



**Chesterfield Borough  
Council  
Air Quality Strategy  
2008**

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## Introduction to the Strategy

### 1.1 Local Air Quality Management

- Local air quality management was introduced in the Environment Act 1995 and subsequent regulations. It requires a Local Authority to regularly review and assess the air quality in their area with respect to health-based Air Quality Objectives for seven of the main air pollutants. These air quality objectives are listed in Table 1 below. Should any of these Air Quality Objectives not be met by the required date, the Local Authority must declare an Air Quality Management Area (AQMA) and develop an action plan to address the air quality issues.

**Table 1: Summary of Objectives in the Air Quality Regulations 2000 and (Amendment) Regulations 2002 applicable to Chesterfield Borough Council.**

Pollutant	Concentration	Measured as	Date to be achieved by
<b>Benzene</b>	16.25µg/m <sup>3</sup> (5ppb)	Running annual mean	31/12/2003
	5.0 µg/m <sup>3</sup> (1.5ppb)	Annual Mean	21/12/2010
<b>1,3-Butadiene</b>	2.25µg/m <sup>3</sup> (1ppb)	Running annual mean	31/12/2003
<b>Carbon Monoxide</b>	10.0 mg/m <sup>3</sup> (8.6ppm)	Maximum daily running 8-hour mean	31/12/2003
<b>Lead</b>	0.5 µg/m <sup>3</sup>	Annual mean	31/12/2004
	0.25µg/m <sup>3</sup>	Annual mean	31/12/2008
<b>Nitrogen Dioxide* (NO<sub>2</sub>)</b>	200µg/m <sup>3</sup> (105ppb), not to be exceeded more than 18 times a year	1 hour mean	31/12/2005
	40µg/m <sup>3</sup> (21ppb)	Annual mean	31/12/2005
<b>Particles (PM<sub>10</sub>)</b>	50µg/m <sup>3</sup> not to be exceeded more than 35 times a year	24-hour mean	31/12/2004
	40µg/m <sup>3</sup>	Annual mean	31/12/2004
<b>Sulphur Dioxide (SO<sub>2</sub>)</b>	266µg/m <sup>3</sup> (100ppb), not to be exceeded more than 35 times a year	15 minute mean	31/12/2005
	350µg/m <sup>3</sup> (132ppb), not to be exceeded more than 24 times a year	1 hour mean	31/12/2004
	125µg/m <sup>3</sup> (47ppb), not to be exceeded more than 3 times a year	24 hour mean	31/12/2004
ppm = parts per million; ppb = parts per billion; µg/m <sup>3</sup> = micrograms per cubic metre *The objectives for nitrogen dioxide are provisional ** Assuming NO <sub>x</sub> is taken as NO <sub>2</sub>			

- Currently Chesterfield Borough Council does not have any Air Quality Management Areas nor an associated Air Quality Action Plan. However recent monitoring data has shown there are a number of roadside locations in Chesterfield at risk of exceeding the Air Quality Objective for Nitrogen Dioxide (NO<sub>2</sub>).
- The most recent air quality screening assessment (Update & Screening Assessment 2006) identified three roads at risk of exceedence of the Air Quality Objective for NO<sub>2</sub>:
  1. Chatsworth Road (A619)
  2. Derby Road (A61 South)
  3. Chesterfield Road, Staveley (A619).
- Along these roads, the locations which are cause for concern are only those where the public are likely to be exposed to the air pollution over a significant length of time.
- In light of this Update and Screening 2006, Chesterfield Borough Council completed a comprehensive assessment of these locations using detailed spatial modelling to investigate the air quality at these localities in more detail. This report is now available and proposes the designation of an Air Quality Management Area (AQMA).
- When an Air Quality Management Area (AQMA) is designated, the Local Authority must produce an Air Quality Action Plan, detailing what action the Council will take to tackle these air quality issues. This Strategy therefore aims to initiate the process of action planning for local air quality. Should an AQMA be declared, it is anticipated that this Strategy will be transposed into an Air Quality Action Plan.
- The overall aim of the Strategy is to reduce local air pollution to improve air quality across the Borough.

