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AIR QUALITY ACTION PLAN FOR COVENTRY

Coventry City Council

FOREWORD

Fifty years ago the effects of air pollution could be seen by the impacts of smogs, which caused thousands of deaths in British cities in the 1950's. Many people believe that air pollution is a thing of the past but up to 32,000 people die prematurely in Britain every year due to its effects.

Today the pollution that causes health problems is more difficult for us to see. The pollutant of most concern in Coventry, nitrogen dioxide, is only seen as a slight brown haze on the horizon on a sunny day. The people affected by this pollutant are the most vulnerable members of our society; the young and the old, those with heart and lung disease and especially those with asthma. Likewise the growing warnings about the effects of Climate Change caused by our emissions are something we cannot as a city ignore.

As a city with a rich car manufacturing heritage it is perhaps more poignant to Coventry than other cities that the major cause of air pollution today is road transport.

This Action Plan seeks to improve air quality in the areas of Coventry where UK air quality objectives are exceeded. We have a responsibility as individuals to do what we can to make the air we breath cleaner. We can use public transport, walk or cycle instead of using our car. We can all play our part in both making Coventry's air cleaner and in tackling climate change.

Gary Ridley

Councillor Gary Ridley

Contents

Table of Figures

EXECUTIVE SUMMARY

"Clean air is an essential ingredient for a good quality of life. People have the right to expect the air they breathe will not harm them."

The Air quality Strategy for England, Scotland Wales and Northern Ireland

The quote above underlines the Government's stance on air pollution and health. Poor air quality, caused by air pollution, impacts on people's health. Coventry City Council is legally responsible for introducing actions that will improve air quality in areas of the city where air pollutant concentrations are above UK objectives and thereby improve the health of the people of Coventry. Positive action to improve air quality via Coventry's Air Quality Action Plan will work towards improving quality of life in Coventry and contribute towards a more sustainable city. Emphasising the importance of air quality The Rogers Review names air quality as one of the 5 enforcement priorities for Local Authorities Environmental Health services as it is of high national political priority due to the health impacts of pollutants and because actions for air quality will contribute to tackling climate change.

The three areas of the City, which have poor air quality, have been designated as Air Quality Management Areas (AQMA). These are;

AQMA 1: the City Centre in the region of Cross Cheaping, the Burges, Hales Street, Trinity Street, and Ironmonger Row.

AQMA 2: the Ball Hill area of the A4600 Walsgrave Road between Brighton Street and Shakespeare Street.

AQMA 3: an area surrounding the junction of Allesley Old Road B4106, Four Pounds Avenue and Queensland Avenue.

Pollution in these areas is due to a gas called nitrogen dioxide, which is produced when fossil fuels are burned. Exposure to nitrogen dioxide enhances the response to allergens in sensitive individuals such as those with asthma or bronchitis and there is evidence that hospital admissions of people with respiratory diseases are related to concentrations of nitrogen dioxide. UK work has also shown that nitrogen dioxide may increase the prevalence of respiratory infections in children. Because the presence of nitrogen dioxide is closely linked to the formation or presence of other air pollutants, it is not yet entirely clear whether long-term exposure to relatively low concentrations has other health impacts.

The main source of nitrogen dioxide in the UK is road traffic and pollution often occurs where there is traffic congestion. Investigations in Coventry show that this is the main cause of nitrogen dioxide within the AQMA's. Therefore the actions outlined in the Action Plan, which were developed by a steering group involving staff from various Council Directorates, are mainly transport related. Actions are listed under the following headings:

1. Specific Proposals: AQMA 1, City Centre
2. Specific Proposals: AQMA 2, Ball Hill
3. Specific Proposals: AQMA 3, Queensland Avenue
4. Reducing Vehicle Emissions
5. Improved Public Transport
6. Improved Efficiency of Highway Networks
7. Alternative Transport Modes and Policies
8. Non-transport Measures

The West Midlands Metropolitan Authorities Air Quality Action Planning Group have liaised closely with Transport Planners and consequently a number of schemes in the Local Transport Plan 2 (LTP2) can be found in this Action Plan.

Even with the extra measures included in this action plan it is extremely unlikely that the relevant air quality objective will be achieved by 2010/11 (the end of the LTP period). It is difficult to ascertain, with current uncertainties in projecting concentrations, as well as the uncertainties regarding which measures are likely to be

implemented in the future, when the air quality objectives are likely to be achieved. It is, however, extremely unlikely to be before 2010. Concentrations post-2010 will to some extent be dependent on the outcomes of the TIF investigations and to some extent on the progress of new technologies and the uptake of alternative fuels.

The Government considers that Air Quality to be corporate issue for Local Authorities and it is recognised that to improve air quality Action Plans must have the support of the whole of the City Council, local public and businesses and other stakeholders. They also recommend that Local Authorities bear in mind the synergies between air quality and climate change so that there is an integrated approach to tackling both climate change and air quality goals. Coventry City Council has consistently worked to ensure that this synergy is evident in both the Climate Change Strategy and the Air Quality Action Plan.

The Air Quality Action Plan 2007 was released as a draft for consultation from March to July 2007 and has been amended where necessary following this consultation.

1 INTRODUCTION

1.1 LEGISLATION FOR AIR QUALITY MANAGEMENT

Part IV of the Environment Act 1995 laid the foundations for air quality management in the UK through the implementation of the National Air Quality Strategy (NAQS). The Strategy aims to protect human health and the environment by setting objectives and standards for eight pollutants, which are known to be harmful.

Part IV of the Environment Act 1995 also introduced the concept of Local Air Quality Management (LAQM), whereby all local authorities are required to review the air quality within their area and assess it against the objectives specified for the pollutant of concern. Seven of the pollutants are managed through LAQM. The national air quality objectives for LAQM which apply to Coventry are shown in Table 1.

If, on the basis of its assessment, the local authority finds that an air quality objective is unlikely to be met in any part of its area, then under Section 83(1) of the Environment Act, 1995 an AQMA must be declared. The local authority is then required to submit, within a period of twelve to eighteen months of declaring an AQMA, an Action Plan in the pursuit of the achievement of the air quality standards and objectives. In addition, under Section 84(1) of the Environment Act, 1995 the council must produce a Stage 4: Further Assessment within 12 months of the declaration of its AQMA, which contains information on the level of exceedence and the sources of the pollutant in question.

Pollutant	UK Objective	Measured as	To achieved by and maintained thereafter
Benzene	16.25 µg/m^3	Running annual mean	31 December 2003
	5 µg/m^3	Annual mean	31 December 2010
1,3-Butadiene	2.25 µg/m^3	Running annual mean	31 December 2003
Carbon Monoxide	10 mg/m^3	Running 8 hour mean	31 December 2003
Lead	0.5 µg/m^3	Annual mean	31 December 2003
	0.25 µg/m^3	Annual mean	31 December 2008
Nitrogen Dioxide	200 µg/m^3 not to be exceeded more than 18 times per year	1 hour mean	31 December 2005
	40 µg/m^3	Annual mean	31 December 2005
Particles (PM_{10}) (gravimetric)*	50 µg/m^3 Not to be exceeded more than 35 times per year	24 hour mean	31 December 2004
	40 µg/m^3	Annual mean	31 December 2004
Sulphur Dioxide	266 µg/m^3 Not to be exceeded more than 35 times per year	15 Minute Mean	31 December 2005
	125 µg/m^3 Not to be exceeded more than 3 times per year	24 Hour Mean	31 December 2004

* Measured using the European gravimetric transfer sampler or equivalent.
µg/m^3 - micrograms per cubic metre
mg/m^3 - milligrams per cubic metre

TABLE 1: UK AIR QUALITY OBJECTIVES APPROPRIATE TO COVENTRY

1.2 AIR QUALITY REVIEW AND ASSESSMENT IN COVENTRY

Coventry City Council has completed the first two rounds of Review and Assessment of air quality in its area. This has consisted of the stages described below:

Round 1 comprised three stages. ***Stage 1 (Review and Assessment)*** involved the identification of the main sources of air pollution within and around Coventry City's boundary, reviewing the levels of air pollutants for which prescribed standards and objectives have 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 which led to the declaration of the first two of the city's AQMA's.

Round 2 changed the format of reporting slightly. The first report of this round was an ***Updating and Screening Assessment*** (USA) that was completed in 2003. When the USA commenced, Coventry City Council was in the process of declaring two AQMA's as annual average levels of nitrogen dioxide (NO_2) were predicted to exceed the 2005 objective.

Following on from the 2003 USA, the ***Detailed Assessment*** involved an accurate and detailed assessment of current and future air quality. The local authority utilised modelling by Direct Mean for Roads and Bridges (DMRB) and NO_2 diffusion tube monitoring to predict whether the air quality objectives would be achieved in the specified time. The assessment demonstrated that annual average levels of NO_2 would also be exceeded in another area of the city, and that led to the declaration of Coventry's third AQMA in 2004.

The Further Assessment required the local authority to undertake further detailed monitoring of the air quality within the AQMA's in order to confirm that the decision to declare the areas as AQMA's was justified. The Further Assessment also involves calculation of how great an improvement is needed for each pollutant where there is

an exceedence and consideration of the extent to which different sources contribute to the problem. The Further Assessment was undertaken in respect of the first two AQMA's and was completed in November 2004 and was subsequently amended following comments received by DEFRA. A study of the current situation and improvement required for AQMA 3 was completed in August and has been approved by DEFRA.

Review and assessment is an ongoing process and the recent Updating and Screening Assessment (2006) concluded that there are a number of locations that are currently exceeding the nitrogen dioxide annual mean objective. These locations, which are to be taken to a Detailed Assessment, are

- Foleshill Road
- London Road / Tollbar Island
- Radford Road / Beake Avenue junction
- Spon End / Hearsall Lane
- Stoney Stanton Road
- Croft Road / Victoria Road, City Centre

The Detailed Assessment is will be completed later in 2007 and will consist of an assessment of both monitored and modelled data. It is likely therefore that further areas of the city will be declared as Air Quality Management Areas in the future. This action plan will need to be added to, or amended, to encompass changes as they happen.

1.3 THE AIR QUALITY ACTION PLANNING PROCESS

Action planning is an essential part of the local air quality management process, providing a practical opportunity for improving air quality in areas where review and assessment has shown that national measures will be insufficient to meet one or more of the air quality objectives. According to guidance published by DEFRA (PG (03) An Air Quality Action Plan must contain the following:

- Quantification of the source contributions to the predicted exceedences of the objectives (to allow the measures to be targeted)

  - Evidence that all available options have been considered on the grounds of cost effectiveness and feasibility.

- How the Local Authority will use its powers and also work in conjunction with other organisations in pursuit of the relevant air quality objectives.
- Clear timescales within which the authority and other organisations propose to implement the measures contained in the plan.
- Quantification of the expected impacts of the proposed measures and, where possible, an indication as to whether these will be sufficient to ensure compliance with the objectives.
- How the Local Authority intends to monitor and evaluate the effectiveness of the plan.

This Guidance has been observed during the production of this Action Plan.

The National Society for Clean Air and Environmental Protection (NSCA) has also issued informal guidance on action planning. This recommends processes to follow for formulating options, evaluating then prioritising the measures proposed. This guidance has also been observed in the production of this document.

2 COVENTRY AND AIR POLLUTION

2.1 COVENTRY

Coventry City Council's district is 98.34 km^2 in area and has a population of around 305,000. It is one of seven Metropolitan Local Authorities, which form the West Midlands Metropolitan Region. Figure 1 shows the geographical distribution of the West Midlands Metropolitan Authorities, which together comprise a predominantly urban area, with approximately 2.5 million inhabitants occupying some 900 km^2 on the western side of central England.

The West Midlands Metropolitan Authorities have co-operated on environmental issues for many years and have a joint group of specialist officers from each authority ensuring close integration of technical work, policy response and action. This is in recognition of the part played by transport (particularly road traffic and congestion) in contributing to air pollution. A further example of joint working is the employment of a joint funded officer based in Birmingham City Council for modelling air pollution within the Metropolitan Area.

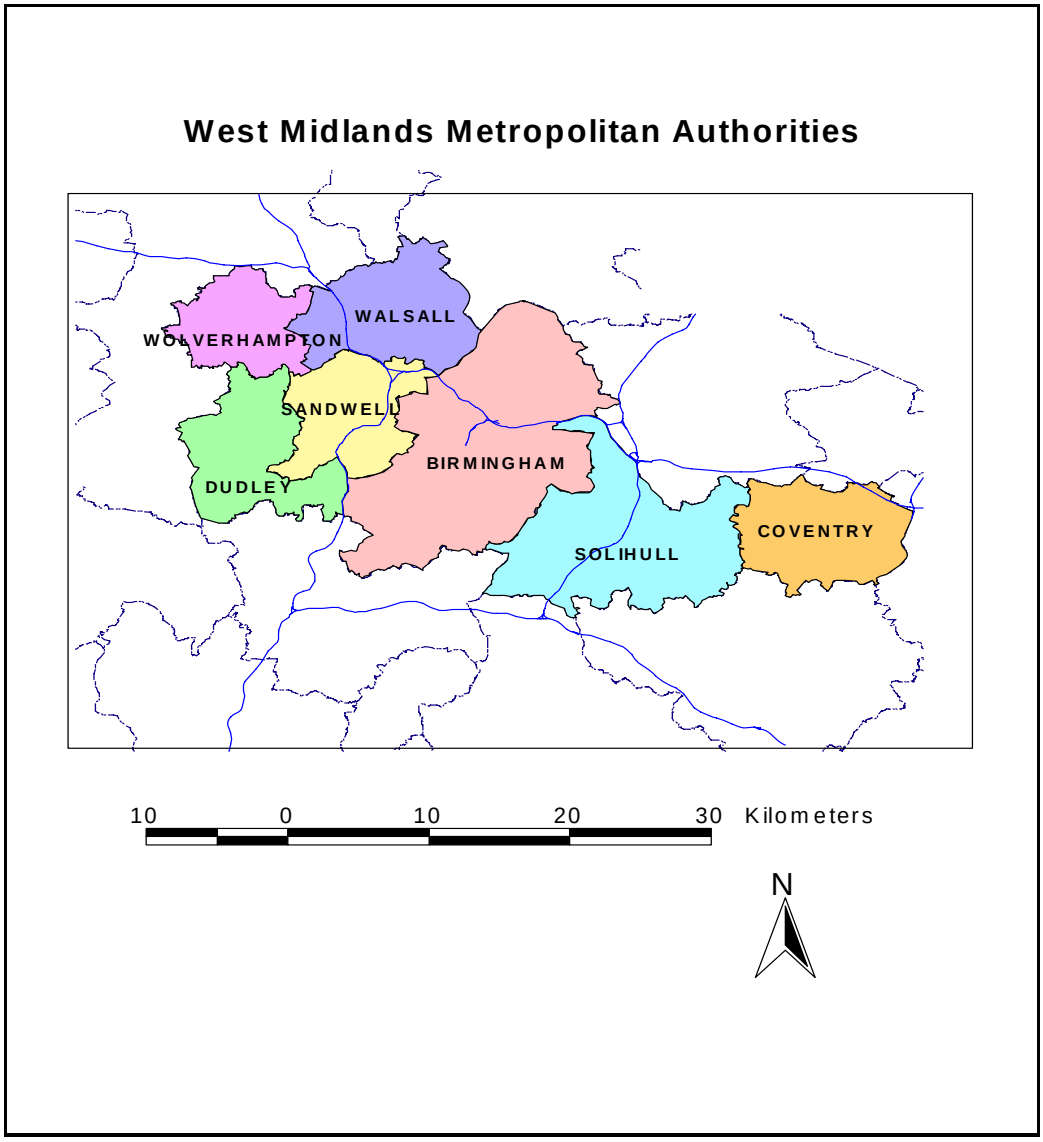

Figure 1: The Geographical Distribution of the West Midlands Metropolitan Authorities

Air quality differs greatly both spatially and temporally because pollutants are influenced by a variety of factors including source location, topography and meteorology. Pollutants in urban areas arise from a wide variety of sources, predominantly as a result of combustion processes. The largest source of pollution is generally motor vehicles, and to a lesser extent industry.

