.55	61.04	44.04	45.74	38.87	38.68	/	31.92	35.68	53.91	54.89	45.20	45.14	41.53	92%
SE1dd	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0%
SE3	48.31	47.28	42.81	37.05	36.05	30.28	26.25	27.48	36.19	48.57	41.57	58.32	40.01	36.81	100%
QAV01	65.16	59.24	49.77	47.33	50.55	41.75	36.47	38.41	53.16	41.23	55.70	69.71	50.71	46.65	100%
QAV01d	58.94	67.08	53.59	53.38	38.87	41.07	31.95	/	41.57	57.54	60.00	60.39	51.31	47.20	92%
QAV01dd	/	/	/	/	/	/	/	/	/	/	/	63.30	63.30	58.23	8%
QAV6	39.56	44.26	41.15	39.74	27.49	29.93	27.16	26.20	/	/	42.21	45.44	36.31	33.41	83%
QAV7	44.98	48.00	38.77	37.01	35.04	35.13	24.93	24.35	35.44	30.27	45.09	44.00	36.92	33.96	100%
QAV8	51.97	44.75	40.34	39.74	30.66	26.17	24.36	24.12	34.53	27.85	54.09	45.98	37.05	34.08	100%
QAV12	44.80	52.91	43.74	42.70	38.05	34.75	28.78	27.39	39.21	50.47	45.53	46.02	41.20	37.90	100%
QAV13	/	46.80	44.16	44.40	37.64	36.18	28.34	32.86	35.48	45.52	45.15	47.61	40.38	37.15	92%
R1	44.17	46.90	42.59	39.54	36.18	34.68	23.47	31.95	31.02	33.35	41.75	45.55	37.60	34.59	100%
R2	42.75	/	45.95	40.68	32.45	32.17	31.19	30.75	35.43	42.89	46.70	44.40	38.67	35.58	92%
R3	38.59	56.24	38.90	42.23	33.35	31.18	26.80	26.83	27.39	33.71	48.62	46.22	37.50	34.50	100%

Raw results	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Raw Annual Mean NO2 (µg/m3)	Bias Adjusted Annual Mean NO2 (µg/m3)	Data Capture %
R4	44.01	53.22	41.40	47.09	35.92	37.43	25.82	33.34	39.62	31.70	44.56	45.55	39.97	36.77	100%
R5	46.41	61.19	/	/	47.96	41.03	31.90	40.97	50.62	41.71	50.55	/	45.82	42.15	75%
R6	53.40	61.69	54.27	54.76	36.61	48.18	45.40	44.83	/	65.24	54.23	66.97	53.23	48.98	92%
R6a	61.74	55.49	55.63	69.74	42.87	49.06	42.32	41.11	46.33	53.21	49.04	63.40	52.50	48.30	100%
R6b	/	/	/	/	/	/	/	/	/	/	/	55.26	55.26	50.84	8%
R8	44.10	/	/	/	39.08	38.98	34.82	34.30	36.17	41.09	48.95	57.16	41.63	38.30	75%
R9	59.91	/	/	/	39.64	35.99	32.85	35.26	42.61	49.00	37.77	47.80	42.31	38.93	75%
LR1	/	52.84	47.14	47.37	36.18	75.06	32.04	34.88	37.66	46.14	52.16	50.82	46.57	42.85	92%
LR2	50.01	/	/	50.73	37.20	/	48.07	33.62	48.18	49.98	52.73	46.17	46.30	42.60	75%
LR3	50.80	57.48	44.76	46.61	39.75	36.83	29.25	35.33	/	/	47.69	53.09	44.16	40.63	83%
LP1	/	/	/	/	/	/	/	/	/	/	/	41.26	41.26	37.96	8%
BR1	44.58	51.58	45.23	42.86	37.61	40.79	26.39	27.06	38.44	38.59	49.09	43.35	40.46	37.23	100%
HL1	44.80	47.30	43.66	44.99	32.07	38.10	28.70	35.62	43.12	41.46	52.26	43.37	41.29	37.98	100%
BRN2	48.82	44.62	43.70	44.20	37.31	35.24	31.24	31.08	32.65	/	40.50	46.66	39.64	36.47	92%
BRN2a	41.25	50.30	43.78	43.93	37.92	34.07	25.44	28.83	36.83	42.64	49.27	40.44	39.56	36.39	100%
BRN2b	/	/	/	/	/	/	/	/	/	/	/	43.75	43.75	40.25	8%
BA1	53.25	46.47	/	41.79	27.35	34.46	31.39	35.68	/	39.72	42.82	56.95	40.99	37.71	83%
BA1d	50.69	54.25	44.16	46.65	27.35	39.05	32.94	36.14	34.29	47.38	50.20	50.33	42.79	39.36	100%
BA1dd	/	/	/	/	/	/	/	/	/	/	/	47.00	47.00	43.24	8%
SS1	50.45	58.67	46.76	42.38	36.44	34.52	27.32	34.68	34.24	39.53	41.37	54.42	41.73	38.39	100%
SS2	47.69	44.37	50.75	44.48	42.90	28.99	28.11	32.94	40.64	39.56	54.68	50.40	42.13	38.76	100%
SS3	/	59.05	47.48	42.03	36.59	32.23	29.67	29.48	37.92	44.91	40.25	51.66	41.03	37.74	92%
SS5	/	/	48.54	49.66	39.07	38.82	32.10	40.72	35.89	44.76	55.79	50.06	43.54	40.06	83%
AUN1	32.37	34.41	20.99	20.50	19.08	16.24	12.92	15.10	17.38	24.88	37.48	33.25	23.72	21.82	100%
AUN2	28.38	32.71	21.76	21.98	18.43	14.23	11.97	15.42	19.43	22.04	27.23	33.31	22.24	20.46	100%
AUN3	37.00	35.22	21.96	21.05	18.15	14.76	12.05	15.04	18.45	21.77	32.36	35.56	23.61	21.72	100%
EH1	47.12	53.18	41.53	36.93	32.48	32.76	27.08	28.92	37.24	37.32	52.39	58.71	40.47	37.23	100%
EH2	44.72	47.76	43.06	37.56	31.01	28.75	25.75	29.43	35.90	35.83	47.10	49.09	38.00	34.96	100%
EH3	/	/	33.55	33.41	33.43	24.65	21.68	21.70	35.09	32.97	47.02	42.75	32.63	30.02	83%
EH4	46.78	50.20	38.90	37.17	29.93	29.50	22.60	23.21	35.30	33.48	44.67	37.33	35.76	32.90	100%
BELL1	/	/	/	/	/	/	/	/	/	/	/	46.53	46.53	42.81	8%

Raw results	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Raw Annual Mean NO2 (µg/m3)	Bias Adjusted Annual Mean NO2 (µg/m3)	Data Capture %
BELL2	/	/	/	/	/	/	/	/	/	/	/	43.11	43.11	39.66	8%
WL1	/	/	/	/	/	/	/	/	/	/	/	50.91	50.91	46.84	8%
CH1	/	/	/	/	/	/	/	/	/	/	/	39.36	39.36	36.21	8%
FGS1	/	/	/	/	/	/	/	/	/	/	/	49.50	49.50	45.54	8%
FGS2	/	/	/	/	/	/	/	/	/	/	/	43.40	43.40	39.93	8%
FGS3	/	/	/	/	/	/	/	/	/	/	/	45.83	45.83	42.16	8%
GR1	/	/	/	/	/	/	/	/	/	/	/	42.69	42.69	39.28	8%