## 1.2 Air Quality Measurement Techniques

- Chesterfield Borough Council monitors for three of the seven pollutants listed in the Air Quality Regulations 2000 and (Amendment) Regulations 2002, namely Nitrogen Dioxide (NO<sub>2</sub>) and Particulate Matter (PM<sub>10</sub>) and benzene.
- The remaining four pollutants are not monitored directly using analysers as they are currently not at risk of exceeding the Air Quality Objectives. It must be noted however that these air pollutants are re-assessed regularly to ensure that they continue to comply with the Objectives.
- The current air pollutant monitoring network within Chesterfield consists of 2 Air Quality Stations and 38 passive Diffusion Tubes.

### Air Quality Stations

- There are two semi-mobile Air Quality Stations which can be located to monitor air quality at different locations across the Borough. Currently one of the Stations is located at a roadside location on Chatsworth Road, outside the proposed AQMA and has been in operation at this location since June 2008. Prior to its current position it was located outside Gilbert-Heathcote School in Whittington Moor since 2004.
- The other Station is located at Queens Park Annexe and has been in operation at this location since June 2008. This location is an urban background site, chosen to be broadly representative of the quality of air in residential areas across Chesterfield. Prior to June 2008, it was located in Birdholme and was also a background site at that location.
- Both Stations monitor for NO<sub>2</sub> (using a Monitor Labs chemiluminescence analyser) and PM<sub>10</sub> (using R&P Teom analyser) in secure air-conditioned cabins. Chatsworth Road also measures Benzene using a NPL pumped tube system. Both sites have recently been affiliated into the Automatic Rural and Urban Network (AURN) which is operated on behalf of DEFRA. Both stations are checked and calibrated at least every two weeks and also undergo daily remote screening by Bureau Veritas on behalf of DEFRA. Routine maintenance services and audits are also conducted every six months.
- The data is downloaded from both Stations every 24 hours directly to a PC in the Environmental Health Department at Chesterfield Borough Council where they are checked every day. The data is also downloaded by AEA Energy & Environment and Bureau Veritas who check the data to ensure systems appear to be order. If there appears to be any errors in the data, the Local Site Operator will visit the Station and will either fix any faults or arrange for an Engineer to visit the site.

### Passive Diffusion Tubes

- Passive diffusion tubes are used to measure NO<sub>2</sub> at a variety of locations across Chesterfield. They are extremely useful as their small size means they can be mounted in locations where it is not possible to position an air quality station. They are also moved easily and so make a useful tool for screening the air at a variety of locations, of which there are currently 38 sites. They are small tubes, open at one end, which essentially absorb NO<sub>2</sub> in the air for monthly intervals.