The whole of Coventry is classed as a smoke control area making it an offence under the Clean Air Act 1993 to emit smoke from a chimney caused by the burning of unauthorised fuel or use of an unauthorised appliance.

Coventry City Council has a total of 37 significant industrial installations from an air pollution perspective operating within its boundaries. This includes one Part A2

process for the manufacturing of heavy clay goods. In addition there are 43 minor installations such as petrol filling stations and small waste oil burners. Each process / installation is regulated under either Part 1 of the Environmental Protection Act 1990 (EPA 1990) or the Integrated Pollution Prevention and Control Regime (IPPC) and the Pollution Prevention and Control (England and Wales) Regulations 2000 which is gradually replacing Part 1 of the EPA 1990. The processes / installations are regularly inspected by the Environmental Health Service to ensure they are controlling their emissions to atmosphere. Coventry also has twelve of the more significant Part A1 installations that are regulated and inspected by the Environment Agency under IPPC.

The main pollutants of concern in Coventry, as in most urban areas of the UK, are associated with road traffic, in particular NO_2 and particulate matter at locations near to busy, congested roads where people may live, work or shop. Local knowledge and the Updating and Screening Assessments have identified areas where UK objectives may be exceeded. This has led to the declaration of the current AQMA's that are considered in this action plan and in the identification of the areas currently undergoing Detailed Assessment.

A Local Area Agreement (LAA) is a three year agreement between Central Government and the Local Authority, based on local Sustainable Community Strategies, that sets out the priorities for a local area. Coventry City Council has been in discussion with Central Government regarding its LAA. Air Quality and the AQAP has been raised as one of the areas which will potentially be covered by Coventry City Council's LAA.

2.2 REASONS FOR AIR QUALITY ACTION PLANNING IN COVENTRY

The first and second rounds of the Review and Assessment process demonstrated that Coventry should not have problems in meeting the UK air quality objectives for the majority of pollutants by the required dates due to the implementation of national measures. Therefore there was no requirement to impose any local measures for these pollutants.

However, the annual mean objective for NO_2 is exceeded in the City's three AQMA's after the target date of 2005. Therefore Coventry City Council is required to submit an Action Plan to try to reduce concentrations of NO_2 in these areas.

The annual mean for nitrogen dioxide applies to areas where members of the public are might regularly be exposed; building facades of residential properties, schools, hospitals, libraries etc. It does not generally apply to places of work, gardens of residential properties or kerbsides.

As stated in Section 1.2 the Review and Assessment 2006 demonstrated other areas of the City exceed the annual mean objective for NO_2. There are areas of the city where the annual mean does not apply at present but where introduction of new residential property etc., may lead to exceedence in the future. Should this occur a new Action Plan will need to be prepared.

The three areas that have been declared as AQMA's are;

AQMA 1, referred to as "City Centre" is composed of an area in the region of Cross Cheaping, the Burges, Hales Street, Trinity Street, and Ironmonger Row.

AQMA 2: referred to as "Ball Hill" is an area along the A4600 Walsgrave Road between Brighton Street and Shakespeare Street in the Ball Hill area of Coventry.

AQMA 3: referred to as "Queensland Avenue" is an area surrounding the junction of Allesley Old Road B4106, Four Pounds Avenue and Queensland Avenue.

These areas are highlighted on the aerial photograph of Coventry in figure 2. Detailed maps of the AQMA's are provided in section 4 of this document.

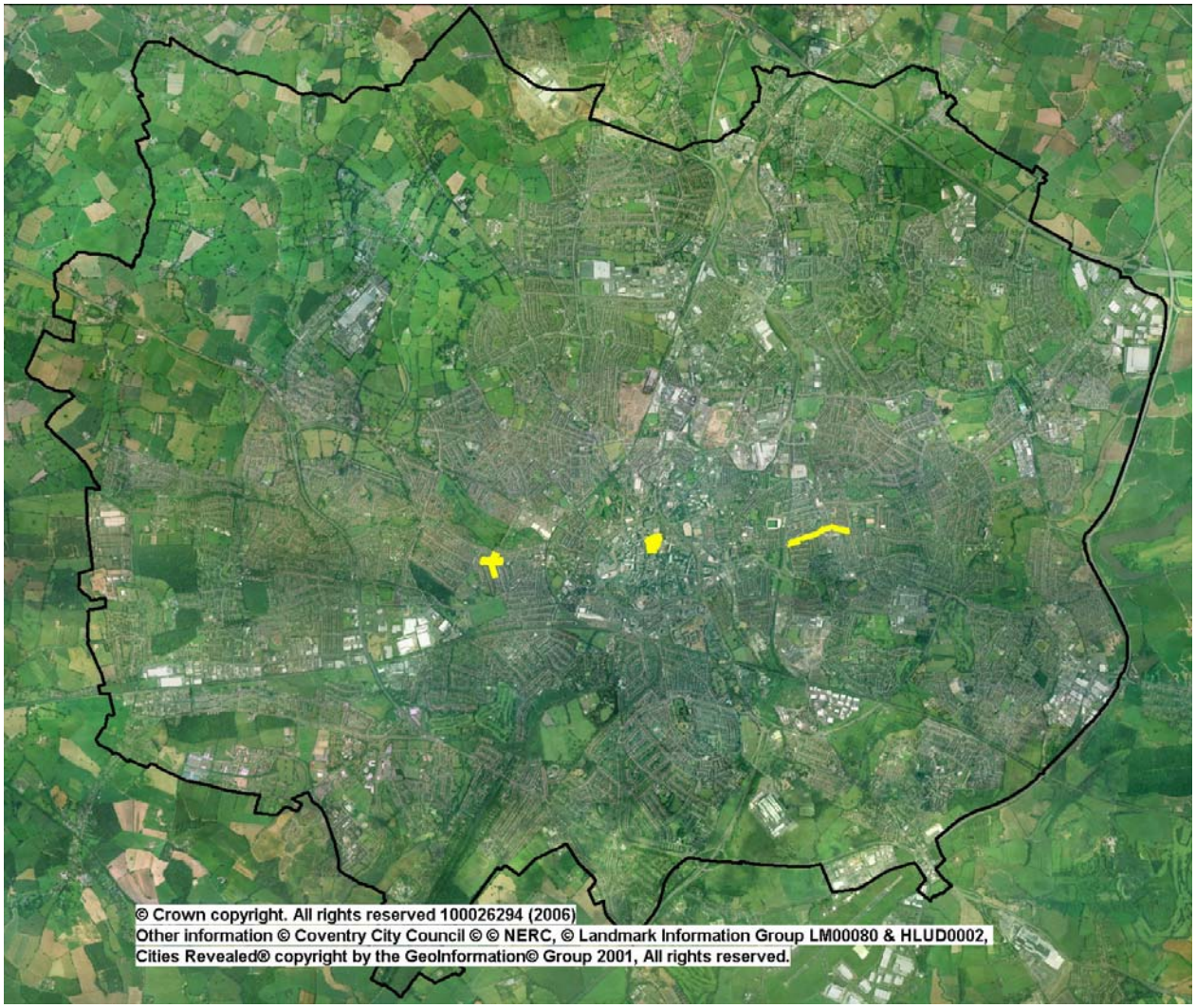

Figure 2: Aerial Photograph of Coventry showing AQMA's highlighted in yellow

2.3 NITROGEN DIOXIDE AND OXIDES OF NITROGEN

2.3.1 What is Nitrogen Dioxide?

Nitrogen dioxide (NO_2) is a reddish-brown gas with a pungent and irritating odour. As well as being an irritant itself, it plays a major role in the formation of ground-level ozone, a major component of harmful photochemical smog and a greenhouse gas. Smog can sometimes be seen as a brown haze on sunny days. Nitrogen dioxide is also forms nitrates, which contribute to respirable particle levels in the atmosphere and hence contributes to PM10 concentrations, which are known to have significant health impacts. As NO2 transforms in the air to form acid rain and toxic organic nitrates it is also responsible for significant damage to ecosystems and vegetation.

2.3.2 Health Impacts of Nitrogen Dioxide

Exposure to NO_2 enhances the response to allergens in sensitive individuals such as those with asthma or bronchitis and there is evidence that hospital admissions of people with respiratory diseases are related to concentrations of nitrogen dioxide. UK work has also shown that nitrogen dioxide may increase the prevalence of respiratory infections in children.

Because the presence of NO_2 is closely linked to the formation or presence of other air pollutants, it is not yet entirely clear whether long-term exposure to relatively low concentrations of NO_2 itself can affect mortality or disease progression. Because adverse effects have been observed within a range that includes the current annual WHO (World Health Organisation) guideline value for NO_2, it is recommended to maintain or lower that value. The UK air quality objectives are in-line with current WHO guidelines.

2.3.3 Sources of Nitrogen Dioxide

Oxides of nitrogen (NO_x) are produced when fossil fuels are burned in air and are mainly composed of nitric oxide (NO) and nitrogen dioxide (NO_2). The greatest source of NO_x is road transport. Power stations, industry and domestic properties are also sources.

When NO_2 is released directly during combustion it is known as a primary emission. However the major component of NOx emitted during combustion is NO. NO then reacts with ozone (O_3) to form NO_2. This source of NO_2 is it is known as a secondary emission.

In urban areas concentrations of NO_x have been decreasing since the early 1990's largely due to reduced emissions from road traffic. However in urban areas the levels of NO2 have not been decreasing as expected and in some areas concentrations of NO_2 have been increasing. The Air Quality Expert Group (AQEG) have reported that this is due to an increase in the number of diesel vehicles, which have been found to emit a greater proportion of NO_2 than originally predicted. Retrofitting of diesel particulate filters has been found to substantially increase the emission of primary NO_2 from buses.

The rate at which NO_2 is formed from NO is proportional to the ambient temperature and the availability of other reactants, including ozone and hydrocarbons. Whenever high levels of NO_X are present, the conversion of NO to NO_2 is rate limited if other chemicals are not present. Thus, in the summer, the chemical reactions are faster so that at low pollution concentrations, more than 80% of the NO_X might consist of NO_2. In the winter, the chemical reactions are much slower so that at high pollution concentrations in particular, perhaps only 20% of the NO_X consist of NO_2. The overall effect of the atmospheric chemistry is to have a reserve of NO in the atmosphere so that a reduction in the levels of NO_x does not produce a proportionate reduction in the levels of NO_2.

3 COVENTRY'S AIR QUALITY MANAGEMENT AREAS

3.1 AQMA 1: CITY CENTRE

AQMA 1 is situated in the City Centre and incorporates the whole of Cross Cheaping, the Burges, Hales Street between Burges and Trinity Street, Trinity Street between Hales Street and Ironmonger Row, and Ironmonger Row between Trinity Street and Cross Cheaping. A map of AQMA Number 1 is shown below in Figure 3.0.