### 1.3 Nitrogen Dioxide: Sources and Health Effects

- High levels of air pollution are known to affect health, especially the young, the elderly and those with pre-existing medical conditions such as asthma, lung and heart disease etc. Very high concentrations of some pollutants have been associated with the development of cancer, however it must be noted that smoking is likely to have a much more serious effect on your health than air pollution.
- Regarding Nitrogen Dioxide, the pollutant of concern in Chesterfield, this is a respiratory irritant affecting lung function and bronchial reactivity. It has also been shown to increase the susceptibility of respiratory tracts to infections in children and may increase the response of sensitive individuals to allergens. It can also increase the frequency and intensity of asthma and heart attacks.
- Nitrogen Dioxide (NO<sub>2</sub>) and Nitric Oxides (NO) are both oxides of nitrogen and are collectively referred to as nitrogen oxides (NO<sub>x</sub>). It is only the NO<sub>2</sub> that is subject to health based air quality standards. High temperature combustion processes produce these oxides. During the combustion process, the principal constituent of NO<sub>x</sub> is NO, which is converted into NO<sub>2</sub> in the atmosphere mostly by reacting with Ozone (O<sub>3</sub>). However there are also primary sources of NO<sub>2</sub> that can also play a considerable role. There is evidence of significant amounts of NO<sub>2</sub> emitted directly in diesel vehicle exhausts, especially in slow moving traffic. This is due to technologies designed to reduce particulate emissions in their exhausts. An increase in diesel car sales from the current rate of 22% of total new car sales to 30% in 2010 could increase urban UK road transport emissions of NO<sub>x</sub> in 2010 by 0.7% and NO<sub>2</sub> emissions by 3%.
- Road transport is the predominant source of NO<sub>x</sub> emissions in the UK, accounting for 49% of total UK emissions in 2000, although the impact of road transport to local emissions may be much higher. However this contribution has declined over recent years due to various policy measures including improvements in engine design and the fitting of three-way catalysts to petrol cars. This decline is expected to continue through improved technologies and emissions standards, with an expected reduction of 46% between 2000 and 2010.
- Other sources of nitrogen oxides include the electricity supply industry and the industrial/commercial sector involved in the combustion of fossil fuels. Emissions from these sources have also declined over recent years due to abatement measures in coal-fired power stations and increased use of other fuels for power generation.
- The annual mean objective of 40µgm<sup>3</sup> is currently widely exceeded at roadside sites across the UK with exceedences also reported at urban background locations in major conurbations. The vast majority of Air Quality Management Areas, which have been declared for NO<sub>2</sub>, are related specifically to road traffic emissions. Analysis of monitoring data in the vicinity of roads has shown that exceedences are likely to occur within approximately 10m of the kerbside of single carriageway roads. This includes roads with relatively low traffic flows if they are within congested town centres. This is particularly significant for Chesterfield, as being a market town, it has narrow streets with some residential properties within 5m of the kerb.

## 1.4 The Strategy: Structure and Benefits

### The Structure

- In light of recent air quality assessments and monitoring data, Chesterfield Borough Council has produced this Air Quality Strategy, which has an overall aim to reduce current and future sources of NO<sub>2</sub> in Chesterfield and, where possible, prevent future developments exposing residents to poor air quality.
- The Strategy follows the format recommended by the Local Air Quality Management Policy Guidance LAQM.PG(03) produced by DEFRA. The Strategy comprises eleven aims: these endeavour to involve and co-ordinate various Council Departments within Chesterfield Borough Council and Derbyshire County Council, local businesses and industries, public transport, freight, fleet and taxi operatives as well as the local community who all have an important role to play in reducing levels and exposure to local air pollution.
- Within each Strategy Aim, various projects are listed which provide potential practical means of implementing these Aims. The approximate timescales for the implementation of each of project is also listed. For ease these have been depicted as short-term (within 12 months), medium-term (within 5 years), long-term (more than 5 years) and ongoing.
- The Strategy does not indicate which projects have priority nor the department responsible for each project. This information will be developed with time and is not a requirement of an air quality strategy. Should an Air Quality Management Area be declared in Chesterfield, this Strategy would transpose into an Air Quality Action Plan, whereupon this additional information would be included.
- This Strategy supersedes the Air Quality Strategy developed by Chesterfield Borough Council in 2003. It builds and expands upon the original principles. Many of the original aims are ongoing and have been incorporated into this Air Quality Strategy. The original strategy has been included in Appendix A.
- Since Nitrogen Dioxide is currently the pollutant of concern in the Chesterfield Borough Council's area, the Strategy focuses on means of reducing/mitigating the sources of NO<sub>2</sub> across the Borough, focusing on road transport and power generation.
- It must be noted however that any reduction in road transport and power generation achieved will also attain a reduction in the other air pollutants listed in Table 1 since, for the majority, they all share similar sources. This is especially significant when it is considered that Chesterfield Borough Council have signed the Nottingham Declaration showing a commitment to tackling Climate Change. Since many of the sources that produce NO<sub>2</sub> are the same as those that produce CO<sub>2</sub>, the air quality strategy could be pivotal in reducing various sources of CO<sub>2</sub> across the Borough.
- It proposed that the Air Quality Officer and the Officers responsible for developing the Climate Change Strategy for Chesterfield Borough Council work together in producing a joint Strategy for tackling both forms of air pollution. Therefore this Strategy may be revised within 12 months to incorporate initiatives to reduce sources of both NO<sub>2</sub> and CO<sub>2</sub>.

## The Benefits

- Aside from reducing local air pollution and the associated health and climatic benefits in doing so, there are a range of other benefits to be enjoyed from implementing a successful Strategy. These include:
  1. increased provision, integration, security and comfort of local transport
  2. improved road safety
  3. development of more sustainable communities
  4. improvement of public spaces
  5. promotion of healthier lifestyles
- A successful Strategy therefore has the potential to improve a range of quality of life issues for all Borough residents, stakeholders, businesses and visitors, this has particular significance when it is considered that poor air quality tends to coincide with areas of social deprivation.
- In addition, a successful Strategy could result in:
  1. lower fuels costs for all involved
  2. more efficient use of resources
  3. lower costs for businesses making them more competitive
  4. may provide new employment and training opportunities.
- Finally a successful Strategy has the potential to raise the profile of Chesterfield Borough Council amongst the community of Chesterfield and those visiting the area.



## 1.5 European and National Policies to reduce air pollution

- There are a number of European and National Policies to address air pollution. These are listed in Table 2 below:

**Table 2: European and National Policies to reduce air pollution.**

<b>Policy</b>	<b>Summary</b>
Air Quality Framework and Daughter Directives	The European Union sets limit values for specified pollutants and the daughter Directives set the air quality objectives.
European Unions Auto-Oil Programme	Vehicle emission standards for all new vehicles and fuel quality standards since 10993.
Acidification Strategy	Reduce emissions of sulphur dioxide, nitrogen oxides and ammonia by: <ul style="list-style-type: none"> <li>• A directive on the sulphur content of Certain Liquid Fuels</li> <li>• Amendment to the EC Large Combustion Plant Directive</li> </ul>
National emissions Ceilings Directive and Ozone Daughter Directive	National emission ceilings set for each EU member State for Sulphur Dioxide, Nitrogen Dioxide, ammonia and VOC's
EC Solvents Directive	Aims to reduce emissions of VOC's from certain industrial installations.
Integrated Pollution, Prevention and Control (IPPC)	Regulation of industrial emissions through site specific permits.
UNECE convention on long range transboundary air pollution	Aims to reduce transboundary pollutants from one country to another by reducing emissions of sulphur dioxide, nitrogen oxides, VOC's, ammonia, PAH's, cadmium, lead and mercury.
Local Air Quality Management	Requires Local Authorities to periodically review and assess the current and future quality of air in their area.
Clean Air Act 1993	Control of emissions form industrial sources that do not fall under the IPPC regime. Control of domestic smoke.
Petrol Vapour Recovery Controls	Emissions of VOC's from vehicle refuelling are properly controlled.
Part III Environmental Protection Act	Allows abatement of nuisance
Planning Framework	Land-use planning and development framework must take the national air quality objectives into consideration in preparing plans and determining applications.