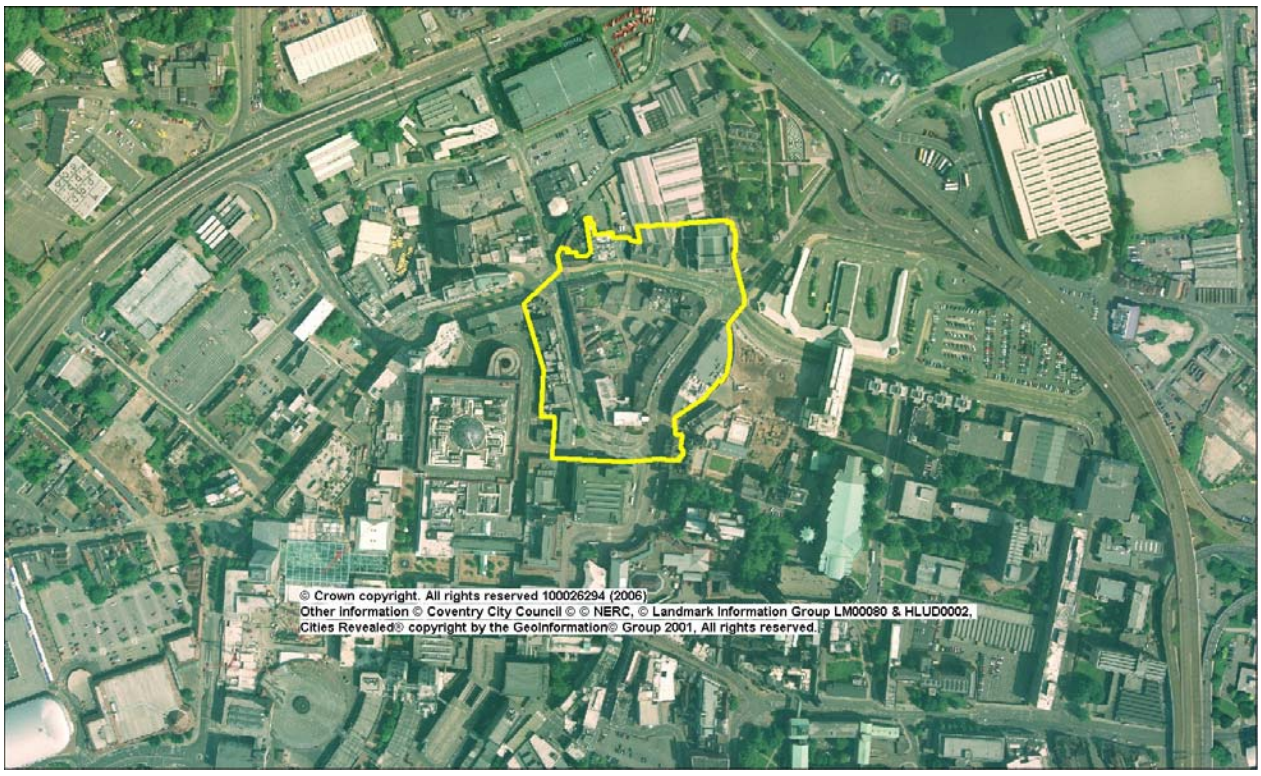

Figure 3: Aerial photograph of AQMA 1

This area is comprised of minor roads that carry traffic around a portion of the city centre forming a one-way system. The majority of premises here are commercial, some with residential properties above them. Trinity Street / Cross Cheaping and The Burges together have an annual average daily traffic flow (AADT) of in the region of 11,800 vehicles. Given the size of the AQMA, there are a high number of bus stops and bus hubs. In 2005 the main area of concern was The Burges: Although it has three lanes, the left-hand lane had a number of bus stops and was not used by moving traffic. The number of buses in the AQMA has improved due to measure 1.1. Congestion occurs at the junction with Corporation Street. The buildings to either side of The Burges are high and the road descends towards the junction forming a street canyon and preventing ready dispersion of traffic fumes. Fifty metres to the west of The Burges is the West Orchards multi-storey car park.

The uncorrected average annual levels of NO_2 monitored by diffusion tubes over six roadside sites in Cross Cheaping / The Burges was 61.4 µg/m3 from June to December 2002, and 71.2µg/m3 for 2003.

In the Stage 4 Assessment the average annual mean NO_2 for AQMA 1 in 2005 was predicted to be 61µg/m^3. Monitoring in 2005, reported in Coventry City Councils Air Quality Updating and Screening Assessment 2006, showed that the average concentration of nitrogen dioxide in AQMA 1 was 58µg/m^3 in 2005. The limit value for $N0_2$ is 40µg/m^3 as an annual mean, to be met by 31st December 2005.

3.2 AQMA 2: BALL HILL

Figure 4: AQMA 2: Walsgrave Road

AQMA 2 is situated in the Ball Hill area of Coventry and constitutes the area of Walsgrave Road between Brighton Street and Shakespeare Street. Figure 4.0 shows the boundary of this AQMA.

The Walsgrave Road forms part of the A4600 carrying traffic between Coventry City centre and junction 2 of the M6 / the beginning of the M69 motorway to the east of Coventry. Ball Hill is an area of mixed residential and commercial use. In this area the A4600 is a single carriage road with an ADDT of approximately 29,000 vehicles.

Premises are in close proximity to the road creating a street canyon. Traffic congestion can be experienced at any time of day but it is particularly heavy during the morning and evening peak periods. The main source of congestion appears to be the traffic lights at the junction of Walsgrave Road with Clay Lane and Brays Lane. A pedestrian crossing exacerbates congestion as it operates out of phase with the traffic lights at the junction. The Stage 4: Further Assessment predicted a NO_2 annual mean concentration of 53 µg/m^3 in 2005 at the nearest building from a

monitoring unit positioned 2.5m from the façade. Monitoring in 2005, reported in Coventry City Council's Air Quality Updating and Screening Assessment 2006, showed that the actual concentration of nitrogen dioxide at this point in 2005 was 43μg/m^3. The highest concentration of nitrogen dioxide monitored at a building façade was an annual mean of 48μg/m^3 in 2005.

3.3 AQMA 3: QUEENSLAND AVENUE

Figure 5: AQMA 3, Queensland Avenue

This AQMA is an area surrounding the junction of a major route into Coventry, the B4106, Allesley Old Road and the B4107, Queensland Avenue to the South and Four Pounds Avenue to the north. Figure 5 shows the boundary of this AQMA. In 2004 the ADDT for the roads within the AQMA were approximately:

B4106 Allesley Old Road	26,000
B4107 Queensland Avenue	22,000
B4107 Four Pounds Avenue	23,000

Four Pounds Avenue is a dual carriageway, while Allesley Old Road and Queensland Avenue are single carriageway roads which widen at the junction. There is often queuing at the road junction especially during the morning and evening peak flow

periods. The area is mainly residential with a couple of local shops. There are no industrial sources of pollution.

While the other major roads in this AQMA are broad, allowing dispersion of traffic fumes, Queensland Avenue is narrow with terraced housing close to the road creating a street canyon. This is the main area of concern in this AQMA.

The Stage 4 Further Assessment demonstrated the maximum concentration of NO_2 in 2004 was close to the junction of Queensland Avenue and Allesley Old Road. At this point annual mean concentrations of 41.8 and 39.6 μgm^{-3} were measured at the building façade - averaging these results predicted a figure of 40.7 μgm^{-3} in 2005. In 2006 the highest concentration of pollution monitored in Queensland Avenue was 51 μgm^{-3}.

4 SOURCE APPORTIONMENT FOR OXIDES OF NITROGEN

Source apportionment is used to show what proportion of NO_x is contributed by different sources. This is shown for the city as a whole and within the AQMA's and allows the major sources of oxides of nitrogen to be targeted in the action plan. This section is a review of the Stage 4 Further Assessments for AQMA 1&2 and AQMA 3 which have been accepted by DEFRA and details of modelling methodology can be found in these documents. Source apportionment modelling was undertaken by the joint WMPG officer.

It must be remembered that this modelling was based on the information available at the time of the original assessments and that data for 2005 was predicted from emissions data available from 2001. As noted in section 2.1.3 there is now evidence that diesel vehicles are emitting higher proportions of nitrogen dioxide to nitrogen oxides than was previously thought.

4.1 OVERVIEW OF COVENTRY

Table 2 shows the total percentage contribution to NO_X concentrations in the three AQMA's including background levels of pollution.

Source	AQMA 1	AQMA 2	AQMA 3
Background	15	52	76
Road Traffic	75	42	21
Commercial/ Domestic	10	6	3
Industry	0	0	0

TABLE 2: PERCENTAGE CONTRIBUTION TO NITROGEN OXIDES CONCENTRATIONS IN AQMA'S

Figures 3 and 4 illustrate the contribution of a number of sources to the total amounts of NO_X across the district for 2001 and 2005 respectively. The data shows relative emissions averaged across the whole of Coventry, however relative amounts of pollution vary across the city depending on the location. For example, in an industrial area the percentage of pollution from industry would be higher than that expected for the city average while the contribution from commercial and domestic properties would be lower. Similarly, in areas close to major roads the contribution of road traffic to NO_2 levels would be expected to dominate.

The source apportionment demonstrates that the transport sector is the major contributor to NO_2 levels across the city of Coventry. However, comparison of the information from 2001 and 2005 indicated that the contribution to NO_x from road transport reduced from 89% in 2001 to 68% in 2005. This reduction is due to improvements in vehicle technology, which has reduced vehicle emissions. It is anticipated that this downward trend in NO_x will continue, but only until 2010 by which time the increased numbers of vehicles on the road will have offset this improvement.

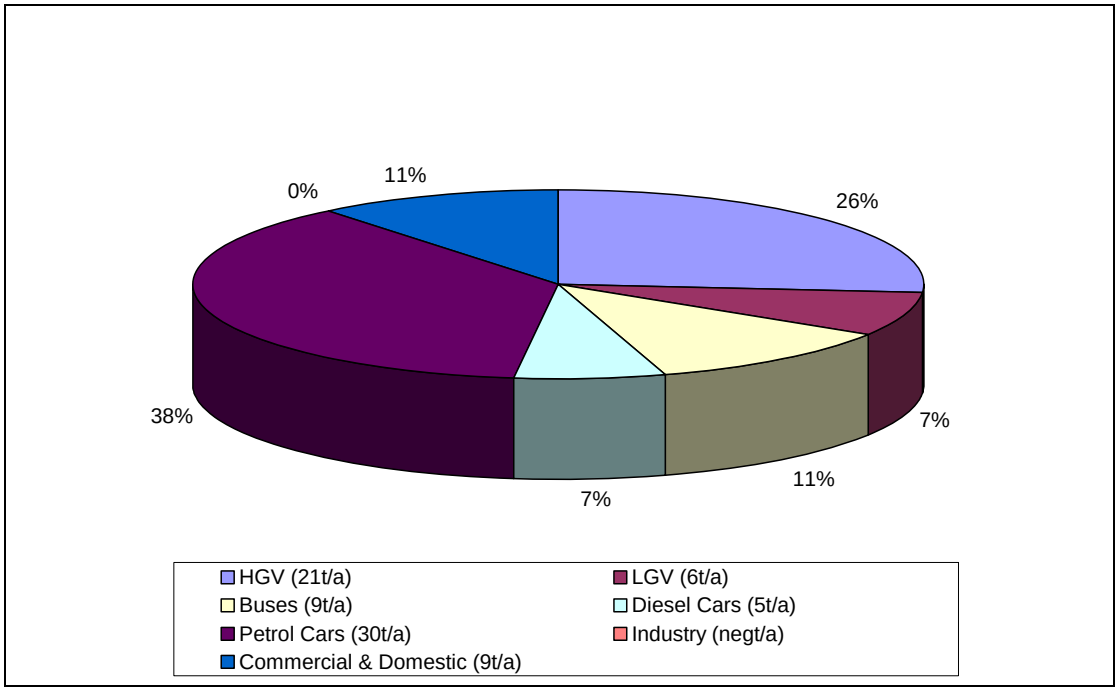

Figure 6: Source Apportionment for Coventry NOx 2001

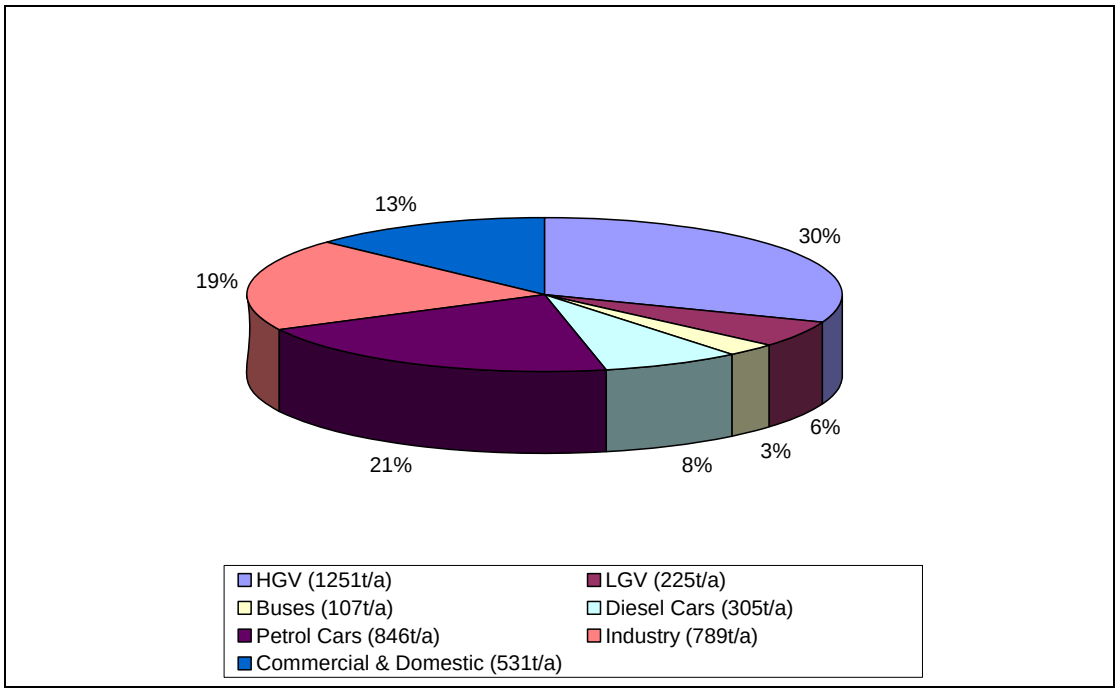

Figure 7: Source Apportionment for Coventry NOx 2005

4.2 AQMA 1: CITY CENTRE

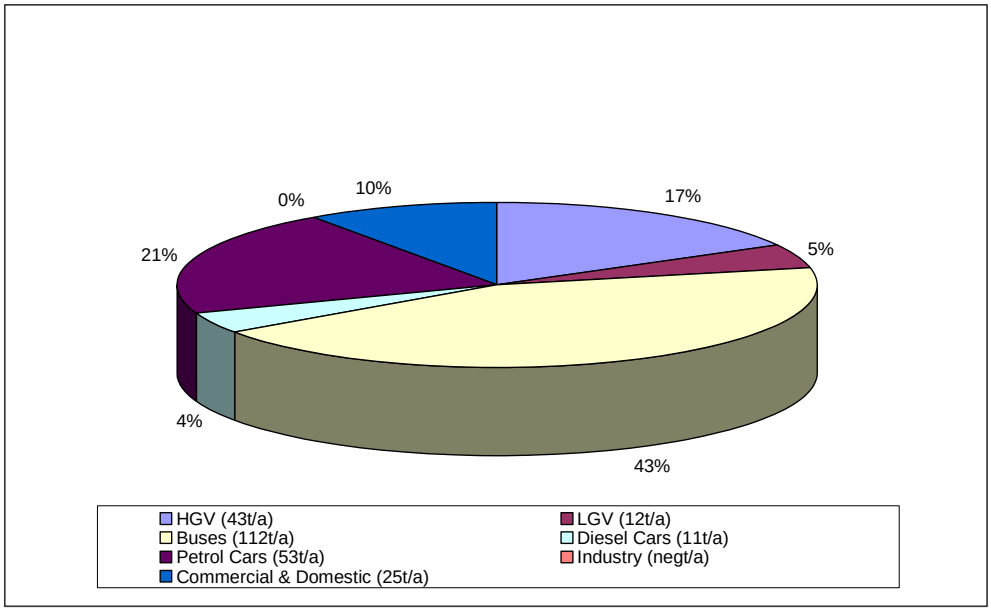

Figure 8: Source Apportionment for AQMA1 NOx in 2001

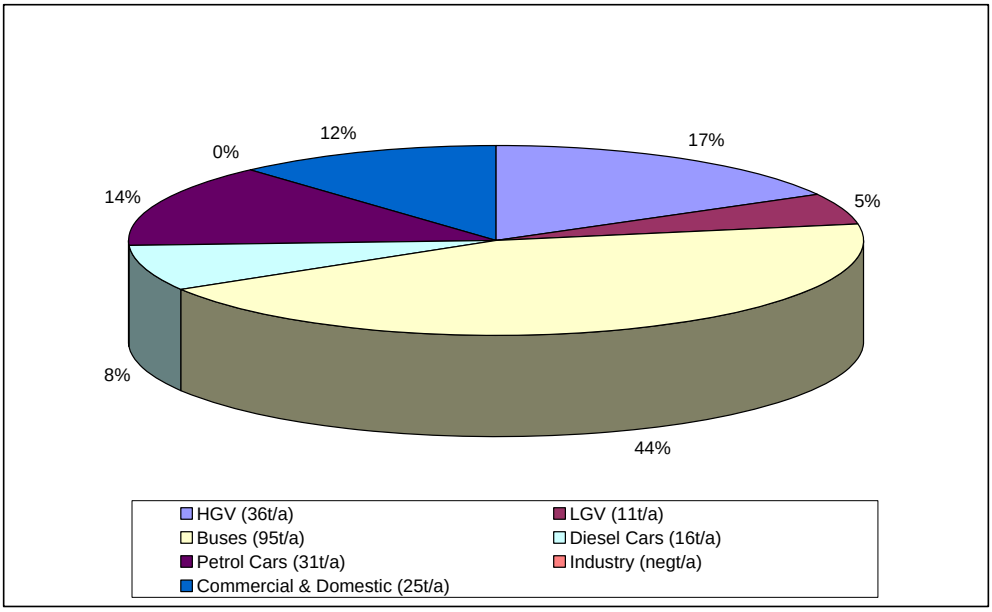

Figure 9: Source Apportionment for AQMA 1 NOx 2005

Source apportionment for AQMA 1 is shown in Figures 5 and 6. As may be expected from a city centre there are no industrial sources of NO_2. Figure 5 shows that in 2001 the major source of NO_X in the area was road traffic, which was responsible for 90% of NO_X emissions. By 2005 the contribution of traffic was expected to be 92%. The largest proportion of this was due to buses, which were expected to be the cause of 44% of NO_X emissions in the AQMA. The effect of buses may have been higher than this as the model used did not take into account the fact that many buses

in this AQMA were stationary at bus stops with engines running, often for prolonged periods of time (see section 3.1.1). The largest contribution after buses is due to heavy goods vehicles (HGV's). HGV's frequent this area of the city to make deliveries to the large number of commercial premises. The effect of petrol cars in the area was expected to decrease between 2001 and 2005. The number of buses in the area has now decreased, however their contribution is probably still considerable due to their high NOx emission rate.

4.2.1 The Effect of Speed on Emissions from Buses

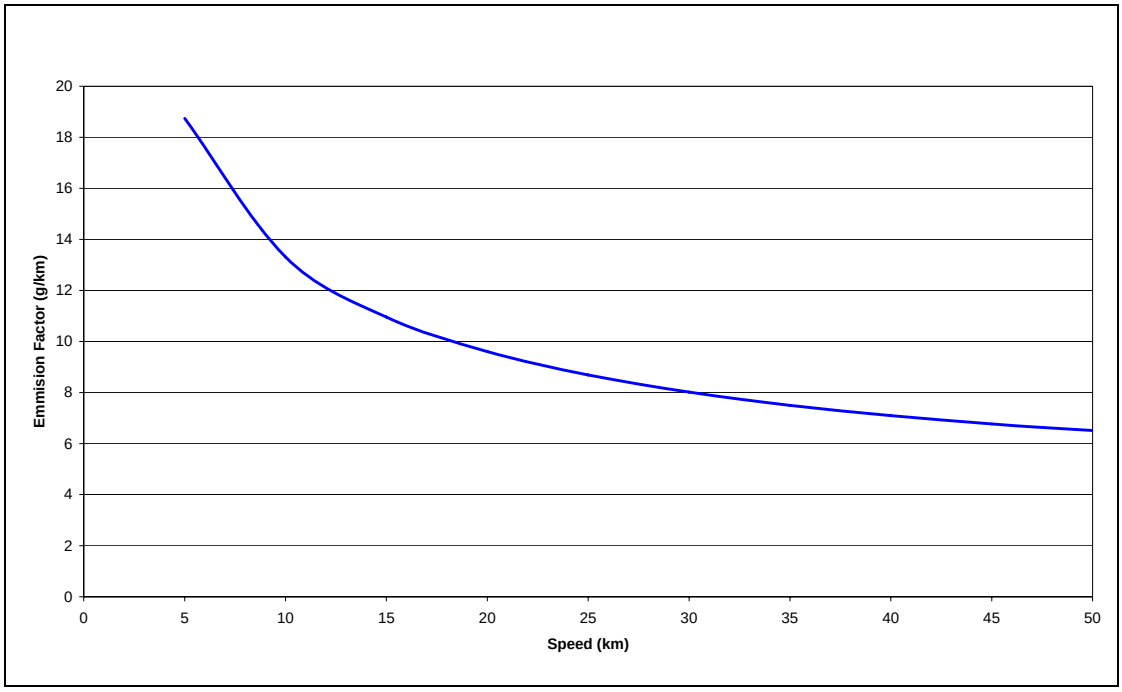

Figure 10: Effect of Speed on Bus Emissions (emission factors for 2004)

Emissions from buses increase significantly as speed decreases as is shown in Figure 7. The average speed of traffic used for modelling in AQMA 1 was 20 kph, which equates to a bus emissions factor of 9.61 g/km. Traffic speed during congestion is recorded as 10kph, equating to 13.31 g/km. A figure for a stationary bus is not available, however, a bus travelling a 5kph has an emission factor of 18.7 g/km, an increase of 95% from the emissions factor for a bus moving at 20 km/hour, and 40% from one travelling at 16kph. Thus the contribution to NO_X levels from buses may be higher in this AQMA than shown by modelling. From consideration of the emissions factors and local knowledge of the Burges it is obvious that emissions from buses are a major contribution to the high levels of NO_X measured in the

vicinity. It is therefore important that their contribution is considered in this Action Plan.

4.3 AQMA 2: BALL HILL

In AQMA 2 the major source of NO_X for both 2001 and 2005 was road traffic, as demonstrated by Figures 8 and 9, respectively. In 2001 road traffic produced 90% of NO_X emissions. This level was expected to decrease marginally to 87% in 2005.

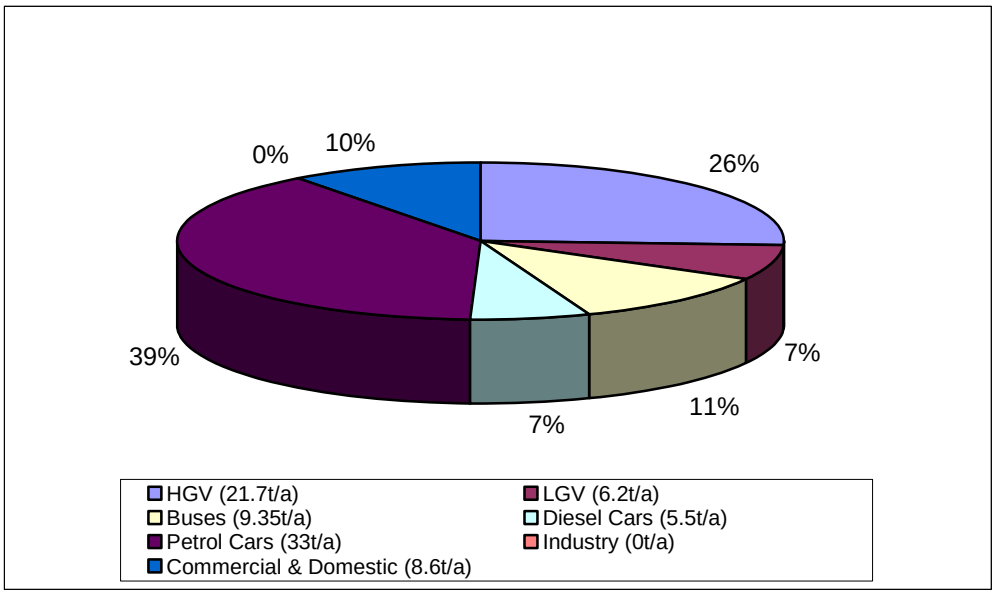

Figure 11: Source Apportionment for AQMA 2 NOx 2001

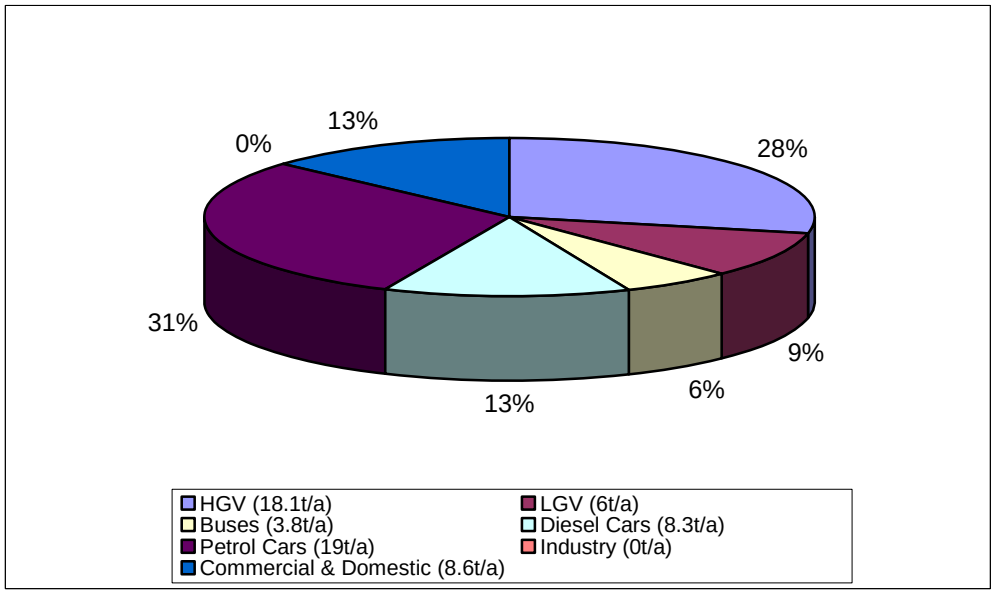

Figure 12: Source Apportionment for AQMA 2 NOx 2005

Petrol cars produce the highest proportion of NO_X in this AQMA, and a significant contribution is also produced by HGV's. It is predicted that by 2005 the contribution that HGV's make to the levels of NO_X will be only 3% less than that due to petrol cars. It is also noteworthy that although the mass contribution from diesel cars is not high, the percentage contribution from these cars was predicted to almost double from 2001 to 2005 in both AQMA's1 and 2. Although HGV's and buses are a smaller part of the traffic composition, they give rise to relatively greater amounts of pollution than cars (petrol or diesel.)