## 1.6 Links to other Strategies

- The air quality strategy links into other Plans developed by other Council Departments and regional strategic groups and its important to recognise these other

### Local Plan

- The replacement Chesterfield Borough Local Plan, adopted in June 2006, sets out the Councils planning policies and specific proposals for the use of land, in order to guide decisions on planning applications. The plan aims to encourage sustainable development and a balance between the economic, social and environmental needs of the Borough. The resulting development of land and its impact upon travel patterns has the potential to significantly affect air quality in the borough and, whilst many of the plans policies and allocations will have an impact, there are a number of policies directly relevant:

**Table 3: Policies in Chesterfield Borough Council Local Plan with direct relevance to air quality.**

<b>Policy</b>	<b>Summary</b>
GEN4 Urban Regeneration and sustainable land mix	Encourages a sustainable mix of land uses and minimising the overall need to travel; encouraging sustainable modes of transport
GEN10 Sustainable Design	Promotes ease of access, reducing the need to travel and encouraging sustainable modes of transport. Promotes energy efficiency.
ENVR23 Pollution and other adverse environmental impacts	Controls development which would increase levels of air pollution, and development likely to be affected by existing sources of air pollution
TRS1 Transport implications of new development	Considers transport impact of new development. Seeks measures to minimise the number and impact of additional motorised journeys and associated air pollution.

## Local Transport Plan

- Derbyshire County Council have developed a 5-year Local Transport Plan 2 setting out their objectives and targets for transport across Derbyshire and their strategies for achieving them from 2006-2011. The plan covers all forms of local transport and establishes strategies to tackle problems such as congestion and poor air quality. Chapter 6 of The Local Transport Plan 2 for Derbyshire sets out the strategy to reduce congestion and Chapter 7 deals with improving air quality and the environment. Since transport and congestion are the major sources of NO<sub>2</sub> and PM<sub>10</sub> in Chesterfield, this Transport Plan is fundamental to tackling these sources and to improving local air quality. The key actions in the Local Transport Plan that could influence and improve air quality are listed in Table 4.

**Table 4: Policies in Derbyshire County Council Local Transport Plan with direct relevance to air quality.**

LTP2 Chapter	Key Actions
Chapter 7: Better air quality and environment	<ul style="list-style-type: none"> <li>Liaise with the District/Borough and Highways Agency over the AQ Review &amp; Assessment process, and will address any areas of concern about local air quality that relates to local traffic.</li> <li>Explore the latest developments in cleaner vehicle technologies as part of a programme to replace the County Councils vehicle fleet.</li> <li>Examine the possibility of using zero emission vehicles for use on DCC contracted public transport services.</li> <li>Raise the profile of air quality issues on decision-making through awareness raising initiative.</li> <li>Work through the Derby and Derbyshire Freight Quality Partnership to develop freight related transport schemes and services, increase co-operation and a more sustainable approach to goods movements.</li> <li>Take an active part in spatial and land use planning especially where this relates to freight.</li> </ul>
Chapter 6: Congestion and Economy	<ul style="list-style-type: none"> <li>Delivery of the transport elements of the Markham Vale Project</li> <li>Work with private sector and local planning authorities to overcome access obstacles to site identified within Local Plans and Local Development Frameworks.</li> <li>Take into account the needs of employment sites and the existing and potential workforce in considering maintenance priorities and bus service provision.</li> <li>Seek to increase the provisions of and publicity/information/facilities, for public transport to and through tourist areas.</li> <li>Continue to liaise with developers and partner local authorities to address transport issues</li> <li>Introduce new Bus Quality Partnerships and Punctuality Improvement Partnerships where appropriate and use LTP funding to deliver schemes in support of these</li> <li>Audit pedestrian and cycle routes into Chesterfield town centre, with a view to establishing a defined and signed network of high quality routes.</li> <li>Provide information for rail travellers and improve access to stations and investigate the provision of new stations at Gamesley and Ilkeston</li> <li>Concentrate site specific work on junction improvements and</li> </ul>