4.4 AQMA 3: QUEENSLAND AVENUE

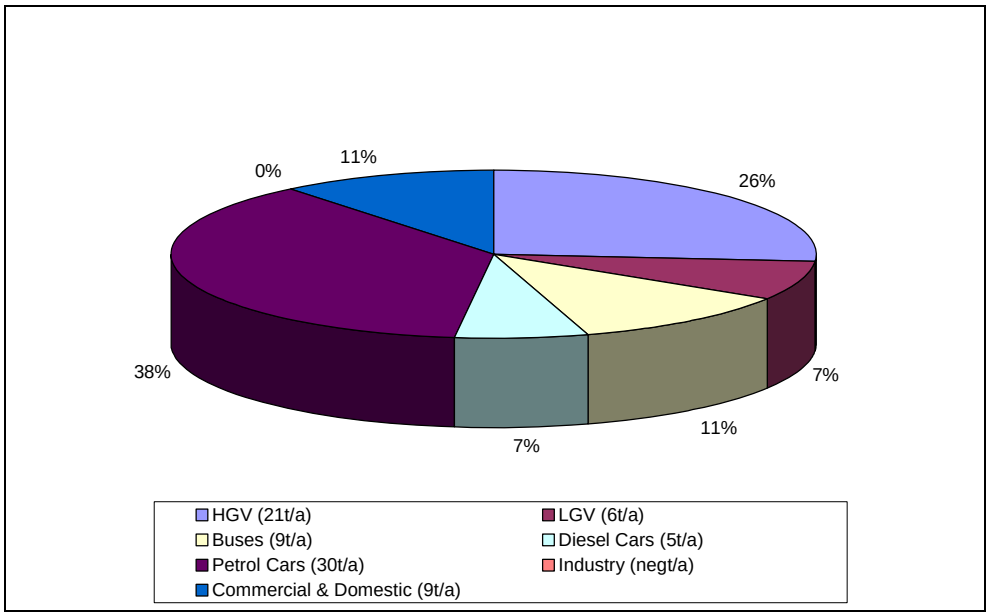

Figure 13: Source Apportionment for AQMA 3 NOx 2001

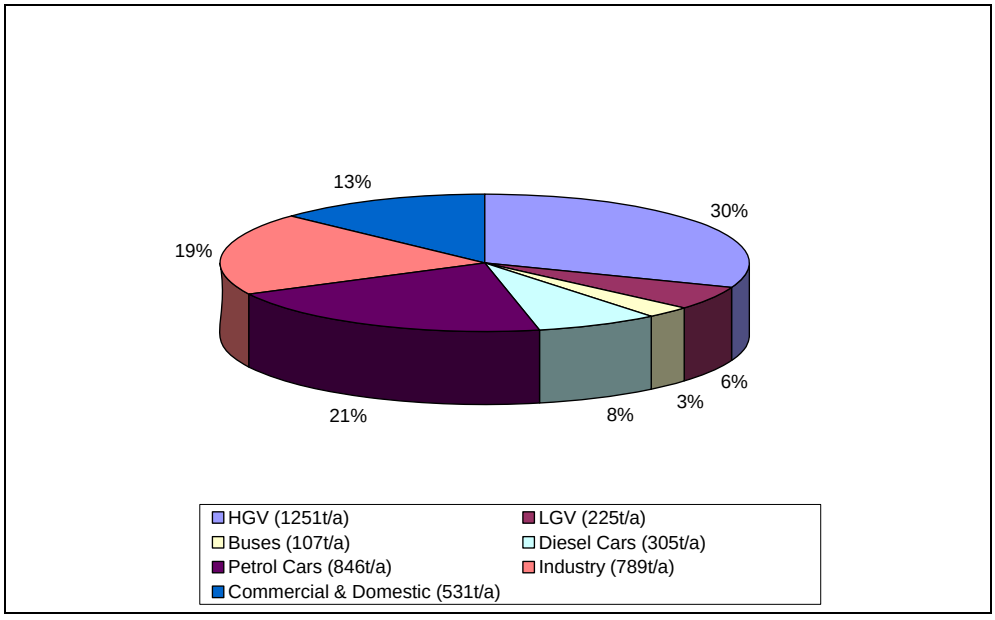

Figure 14: Source Apportionment for AQMA 3 NOx 2005

Figures 10 shows that in 2001 the largest contribution to NOx was due to petrol cars. By 2005, shown in figure 11, the contribution of petrol cars was expected to decrease from 38% to 28%, while the contribution from HGV's was expected to increase from 26% to 30%. This makes HGV's the most significant contributor to NO_x emissions in AQMA 3.

The situation in respect of diesel cars is the same as in AQMA's 1 and 2 with their contribution to air pollution expected to double between 2001 and 2005. The contribution of commercial and domestic NO_X emissions and light goods vehicles (LGV's) was also expected to increase, while the contribution due to buses in this area was expected to reduce by 5% between 2001 and 2005.

4.5 THE LEVEL OF REDUCTION IN NITROGEN DIOXIDE NEEDED

This section presents an estimation of the reduction in nitrogen dioxide levels needed so that the UK air quality objectives are met in each of the three AQMA's. Prediction of nitrogen dioxide concentrations is difficult due to the fact that it is formed as both a secondary and primary pollution source as discussed in paragraph 2.3.3. Concentrations of nitrogen dioxide depend upon the proportion of NO_2 to NO found in the initial emission and on the availability of atmospheric oxidants. The implication of this for the Air Quality Action Plan is that a reduction in the levels of NO_X does not produce a proportionate reduction in the levels of NO_2. This effect can be seen in the levels of pollution that have been observed in the past decade.

The reduction in NO_2 required for each of the AQMA's have been calculated from NO_2 levels measured in those areas for the Further Assessments. Calculations of the minimum percentage reduction required are shown in the Further Assessment reports for the AQMA's and are summarised below.

AQMA 1

Predicted maximum concentration of NO_2 at façade in 2005 was $74.2 \mu gm^{-3}$

$74.2 \mu gm^{-3} - 40 \mu gm^{-3}$ (The objective) $= 34.2 \mu gm^{-3}$ NO_2

Minimum % Reduction in NO_2 Required = 46%

AQMA 2

Predicted maximum concentration of NO2 at façade in 2005 was 53 μgm^{-3} from chemiluminescent monitoring. Therefore;

53 μgm^{-3} - 40μgm^{-3} = 13 μgm^{-3} NO_2

Minimum % Reduction in NO_2 Required = 25%

AQMA 3

Predicted maximum concentration of NO_2 at façade in 2005 was 41.8μgm^{-3}.

41.8 μgm^{-3} - 40μgm^{-3} = 1.8 μgm^{-3} NO_2

Minimum % Reduction in NO_2 Required = 4%

Calculations in the Stage 4: Further Assessment show that the percentage improvement in NO_X levels required from road traffic for AQMA 2 and 3 are 25% and 4% respectively. For AQMA 1 a 46% reduction in NOx levels is required. Calculations indicate that even if local road traffic sources of NO_X were removed from the area, abatement of other sources would be needed to reach the UK objective for NO_2 in this area of the city. Background levels of NO_2 in this area may be higher than estimated by www.airquality.co.uk/archive/laqm/tools.php due to the area's topography and the proximity of multi-storey car parking areas and delivery points which are outside of the AQMA.

This demonstrates the difficulties that Coventry City Council will face in trying to achieve the UK objectives, especially in AQMA's 1 and 2.

5 WHEN ARE THE AIR QUALITY OBJECTIVES LIKELY TO BE ACHIEVED?

On-going monitoring within Coventry is suggesting concentrations that are significantly above the nitrogen dioxide air quality objective. AQMA 1 (city centre) consistently shows the highest concentrations in Coventry with concentrations on Burges over 70 µg/m^3 in 2005 (this may now have reduced since less buses are using Burges, but the problem may now have moved elsewhere within the AQMA). In 2005 concentrations in AQMA 2 were in the high 40's (with higher concentrations at roadside sites) and AQMA 3 (Queensland Avenue) had concentrations of up to 50 µg/m^3.

The Local Transport Plan is predicting a decrease of 1% in concentrations (LTP8 target) across the West Midlands, even taking into consideration the impacts of the LTP measures.

Even with extra measures included in this action plan it is therefore extremely unlikely that the relevant air quality objective will be achieved by 2010/11 (the end of the LTP period). It is difficult to ascertain, with current uncertainties in projecting current concentrations, as well as the uncertainties regarding which measures are likely to be implemented in the future, when the air quality objectives are likely to be achieved. It is however extremely unlikely to be before 2010. Concentrations post-2010 will to some extent be dependent on the outcomes of the TIF investigations and to some extent on the progress of new technologies and the uptake of alternative fuels.

6 DEVELOPMENT OF THE ACTION PLAN

A Steering Group consisting of representatives from relevant Directorates within the City Council, and external organisations such as the Environment Agency, the Highways Agency and local transport operators was established to oversee the preparation of the Action Plan. A full list of organisations represented is shown in Appendix 1. The aim of this group was to identify existing and proposed policies and strategies, including those within the Local Transport Plan (LTP) that would impact positively on the air quality within the three AQMA's.

The Steering Group meetings began with a presentation from the Council's air quality expert on air quality and health, the legislative background, the National objectives, the current state of air quality in Coventry and the action planning process. Forecasts of future air quality were then considered against the required limit values.

The Steering Group then began the process of identifying actions under existing policy that were likely to result in an improvement in air quality. The broad background of the group enabled a large number of existing actions to be identified. In particular the LTP for the West Midlands was recognised as containing both the broad vision and a multitude of specific initiatives aimed at improving the transport mechanisms of the entire City. Measures that generate an improvement in traffic flow can often be beneficial to the improvement of air quality so the LTP was essential to the development of the Action Plan.

The Steering Group then reviewed the existing actions and sought to identify additional actions that were both feasible and had the potential to improve air quality within the AQMA's.

It was recognised that the Action Plan would only be effective if the effect of the actions and the likely impact on air quality were balanced. Appendix 1 of this report consists of tables of actions that were originally developed by the Steering Group for the previous version of this report, and then subsequently consulted on. The tables include information about the measures, some qualitative evaluation (impacts on air quality, other environmental impacts, economic impacts, cost, feasibility, compatibility with other council policies etc). From this evaluation, a prioritisation has been undertaken based on high, medium and low priority actions. Again, these classifications have been consulted on with the steering group.

7 TRANSPORT AND THE AIR QUALITY ACTION PLAN

7.1 THE LOCAL TRANSPORT PLAN FOR THE WEST MIDLANDS

The West Midlands Metropolitan Authorities Air Quality Action Planning Group have liaised closely with Transport Planners and consequently a number of schemes in the LTP can be found in this Action Plan.

Since the second LTP, published in 2003, a third LTP has been produced by The West Midlands Metropolitan Area. This third LTP, is referred to as LTP 2 to be consistent with Government terminology and was initially submitted in draft form to the Government in July 2005 and finalised in March 2006[1]. The air quality strategy for the Metropolitan Area has three elements, all of which recognise the fact that transport related pollution is the main cause for concern in these areas:

- Work with the Highways Agency (HA) in respect of emissions from motorway traffic.
- Detailed local initiatives to tackle local 'hotspots'.
- Policies which encourage more sustainable transport with less impact on air quality.

As one of the four shared transport priority themes, it is a mandatory requirement for LTP2 to contain a target on air quality. The target chosen for the West Midlands Metropolitan Area is:

"Reduce the average level of NO_2 by 1% between 2004/5 and 2010/11 in the areas where NO_2 exceeds the national objective"

The Strategic Environmental Assessment of LTP2 stated that the LTP in its entirety is expected to have a positive impact on air quality.

7.2 TRANSPORT INNOVATION FUND (TIF)

Predicted traffic levels in the West Midlands could rise by 15% between 2001 and 2011. Peak hour travel times could increase by 25-35% in the same period. The Government announced the details of the TIF in July 2005 promising substantial, long-term investment to enable better use of existing transport capacity. The West Midlands was one area to be successful in bidding for a proportion of this funding. The first stage of the feasibility work has reported and at the time of writing is under consultation[2]. In summary the findings of the study are:

[1] [1] http://www.westmidlandsltp.gov.uk/default.php?id=252

- Weaknesses in the metropolitans areas' transport links are already affecting the economy and quality of life
- Effects are likely to worsen between now and 2021
- There are a range of options available both to influence our travel behaviour and invest in the support mechanisms to do so and
- There is likely to be a requirement for significant additional transport investment.

The analysis shows that the scenario which included Road User Charging, supported by significant investment in the transport infrastructure is likely to have the most beneficial impact on congestion and related economic and environmental impacts. The work undertaken to date has been largely a desktop exercise and further work in ascertaining more realistically the risks and benefits of measures is underway. This includes meetings with business communities and residents to address specifically how the measures discussed in the report might affect them. The report currently under consultation is very much the beginning of the process designed to generate debate. The next steps in the process include more detailed surveys and analysis with businesses and residents and potentially some technology trials in partnership with Government as demonstrations as to how some of the measures might work in practice.

8 CLIMATE CHANGE AND AIR QUALITY

Climate change and air quality are both caused by emissions of air pollutants, often from the same sources. This means that at a local level many of the methods of abating greenhouse gases and air quality pollutants are similar.

The Air Quality Strategy for England, Scotland and Northern Ireland (2007) states "...Local Authorities should bear in mind the synergies between air quality and climate change, and added to the benefits to the local, regional and global environment of having an integrated approach to tackling both climate change and air quality goals." The Air quality Action Plan has been developed with full consideration of any impacts on climate change. Many actions within the Air Quality Action Plan will reduce emissions of greenhouse gases and have been incorporated within the Draft Climate Change Strategy.

[2] http://www.westmidlandsltp.gov.uk/news.php?id=2520

There are some measures to reduce greenhouse gases that can increase emissions of air pollutants and visa versa. For example, encouraging use of diesel vehicles as a means to reduce carbon dioxide emissions has had an overall detrimental effect on local air quality because of higher emissions of nitrogen oxides and particulate matter. However, understanding of both air quality and climate change is increasing daily and new technologies are arising all of the time, so it is possible to chose solutions which are beneficial to both so long as options are considered wisely.

Although there have been many improvements in Air Quality over the 20th Century reduction in air pollution is still necessary, as is reduction in greenhouse gas concentrations.

9 PLANNING AND AIR QUALITY

In November 2004 Planning Policy Statement 23: Planning and Pollution Control was released. This document recognises air quality is a material consideration in planning as development control decisions can have a direct or indirect bearing on existing air quality and creating exposure to poor air quality. It is also recognised that all developments within an AQMA which may cause air quality deterioration should not be refused, especially as some Local Authorities have declared whole borough AQMA's. Road transport is the major contributor to poor air quality and planning can play a key role in ensuring developments reduce the need to travel and encouraging travel choices. PPS 23 acknowledges the importance that the planning, transport and air quality control functions of Local Authorities work closely together on development issues.

Coventry City Council is currently producing two documents that will aid with integrating air quality considerations with local development in the city. These are:

- Supplementary Planning Document for Sustainability Assessments
- Information Requirements For Planning Applications And Other Submissions which is in draft format at present

10 CONSULTATION

The process of consultation is critical to the success of any Air Quality Action Plan, however there is little flexibility in terms of different courses of action available to tackle NO_2 in Coventry as the most significant source is from transportation, and the LTP published in 2003 already set out the comprehensive strategy for transportation policy across the West Midlands.

Following a report to the Cabinet Member for City Services consultation was performed in a manner which was sustainable but which would allow access to members of the public. Briefing documents asking for comment were prepared which explained Air Quality and Action Planning and describing Actions specific to the AQMA's. These were sent to properties residential properties in the Air Quality Management Area. The consultation draft of the Air Quality Action Plan was made available on the Council's web page at www.coventry.gov.uk/airpollution along with the briefing documents and comments were invited. The Action Plan was also made available in libraries local to the AQMA's, including the Central Library in the City Centre. The briefing document on Air Quality and Action Planning is given in Appendix 2.

An email was sent to the people and organisations listed below with a link the Action Plan on the web page were requested to comment on the Draft Action Plan by email with a request for comments.

The Environment Agency
The Highways Agency
The Health Protection Agency
Coventry Primary Care Trust
Nuneaton and Bedworth Borough Council
Warwick District Council
Rugby Borough Council
Walsall MBC
Dudley MBC
Solihull MBC
Sandwell MBC
Birmingham City Council

Wolverhampton MBC
North Warwickshire DC
CENTRO
Travel Coventry
Stagecoach Bus Company
Mike De Coursey Travel
Friends of the Earth
Members of the Air Quality Action Planning Steering Committee

In addition presentations were given to the Environment Theme Group and the Transport Theme Group, which include senior people from the public, private, community and voluntary organisations. A copy of the presentation was also sent to the PCT and there are plans to discuss air quality issues with the PCT in autumn when restructuring has been completed.

Consultation had already taken place on the proposals for improvements in AQMA 2. A presentation was given to the Ball Hill Trader's Association in July 2005, followed by a leaflet drop to all local residents, and then a public display in July and August. Comments from people who viewed the displays suggested recognition of the air quality problems in Ball Hill, but a disagreement with the specifics of the proposed traffic management measures. Therefore, in October 2005 the City Council ran a workshop where residents, traders and external organisations such as Centro were given the chance to use their valuable local knowledge to help design the traffic management schemes. This was an extremely useful exercise and helped to increase the profile and understanding of the air quality problems in this area of the city. It also gave local residents and traders some responsibility for the future of their neighbourhood.

Very few comments were received during the consultation on the Draft Air Quality Action Plan. The majority of comments were received from other Local Authorities responding favourably to the plan and requesting advice on the formulation of their own action plans. A response from the Highways Agency indicated their support of the actions in the Action Plan and a request to be involved in the development of measure 2.8, re-routing traffic for AQMA 2.

11 PROPOSED ACTIONS

Appendix 3 contains the actions that have been identified by the Steering Group as having the potential to improve air quality in the three AQMA's. The actions are listed under the following headings:

1. Specific Proposals: AQMA 1, City Centre
2. Specific Proposals: AQMA 2, Ball Hill
3. Specific Proposals: AQMA 3, Queensland Avenue
4. Reducing Vehicle Emissions
5. Improved Public Transport
6. Improved Efficiency of Highway Networks
7. Alternative Transport Modes and Policies
8. Non-transport Measures

Each action lists the body (or bodies) responsible for its implementation, how it will be implemented, an intended completion date, an estimate of financial cost, a qualitative evaluation including issues such as impacts on air quality, climate change, public perception, social impact, feasibility and a prioritisation that was reached by not only using this evaluation, costs and benefits, but also taking into consideration issues such as whether funding is already available, the timescales the measure could be feasibility implemented within. For the purposes of this cost - benefit analysis 'Low' equates to less than £100,000, 'Medium' equates to between £100, 000 and £1000,000 and 'High' equates to greater than £1000,000. It is not possible to accurately quantify the expected improvement in air quality for each option and therefore an estimate of high, medium or low improvement has been used to allow a comparison between the proposed actions. The wider impacts of the work have been considered by estimating the percentage of people in the city of Coventry who would be positively affected.

The level of reduction in NO_X necessary to reduce NO_2 to below the annual average limit value of 40 µg/m^3 is uncertain (as discussed in Section 5 of this report). What is certain is that the levels of traffic reduction needed to reduce NO_2 to an annual average of below 40 µg/m^3 is unlikely to be achieved by the end of 2010 through the application of these actions. However, these actions are considered to strike an

appropriate balance between the direct and indirect costs of taking action and the benefit in terms of improved air quality.

12 IMPLEMENTATION OF THE ACTION PLAN

The Environmental Health Service will take the lead role in ensuring the implementation of the Action Plan and monitoring the improvements in air quality achieved as a result of the actions taken. Annual Action Planning Progress Reports will be published on the progress of implementation. Since road traffic is the most significant source of NO_2 it is especially important to ensure that the Air Quality Action Planning process is harmonised with the process of Local Transport Planning. The two processes will work alongside each other with each feeding information into the other. As the TIF study progresses, it is hoped that actions to be undertaken on a longer timescale will be identified. The impacts of the process on air quality are already being fed into the TIF process and this will continue as the process moves on to defining measures. Coventry City Council will ensure that this Action Plan is kept up to date, and the Secretary of State and other statutory consultees will be consulted if the need arises to revise it.

DEFRA have issued guidance on their expectations for the submission of annual progress reports until 2010. The first report is expected to be submitted by the end of the April following completion of the final Action Plan. Compliance with these requirements should provide effective, auditable monitoring of progress.

As an indication of how work is progressing in the three AQMA's, an update of the situation as at is given below:

12.1 AQMA 1

Work to improve access to Pool Meadow Bus Station in AQMA1 was completed in 2006. This has reduced the numbers of buses and bus stops in Burges, which should improve air quality significantly in this area. Monitoring over 2007 will show how these measures have affected levels of NO2 in the AQMA 1.

12.2 AQMA 2

Consultation for improvements in AQMA 2 took place in 2005. A presentation was given to the Ball Hill Trader's Association in July, followed by a leaflet drop to all local residents, and then a public display in July and August. Comments from people who viewed the displays suggested recognition of the air quality problems in Ball Hill, but a disagreement with the specifics of the proposed traffic management measures. Therefore, in October 2005 the City Council ran a workshop where residents, traders and external organisations such as Centro were given the chance to use their valuable local knowledge to help design the traffic management schemes. This was an extremely useful exercise and helped to increase the profile and understanding of the air quality problems in this area of the city. It also gave local residents and traders some responsibility for the future of their neighbourhood. Implementation of many of the measures in AQMA 2 are already well underway.

12.3 AQMA 3

The proposed works around AQMA 3 have been completed. This comprised of a bus showcase corridor along Hearsall Lane, which lies to the immediate south east of the AQMA, and improvements to the Spon End junction directly to the west. The consultation strategy used for these works was similar to that for Ball Hill. It is too early yet to assess whether these works have had an impact on the level of congestion around this area, or indeed whether there has been an improvement in air quality concentrations.

13 SUPPORTING DOCUMENTS

Coventry City Council Documents

Updating and Screening Assessment (2006)

Air Quality Progress Report (2005)

Stage 4 Further Assessment for AQMA 3 (2005)

Amended Stage 4 Further Assessment for AQMA's 1 and 2 (2005)

Detailed Assessment (2004)

Updating and Screening Assessment (2003)

Air Quality Updating and Screening Assessment (2006)

Other Documents

Air Quality Action Plans: Interim Guidance for Local Authorities. NSCA

Air Quality and Traffic Management. DETR (1997)

Air Quality Management Areas: Turning Reviews into Action. NSCA

Air Quality: Planning for Action PART 2 of the NSCA Guidance on the Development of Air Quality Action Plans and Local Air Quality Strategies. NSCA (2001)

Consultation for Local Air Quality Management. The How To Guide NSCA (1999)

Developing Local Air Quality Action Plans and Strategies: The Principal Considerations. DETR (1997)

Moving With the Times – West Midlands Local Transport Plan 2003

Part IV of the Environment Act 1995 Local Air Quality Management Policy Guidance LAQM.PG(03). DEFRA (2003) (and addendum LAQM.PGA(05))

Provisional West Midlands Local Transport Plan 2005.

West Midland Local Transport Plan 2006

AQEG "Trends in Primary Nitrogen Dioxide in the UK -draft report for comment" August 2006

"The Air Quality Strategy for England, Scotland, Wales and Northern Ireland – A consultation document on options for father improvements in air quality" DEFRA

"The Air Quality Strategy for England, Scotland, Wales and Northern Ireland" DEFRA, July 2007

Rogers Review of National Enforcement priorities for Local Authority Regulatory Services, 2007

APPENDIX 1: STEERING GROUP

Councillor Foster	Cabinet Member (City Services)
Clare Beattie	Air Quality Consultants
Andy Duncan	Regeneration Services (CCC)
Ann Oliver	Environmental Health Manager (CCC)
Barry Cocks	Project Manager. (Environmental Regeneration)
Chris Thomas	Sustainable City Co-coordinator
Clare Beattie	Air Quality Consultants
Daniel Rowlson	Principal Environmental Health Officer (CCC)
Dilip Chauhan	Transport and Supplies Manager(CS)
Frank Barlow	Taxi Licensing officer (CCC)
Jackie Dooley	Network Management
Kathryn Bell	Air Quality Officer (CCC)
Kevin Wilkins	Urban Designer (CCC)
Lesley Wroe	City Planning Manager (CD)
Martin Trewinnard	Senior Policy Planner (CCC)
Myles Mackie	Research and Strategy Manager
Nigel Mills	Policy and Sustainable Transport Team Leader (CCC)
Nick Richards	Transport Delivery Unit (CD)

Decourcey Travel
Travel Coventry
Centro

Invitations were also sent to

The Highways Agency
The Primary Care Trust
Friends of the Earth
The Environment Agency

APPENDIX 2: CONSULTATION BREIFING DOCUMENT

AIR QUALITY ACTION PLANNING IN COVENTRY

What does Air Quality mean?

The term "Air Quality" refers to how polluted the air we breath is with substances that are harmful to human health. Air Quality is measured using objectives set out in the National Air Quality strategy. When air pollutant levels in an area are close to or above these objectives the area is said to have poor air quality.

What is the Council's Role in Air Quality?

The Council has several roles in air quality.

- We are responsible for monitoring air pollution around Coventry and seeing if the UK objectives are met. We use technical guidance and our knowledge of Coventry to identify areas where pollution levels may be high and then we monitor the pollution levels to see what they are like. The pollutants we look at are:

  Benzene
  1,3-Butadiene
  Carbon Monoxide
  Lead
  Nitrogen Dioxide
  Particles (PM10)
  Sulphur Dioxide

When concentrations of pollution in an area are higher than the objectives we have to produce an Action Plan to try to reduce the levels of air pollution in that area.

- We apply various legislation to reduce emissions from domestic and commercial premises and regulate industrial processes to limit their emissions.

- We have a responsibility to consider air quality for Planning Applications.

What is an Air Quality Management Area?

Areas where the UK air quality objectives are not met have to be declared an Air Quality Management Area (AQMA). The AQMA identifies the area to be targeted in the Action Plan. The size of the AQMA is decided by the Local Authority. In Coventry we have three AQMA's each of which covers an area which is slightly larger than the area with poor air quality.

Which Pollutants are a Problem in Coventry?

In Coventry the only pollutant that is at levels above the UK objectives is called nitrogen dioxide. It mainly comes from road traffic so levels are often high on busy, congested streets.

What are the health effects of Nitrogen Dioxide

The main effect of breathing in raised levels of nitrogen dioxide is the increased likelihood of respiratory problems. At the levels found in Coventry most people should not notice an impact but nitrogen dioxide can have significant impacts on people with asthma and other respiratory conditions because it can cause more frequent and more intense attacks. Children with asthma and older people with heart disease are most at risk.

What are the Councils Plans?

We have developed an Air Quality Action Plan to try to improve air quality in the three Air Quality Management Areas. Many of the measures in the Action Plan target improvements in the specific AQMA's. Some are more general, such as improving public transport and alternative transport policies. You may notice that some of the Actions have already taken place or are being worked on at the moment. Some of the Measures for each AQMA are described on the attached fact sheets. If you want to look at the full Air Quality Action Plan you can find it on our web page at http://www.coventry.gov.uk/airpollution

What can I do?
There are a number of things we can all do which can reduce the amount of pollutants in the Air.

- Before using the car ask yourself if you could walk, cycle or take public transport instead? If using your car try and share the journey with other people.
- Make use of Park and Ride facilities
- If it is possible, and your company allows it, work from home when you can.
- Drive smoothly. Avoid sharp acceleration and heavy braking. This saves fuel and reduces accident rates.
- Check your revs - change up before 2,500 rpm (petrol) and 2,000 rpm (diesel).
- Drive away immediately when starting from cold - idling to heat the engine wastes fuel and causes rapid engine wear.
- Check your tyre pressure regularly - under-inflated tyres are dangerous and can increase fuel consumption by up to 3%.
- Plan your journeys to avoid congestion and road works if possible.
- If you're stuck in a jam, switch the engine off if you expect to be there for more than a minute or two. Cutting the engine will save fuel and reduce emissions.

Blue Sky Ideas

We're interested in hearing any ideas you have for reducing air pollution so please send them in. We can't promise that they will be adopted but they will be considered.

Please send your comments on the Air Quality Action Plan in to;

Kathryn Bell

Environmental Health
Environmental Protection
Broadgate House
Broadgate
Coventry
CV1 1NH

Email address: Kathryn.bell@coventry.gov.uk

APPENDIX 3: ACTIONS PROPOSED

Notes on evaluation:

The tables show the actions proposed to improve air quality, the stakeholder responsible for those actions and what projects are currently on-going or planned.

The feasibility and impact of the action on air quality and other areas is shown using a 'traffic light' system.
: positive impact (even if only minimal)
: either some positive and some negative impacts, or a generally neutral effect,
: signifying negative impacts.

The economic impact relates to any impacts on local businesses or others, rather than the cost of the measure itself, which is reflected under cost.

A prioritisation has then been undertaken taking into account this evaluation, but inevitably also based on judgement, the magnitude of impacts (which is not explicit from the colour system) and whether funding is available.

Costs are defined as low, medium and high as follows: Low = < £100K Medium = £100K to £1 Million High - > £1 Million. Costs are only relevant where funding is needed for implementation. In many cases, schemes are being implemented for a wide variety of reasons and hence will be noted that funding is not required in terms of this document.

1. Specific proposals: AQMA 1, City Centre

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
1.1 Pool Meadow	CCC City Development – project Champions Office	CCC will 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. This will reduce the number of stops and buses in Burges	Local air quality		n/a	No extra funding required – already fully funded	Already complete
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: The re-development of the bus station provided an ideal opportunity to reduce the number of stationary buses in the AQMA. There are no longer bus stops in Burges, but there are still bus stops in Trinity Street and Hale Street. A more integrated transport system with interchanges between modes of transport may persuade more people to use public transport and thus help in modal shift from private vehicles. Public perception of the scheme has been generally positive, although buses crossing the pedestrianised area in front of the bus station has not been well received by some.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
1.2 Relocation of Taxi ranking 	CCC City major Projects	CCC will consider changing the location of taxi ranks as part of the review of access into this area of the city centre for both public transport and private vehicles	Local air quality		High	No extra funding required – to be funded within existing funds	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Both the Taxi Licensing officer and the Taxi Trade must be consulted on any proposed changes to ranks. Badly designed/located ranks can increase pollution.							

2. Specific proposals: AQMA 2, Ball Hill

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
2.1 Bus Showcase Route	CCC City Development Directorate (Transport Delivery Unit)	CCC are implementing a bus showcase route along the Walsgrave / Ansty Road corridor to serve the hospital	Local air quality		Medium	No extra funding required – funding secured through Prime Lines Project	March 2007
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: This measure is covered more generally under 5.1 (Prime Lines), with 1 of the showcase routes likely to have impact on the Ball Hill AQMA specifically. Funding has been secured in this location and is due to be complete in 2007.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
2.2 Park and Ride	CCC City Development Directorate (Transport Delivery Unit)	CCC is investigating further sites for east and west park and ride services to complement the existing north and south park and ride sites.	Local air quality		Medium	High cost Funding identified in Local Transport Plan	On-going
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: The majority of the traffic coming through Ball Hill is going into Coventry, therefore a Park and Ride could theoretically encourage more drivers to change mode to come into Coventry.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
2.3 On-street parking enforcement 	CCC City Services (Network Management)	Decriminalised parking powers will be used by CCC to reduce illegal parking which restricts traffic flows	Local air quality		High	No extra funding required – funding secured	2007
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: There is a particular problem in this location with double parking causing congestion and therefore this measure is prioritised for this area in order to reduce this issue.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
2.4 On-street parking management 	CCC City Development Directorate (Transport Delivery Unit)	Revised layouts will be implemented by CCC to restrict the potential for obstructive parking	Local air quality		High	No extra funding required – funding secured	March 2007
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Again, in order to reduce problem parking, the locations and orientation of parking bays are being changed to reduce double parking and increased congestion.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
2.5 Traffic Signal Control 	CCC City Development Directorate (Transport Delivery Unit)	Improved signalisation of the junction will be implemented to ease the passage of vehicles and reduce delay and congestion	Local air quality		High	No extra funding required – funding secured	March 2007
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: As part of the wider UTC project across Coventry, Ball Hill has been prioritised for implemented as it is so congested.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
2.6 Junction layout 	CCC City Development Directorate (Transport Delivery Unit)	CCC are to propose the restriction of some turning movements on Clay Lane / Brays Lane to ease traffic flows and reduce delays and congestion	Local air quality		High	No extra funding required – funding secured	March 2007
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: At the time of writing, the junction layout at Ball Hill is being improved.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
2.7 Off Street parking	CCC City Development Directorate (Transport Delivery Unit)	CCC will review off street parking tariffs in the Ball Hill area	Local air quality		Medium	No extra funding required – funding secured	March 2007
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Currently the car park in the area is under utilised as there is a charge, whereas it is free to park on street (and many people double park). There is also no sign posting to the car park, so unless you knew the area would not know it is there. The tariff for the car-park is under consideration. There are some proposals to make the car park free for a short term parking which is likely to mean a very positive public perception. The car park is being refurbished including new pay & display machines and CCTV. Additional landscaping is included as is cycle and motorcycle parking. The recycling area has been screened off to improve the appearance.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
2.8 Re-Routing traffic 	CCC City Services (Network Management)	Review of strategic routing into/ out of city centre	Local air quality		High	No funding available	On-going
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Currently traffic, especially HGV's from the M6/M69 are directed through the AQMA, which is a narrow single carriageway road, rather than down the A444 or wider roads with less residential exposure. Signing on trunk roads is under the control of the Highways Agency and will require them to agree to fund any changes to the route signing. The Highways Agency have indicated they wish to enter into early stage discussions regarding this. Some route resigning work has been undertaken as a short-term measure.							

3. Specific proposals: AQMA 3, Queensland Avenue

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
3.1 Bus Showcase route	CCC City Services (Network Management)	Bus Showcase Corridor along Hearsall Lane	Local air quality		n/a	No extra funding required – funding secured	Completed Autumn 2005
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: This measure is covered more generally under 5.1 (Prime Lines). Hearsall Lane showcase routes should impact on the Queensland Avenue AQMA. Funding has been secured in this location and this showcase bus route is complete. It is unclear what impact the measure has had in terms of improvements in air quality. Allesley Old Road will not be a showcase route but will come up to showcase standard.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
3.2 Junction improvement at Queensland Avenue/ Allesley Old Road 	CCC City Services (Network Management)	CCC will investigate junction improvement to reduce congestion and emissions	Local air quality		High	Funding identified for investigation. No funding identified for actual scheme.	Unclear until outcome of the investigation
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Complaints about Air Quality are increasing in this area. AQMA is a single carriageway road off the main road –improving the AQMA may cause more congestion on the main road.							

4. Reducing vehicle emissions

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
4.1 Enforcement of idling vehicles legislation	CCC City Services Directorate (Environmental Services)	Not currently being implemented. Feasibility needs to be investigated.	Local air quality		Low	Low Cost Additional funding required	2008 for feasibility – ongoing if implemented
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: The Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulations 2002 (Statutory Instrument 2002 No. 1808) enables authorised individuals to issue a fixed penalty notice to vehicles stationery on a road and can require them to switch off their engine. In some circumstances, for example where buses congregate, this may provide localised improvements in air quality. Enforcement of this legislation is not currently underway in Coventry but prioritised locations for enforcement will be considered as part of this action plan.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
4.2 Improve the Council fleet (in terms of emissions)	CCC - Individual Departments	Currently fleet management is undertaken across the council. It is suggested that through procurement, emissions are taken into consideration on purchase.	Local air quality		Medium	No extra funding required – funding within existing funds	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: As an organisation with a large vehicle fleet and even greater numbers of vehicles operated via contract, it is important that Coventry City Council leads by example by favouring low emissions vehicles when purchasing vehicles for its own fleet. Coventry currently has 2 electric Peugeot 106's and 2 Toyota Prius (duel fuel and electric) vehicles which are well used. Each function organises its fleet management separately, and therefore it is suggested that an overall policy for including emissions in the decision making process (through procurement) is introduced.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
4.3 Expanding a city network of low emission vehicles 	CCC - City Development Directorate & City Services	CCC will continue to pursue the current research and development projects aimed at encouraging low emission vehicles	Local air quality		High	Low Cost Additional funding required	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: A previous project was to have a city wide network of electric vehicle charging points, however at that time, electric vehicles were not as popular as anticipated and the funding was cut. However, Coventry City Council is currently working with a number of companies to ensure that the Council are at the cutting edge of technology with regards to low emission vehicles. This will continue and potentially electric vehicle charging points, as a pilot study, investigated as a means of encouraging the use of electric vehicles.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
4.4 Improve bus emissions 	Centro and large fleet operators in Coventry – e.g. Travel Coventry, Stage Coach and Mike Decourcey Travel Ltd	The bus operators will continue modernisation of the bus fleets with low emission vehicles	Local air quality		High	Commercial investment would be required for any large scale improvements	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: The introduction of increasingly stringent European emissions standards mean that new buses are increasingly cleaner. This can be encouraged through voluntary schemes, or implemented through Bus Quality Partnerships for the commercial bus services. One way of encouraging operators to retrofit old buses is to include minimum emissions standards into Council contracts for supported bus services, for example those funded via Education Departments for the school bus services.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
4.5 Improvements in taxi fleet	CCC City Development Directorate (Taxi licensing)	CCC are implementing ongoing work in improving the taxi fleet through the licensing regime	Local air quality		Medium	Medium Cost Commercial investment required	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				

Background information:
As part of the Local Transport Plan, the West Midlands area cover taxis and Private Hire Vehicles in an appendix which recognises the contribution that taxi and private hire services have to an integrated transport strategy. At present, each of the local authorities license taxis and Private Hire Vehicles separately leading to disparate policies in each of the authorities areas. In order to bring about greater integration and unified standards and policies, a West Midlands Neighbouring Authorities Working Group has been created. This Group has grown from an initial membership of a dozen local authorities to a current membership of 27, creating a regional group working to introduce complementary policies and standards that reflect the different characteristics of the member authorities. There is a potential to include tighter emissions standards (or enforcement of current emissions standards) for taxis and private hire vehicles across the West Midlands. The scheme that is currently proposed for London could be used as a template[3]. However, taxis in Coventry are generally a much newer fleet than other comparable locations. Coventry age policy for renewal is 10 years (rather than the 15 which it was in London) which means the average age of the fleet is 6 years old. Coventry licenses only one vehicle type, Euro IV for this vehicle was launched about a month ago, i.e., in 10 years time, all the taxis will be Euro IV. Any Hackneys over 5 years old are checked every 6 months for emissions. This encourages proprietors to maintain them. Pushing for taxi fleet renewal may therefore not be as cost effective in Coventry as it would be in London.

[3] London's 20,000 black taxi fleet will be expected to meet strict emissions standards by 2007, under the Mayor's Taxi Emissions Strategy. Taxi drivers will be able to meet the requirements by bringing forward the date at which they planned to invest in a new, cleaner cab, fitting abatement technology or converting to run on alternative fuels. Funding for these options will be provided through a small environmental surcharge on each fare, from April 2005.

5. Improved public transport

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
5.1 Prime Lines 	CCC City Development Directorate (Transport Delivery Unit)	CCC is investing heavily in the development of 7 bus showcase corridors across the city in order to increase modal shift to public transport. Improvements include new shelters, buses, bus lanes and real time information at bus stops	Local air quality		High	No extra funding required – funding secured	2004 - 2008
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				

Background information:
PrimeLines is a four year £42million project aimed at improving all aspects of the bus journey within Coventry, through a partnership between the City Council, Centro and the bus operators. The network of seven Bus Showcase routes runs across the city, and will give the people of Coventry a range of incentives for bus travel, and will offer users the very best vehicles and service. PrimeLines has already started to take shape across Coventry with the appearance of new shelters, buses and bus lanes. Work has now been completed on the Binley Road bus lane; and junction improvements at Foleshill Road and Lockhurst Lane, Spon End, Longford Square, and Clifford Bridge Road with Belgrave Road. The new 'Coventry Blue' bus shelters have been appearing all over the City – see the following link for more details:
http://www.coventry.gov.uk/ccm/navigation/transport-and-streets/public-transport/buses---primelines/

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
5.2 Bus lanes (usage of and parking in) 	CCC City Development Directorate (Transport Delivery Unit)	CCC will use parking attendants (Phase 1) to enforce parking in bus lanes and then CCTV (phase 2) to enforce bus lane usage and parking	Local air quality Climate change Compatibility with other council policies Public perception Economic impact Social impact Feasibility % of people positively affected		High	No extra funding required – funding secured	On-going
Background information: Reducing parking in bus lanes should reduce localised congestion (thus speeding up buses). Buses with a more reliable journey time will encourage more people to use them, and less stop-start driving will directly reduce emissions.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
5.3 Bus Rapid Transit	CCC City Development Directorate (Transport Delivery Unit)	CCC are developing a "Bus Rapid Transit" proposal to operate through the city using tram type vehicles which do not require tracks.	Local air quality Climate change Compatibility with other council policies Public perception Economic impact Social impact Feasibility % of people positively affected		Medium	High Cost Additional funding required	Implementation from 2012 subject to DfT funding
Background information: Where public transport is seen as being faster, more reliable and effective than commuting by car, more people are likely to make the modal shift. This Scheme is a joint bid between Centro and Coventry City Council, and possibly Warwickshire County Council. It will provide a high quality, high frequency, limited stop bus service that operates like a tram that will offer a fast, flexible and reliable service that can compete effectively with the car. The route will improve public transport through the regeneration areas of north Coventry. It will link a number of large developments including the Arena stadium and exhibition hall, a new Park & Ride North, Longford, Foleshill District Centre, Prologis Business Park, and new housing in Radford and Swanswell Development Area. Potential extensions into Warwickshire would also serve Nuneaton and Warwick University.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
5.4 Coventry Station Transport Hub	CCC City Development Directorate/ Private Development Partner	A transport hub at the station has been an aspiration since the Coventry Development Plan 2001. The hub forms part of the comprehensive redevelopment of the station area.	Local air quality		n/a	No extra funding required – funding secured through LTP and developers	Already implemented
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: The area around the railway station is being brought into single ownership by a company which wants to develop a 1 million sq ft, mixed use scheme, adopting Transport Development Area principles. The proposals 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.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
5.5 Canley/ Western access	CCC, external agencies and Centro	A number of significant changes are taking place in the west of the City, which will result in the major redevelopment of several large sites.	Local air quality		Medium	No extra funding required	Over timescale of LTP2 and beyond
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: This scheme proposes improved links with the inter-urban highway network to the West of Coventry and increases public transport accessibility, aiding economic growth. Further exploratory work has been undertaken through the Coventry/ Solihull/ Warwickshire sub-regional study. A range of significant improvements to the transport network will be required to meet changing transport needs which should have a knock on effect in other areas of Coventry.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
5.6 Park and Ride	CCC City Development Directorate (Transport Delivery Unit)	CCC is examining two park and ride schemes in the east and west of the city	Local air quality		Medium	High Cost Funding identified in Local Transport Plan.	2008/2010
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				

Background information:
The Sprint project (a bus rapid transit) involves implementing Park and Ride. The project aims to link Bedworth, Coventry, Warwick University and Kenilworth using new tram like vehicles, but on existing and new (segregated) sections of road. Consultation has begun on routes and the scheme will include enhanced Park and Ride for Coventry which is likely to be in the North of the City.

6. Improved efficiency of highway networks

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
1.3 Feasibility study into long-terms options for cutting congestion	West Midlands Metropolitan Authorities, external agencies and Centro	Draft report published September 2006 on potential options. Further investigation to be carried out and drawn together in 2007.	Local air quality		Medium	No extra funding required – funding secured through TIF funds and matched by metropolitan authorities	2007 for feasibility study
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Congestion is currently estimated to cost the West Midlands around £2.5 billion every year and the seven metropolitan authorities, in partnership with the passenger transport authority have committed to investigating how this should be tackled. This has resulted in the most comprehensive study into congestion in the West Midlands ever undertaken, and it contains evidence about the rising traffic levels in the region. The study looks at the feasibility of different options with the aim to stimulate debate. Future work includes extensive consultation and potentially some technology trials (in partnership with Government) as a demonstration of how some of the options might work. Work to date suggests that Road User Charging supported by significant investment in the transport infrastructure is likely to have the greatest impact on congestion and therefore air quality. More work will be undertaken investigating options in more detail with the study progressing into 2007.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
6.1 Red Routes	CCC City Development Directorate (Transport Delivery Unit)	CCC will be developing a network of strategic red routes (no stopping) as part of the prime lines project	Local air quality		Medium	Funding secured for trial. Additional funding approval from Government required for package 2.	2005-2008
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: This Scheme aims to provide a network of 419 kms of Red Routes over the West Midlands in two phases. Red Routes introduce strict controls on vehicle stopping, parking and loading, and are designed to improve the flow of traffic, together with local environmental improvement works.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
6.2 Urban Traffic Control (UTC) 	CCC City Development Directorate (Transport Delivery Unit)	CCC will upgrade the UTMC system as part of Prime Lines which should improve the efficiently of the highway network (i.e. smooth flow).	Local air quality		High	No extra funding required – funding secured	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: UTC seeks to make more efficient use of existing infrastructure and reduce congestion on the network. It will make traffic signals more efficient, provide a common platform for bus priority measures, deliver more variable message signs, and create a technical platform which enables intelligent transport services to be deployed. The project has been developed in partnership with the police, Highways Agency and public transport operators.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
6.3 Route Resigning	CCC City Development Directorate (Transport Planning)	CCC will continue to upgrade road direction signs along all major radial routes in the City (e.g. signs to the ring road and car parks).	Local air quality		Medium	No extra funding required – funding secured through LTP2	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Poor travel planning, exacerbated by poor signage can be a major contributor to unnecessary journeys, congestion and therefore pollution. Upgrading direction signs should decrease unnecessary mileage where people do use private vehicles, thus helping to reduce emissions and overall pollutant concentrations.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
6.4 Variable Message Signs	CCC City Development Directorate	CCC will use 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	Local air quality		Medium	No extra funding required – funding secured	April 2007
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Using VMS to highlight speeds of bus compared to car travel, as well as real time air quality information will help to raise awareness of air quality issues and potentially persuade people to change mode of travel away from private vehicles. This is particularly important in relation to raising awareness during pollution episodes.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
6.5 General Highway Improvements 	CCC City Development Directorate (Transport Planning)	Traffic management schemes will be undertaken by CCC to deliver minor highway improvement works such as road markings, sign and junction improvements.	Local air quality		Medium – High (dependent on costs)	No extra funding required – funding secured	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: These minor schemes are valuable for minimising congestion and improving road safety, but can also provide large benefits for disadvantaged road users, such as disabled people and cyclists, which improves accessibility. Potentially provides local solutions to local pollution hot spots.							

7. Alternative transport modes/ policies

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
7.1 Cycling 	CCC City Development Directorate (Transport Planning)	CCC will continue to 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	Local air quality		High	No extra funding required – funding secured through LTP2 and Sustrans	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: The Cycling Strategy within the West Midlands LTP (http://www.westmidlandsltp.gov.uk/2006/appendices/chapter_25.html) outlines the strategy for increasing cycling trips from a low baseline level through 4 areas of activity: infrastructure, training, promotion and integration. It is also recognised that performance in other areas of the LTP2, not specific to cycling, will have just as much, if not more impact upon the level of cycling. These are land use planning, demand management and speed management.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
7.2 Walking 	CCC City Development Directorate (Transport Planning)	CCC will continue to promote walking as a lower polluting means of transport.	Local air quality		High	No extra funding required – funding secured through LTP2 and Sustrans	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: The Walking Strategy within the West Midlands LTP (http://www.westmidlandsltp.gov.uk/2006/appendices/chapter_24.html) contributes to the vision of the West Midlands "as a place where walking will be 'commonplace' and where people increasingly choose to walk for shorter journeys and are not discouraged due to fears for road safety or personal security". A number of proposals are put forward in order to increase levels of walking for short journeys and also measure the impacts of these policies.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
7.3 Travel Plans 	CCC City Development Directorate (Planning and Strategic Transportation)	CCC will continue to require green travel plans with all major planning applications as well as continue to work with schools on school-based travel plans	Local air quality		High	No extra funding required – funding secured through LTP2 and commercial investment	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				

Background information:
Travel Plans can help companies or schools reduce the traffic impacts of their activities. Travel Plans look to reduce work related car trips through initiatives such as car sharing, providing pool cars, cycling incentives, cycle parking, showers and changing facilities, video conferencing, flexible working and discounted bus and train tickets. Travel Plans can be extremely cost-effective and have proved very successful in cutting car use. In many cases travel Plans have been shown to have positive economic impacts for the organisation involved particularly where the cost of land is high and parking spaces can be utilised for other uses.

Examples of Travel Plans in Coventry:
Denso UK, Walsgrave Triangle Business Park, uses technology extensively to avoid travel, through video conferencing and organising lift sharing for meetings. They have also linked into the Energy Savings Trust green fleet consultancy reducing their petrol consumption and emissions through driver training and purchasing of cleaner fleet vehicles.
E-on, Westwood Business Park, has used its travel plan to promote car sharing and gives staff payments for not travelling to work by car. Those who walk, cycle or take the bus get a payment with their salary at the end of the month.
Coventry Airport, has already stated its travel plan and has started to promote public transport and cycling to its employees, who predominantly live in the Coventry area. It has introduced new secure cycle storage and showering facilities and locker for staff and has a dedicated staff bus which is extremely popular. It has also started to promote public transport and cycling options to the general public using the airport. It has introduced an all in one ticket for those travelling to Coventry station and then taking the 737 bus to the airport.
University Hospital Coventry & Warwickshire (Walsgrave), have worked very hard to get their travel plan up and running due to the significant parking issues. They now have numerous buses travelling across the city to the hospital. A new bus waiting area has just been opened which has lots of information on the different buses. Also a new timetable is being developed to be sent out with outpatient appointments detailing all bus routes and their frequencies. New secure cycle storage has been installed along with showering facilities and lockers. And a cycle user group has been set up for cycling employees.

Coventry City Council has 2 school travel plan co-ordinators and 1 Workplace Travel Plan co-ordinator. In Coventry many travel plans are secured through the planning process using Conditions or Section 106 agreements and meetings with schools.

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
7.4 Safer Routes to School initiative 	CCC City Development Directorate (Strategic Planning)	CCC will continue to invest in 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	Local air quality		High	No extra funding required – funding secured through LTP2	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Safe Routes to Schools (SRS) is a project run by Sustrans www.sustrans.org.uk - a national organisation which promotes walking, cycling, and other forms of sustainable transport. One element of sustainable travel is to increase the safety of children and young people walking and cycling to school. This measure links in with school travel plans (see 4.3).							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
7.5 Safer Routes to Work initiative	CCC City Development Directorate (Strategic Planning)	CCC will continue to invest in 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	Local air quality		Medium	No extra funding required – funding secured through LTP2	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: In a similar way to Safer Routes to School, Safer Routes to work promotes walking, cycling and other forms of sustainable transport in the context of employment. This measure links in with work place travel plans (see 4.3).							

8. Non-transport measures

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
8.1 Planning Supplementary Document on air quality 	CCC City Development Directorate (Strategic Planning)	Not currently under consideration. CCC will consider the implications of writing and implementing an SPD (or equivalent) on air quality and planning. May be included in an SPD for Sustainability.	Local air quality		High	Low Additional funding or allocation of staff time required	n/a
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: An SPD on air quality could be used to 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 (i.e. that air quality is taken into consideration in as full a way as possible). An SPD could also outline potential mitigation measures, what is required from developers (and consultants working on behalf of developers) to ensure a consistent approach to assessing impacts and mitigating those impacts. In the long term this could bring about significant improvements in air quality.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
8.2 Energy Efficiency measures	CCC Housing and Policy Services and City Development Directorate	Housing and Policy Services to continue its programme of energy efficiency improvements in the domestic sector. CCC (City Development Directorate) are to develop an energy strategy	Local air quality		Medium	High for improvements in domestic sector (additional funding required), low to develop an energy strategy (funding already secured)	March 2011 for energy efficiency improvements.
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				

Background information:
Although not tackling the main source of pollution within the AQMA, energy efficiency measures should generally decrease NOx emissions from the domestic and commercial sector thus decreasing background concentrations across Coventry. Energy efficiency measures can also help in raising awareness of pollution issues more generally. A related initiative called *Switch it Off* is an energy saving campaign covering Coventry, Warwickshire and Worcestershire. Its aim is simple – to show the saving that can be achieved when a lot of people turn off unwanted lights and electrical appliances that have been left on standby. For five days in late 2006, the population will be encouraged to turn off all unnecessary lighting and electrical appliances, whether they are at home, at work or at school.

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
8.3 Control of Industrial emissions	CCC City Services Directorate (Environmental Protection)	CCC will continue to actively regulate its processes under Part 1 of the Environmental Protection Act 1990 and the Pollution Prevention and Control Act 2000. In addition the Council will survey its district for further premises requiring regulation under the above legislation	Local air quality		Low	No extra funding required – within existing funds	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				

Background information:
The Environmental Protection Act 1990 or Pollution Prevention and Control Act 1999 requires certain industrial processes to have an Authorisation or Permit to operate. This prior approval must be in place before the process is first operated. Coventry City Council is responsible for permitting over 80 processes within the city including activities such as vehicle re-spraying, furniture manufacture and unloading of petrol at petrol stations by delivery tankers. The operator of the prescribed process must comply with the conditions of the permit, and they will be subject to inspection to ensure this is the case. Conditions relate to the control of pollution by for example setting emission limits for certain pollutants, materials handling, staff training and equipment maintenance. Again, although not tackling the main source of pollution within the AQMA this measure should generally reduce NOx emissions and therefore reduce background concentrations across Coventry.

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
8.4 Emissions from domestic sources	CCC City Services Directorate (Environmental Protection)	CCC will continue to enforce the provisions of the Clean Air Act 1993 as applied to stack height provision and dark smoke offences	Local air quality		Low	No extra funding required – within existing funds	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Similarly to measure 8.3, enforcing the Clean Air Act 1993 may make some improvements to background concentrations of pollutants, thereby helping to reduce concentrations over Coventry as a whole.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
8.5 Control of Bonfires	CCC City Services Directorate (Environmental Health)	CCC will enforce the provisions of the Clean Air Act 1993 and part III of the Environmental Protection Act 1990 regarding emissions from bonfires within its area.	Local air quality		Low	No extra funding required – within existing funds	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: One particular statutory function of the Environmental Protection Team is to respond to complaints, including those relating to bonfires, and thus control emissions from localised sources, which can add to the overall pollution in Coventry. This is unlikely to have much impact on concentrations of NO_2 but may help to make some improvements to background concentrations.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
8.6 ISO14001	CCC City Services Directorate	CCC has adopted ISO14001 within its Public Protection Division with various commitments (see below).	Local air quality		Low	No extra funding required – funding secured	2007-2008
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				

Background information:

CCC has adopted ISO14001 within its Public Protection Division with commitments to the following:

- Investigate and compile an action plan to minimise our use of energy
- Investigate the feasibility of reducing emissions from private vehicles for commuting
- Reduce the air emissions from City Council vehicles by 5% from the 2005 baseline by the end of 2007
- Reduce air emissions from the use of grounds maintenance vehicles by 10% from a 2005 baseline by the end of 2007
- Reduce air emissions from the use of grass/hedge trimmers by 10% from 2005 baseline by the end of 2007
- Investigate the feasibility of reducing air emissions from the cremation of cadavers

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
8.7 Public Information	CCC City Development Directorate (Regeneration Services)	CCC will continue to raise awareness of Air Quality through the Light-Art-Installation on the top of Coventry Point.	Local air quality		Low	No extra funding required – funding secured	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Three centrally grouped towers (Coventry Point, Hillman House and Mercia House) are lit with a weather prediction for the following day. The colour of the crown indicates the next day's weather and LED beacons indicate temperature change, wind speed and direction and air quality.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
8.8 Public Awareness 	CCC City Services Directorate (Environmental Health)	CCC will continue to raise public awareness of air pollution through newsletters and displays around the city.	Local air quality		High	No extra funding required – within existing funds	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Pubic awareness activities can be used to help raise awareness of both city-wide issues and very localised (i.e. bonfire and statutory nuisance) issues. As an example, promotion of good health can be related to both the links between air pollution and health, and in also in encouraging people to cycle and walk, especially for short journeys. Collaboration with external organisations such as the local Primary Care Trust could explored as a way of increasing the number of people which the information and education on both health impacts of pollution, and encouragement away from private vehicles to healthier modes of walking and cycling. The Policy and Sustainable Transport team run events in Coventry to encourage movement away from the private car as part of the Regional TravelWise campaign which runs from May to October each year. This includes Car Sharing Day, a walking challenge, travel awareness days at the Universities and the Hospital. Air Quality needs to be linked into this.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
8.9 Sustainable Education Development	CCC City Services Directorate (Environmental Health)	CCC will provide 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	Local air quality		Low	Funding may be required	
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: Targeting education measures at school children is a useful way of ingraining behavioural habits early in life. This measure could be implemented in conjunction with schools travel plans and useful education packs in line with the national curriculum are available from both the National Society for Clean Air and Sustrans, making this a very feasible and cost-effective option assuming staff time exists for liaison with schools.							

Measure	Stakeholder	Current/ planned projects	Feasibility/ impacts		Prioritisation	Cost/ Funding	Completion date
8.10 Planning applications 	CCC City Development Directorate (Planning and Transportation)	CCC's development plan policy states that mitigation measures will be secured through emphasis on sustainable developments and through mitigation measures secured through planning obligations and or conditions.	Local air quality		High	No extra funding required – within existing funds	Ongoing
			Climate change				
			Compatibility with other council policies				
			Public perception				
			Economic impact				
			Social impact				
			Feasibility				
			% of people positively affected				
Background information: The assessment of planning applications in order to secure improvements in air quality through mitigation measures, emphasis on sustainable development and through contributions from planning obligations or conditions can in the long term make a significant step towards improving air quality or preventing deterioration. This measure is already being implemented, but processes to ensure the consideration of air quality could be improved. This measure could be implemented as one aspect of a Supplementary Planning Document (see measure 8.1).							

If you need this information in another format or language please contact us.

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