	<p>measures to assist traffic flow on identified congested links, especially concentrating on localised improvements to remove 'pinch points' for buses.</p> <ul style="list-style-type: none"> <li>• Adopt powers of parking enforcement countywide, and use these in combination with residents parking schemes.</li> </ul>
Chapter 4: Accessibility and healthy travel choices	<ul style="list-style-type: none"> <li>• Develop the strategic cycling network, including links between cycle routes and town centres.</li> <li>• Implement pedestrian quality networks</li> <li>• Improve pedestrian access to public transport services</li> <li>• Implement the Rights of Way Improvement Plan</li> <li>• Continue the dropped kerb programme</li> <li>• Encourage employers to develop and implement travel plan initiatives</li> <li>• Developing Safer Routes to School and assisting schools to develop travel plans</li> <li>• Implementing the County Councils Travel Plan</li> <li>• Investigating the best applications of personalised travel planning.</li> <li>• Promote travel awareness campaigns</li> <li>• Publicise cyclist facilities and recreational events</li> <li>• Pursuing green tourism initiatives e.g. 'peak connections'</li> <li>• Providing alternative public transport, walking and cycling opportunities.</li> </ul>

### Community Strategy for Chesterfield and North East Derbyshire 2005-2015

- The Chesterfield and North East Derbyshire Community Strategy has been developed to ensure that the service providers acknowledge, and react to, the key issues which have been identified by communities who live and work within Chesterfield Borough and North east Derbyshire. There are seven key aims within the strategy, the Environment and Transport theme being the most relevant to tackling air quality issues. The two overall objectives in the Environment and Transport Theme are:
  1. 'To promote and protect a clean and attractive environment;
  2. 'To develop an integrated transport strategy and promote better, safer roads'.
- Within these overall objectives are sub-aims which are of particular relevance to local air quality, these are listed in Table 5.

**Table 5: Policies in the Community Strategy for Chesterfield and North East Derbyshire 2005-2015 with direct relevance to air quality.**

Aim	Summary
Aim T2: Protect both human health and environment by reducing pollution levels in land, air and water.	<ul style="list-style-type: none"> <li>• Develop initiatives with the community, businesses and local and statutory authorities to create a cleaner, safer and healthier environment.</li> <li>• Improve knowledge and understanding of the extent, cause and effects of pollution locally.</li> </ul>
Aim T6: Develop the use of public transport and 'green' transportation and improve facilities to encourage this.	<ul style="list-style-type: none"> <li>• Encourage more journeys by cycling and walking</li> <li>• Improve bus and train passenger facilities</li> <li>• Review access in town and village centres in the CHART area</li> <li>• Work with employers to provide facilities to support sustainable transport of staff.</li> </ul>

**EMAS Accreditation**

- Chesterfield Borough Council has been awarded Eco Management and Audit Scheme (EMAS) certification for all its services. Since the Council began developing its environmental management system in 2004 it has improved its environmental performance significantly, including:
  1. Reducing the amount of waste produced by 5.5% to 5,455 tonnes
  2. Identifying several new recycling opportunities, which along with existing schemes ensured the Council reused, recycled and composted 1,020 tonnes of the waste it produced
  3. Reducing gas consumption by 11%
  4. Reducing employee mileage by 7.5%
  5. Reducing carbon emissions by 5.3% to 4,672 tonnes.
  
- There are a number of policies in the Environmental Management Programme, which share common goals with the air quality strategy and these are listed in Table 6.

**Table 6: Policies in Chesterfield Borough Councils Environmental Management Programme which share common goals with the air quality strategy.**

Ref No	Target
EMPT229	Redesign the mileage forms to include a passenger column
EMPT227	All fleet vehicle drivers to attend an advanced driver training course
EMPT230	Obtain fuel use figures from Cleanaway and Abitibi and assist them to target year on year reductions.
EMPT220	Investigate the possibility of using BioDiesel in all fleet vehicles
EMPT262	Develop and launch the Councils Green Travel Plan
EMPT223 EMPT224	Fleet vehicle drivers to attend advanced driver training course
EMPT226	Investigate the use of alternative methods of transport e.g. use of bikes in country parks or electric service vehicles; the use of bio-diesel/LPG in ranger vehicles
EMPT222	Promote increased use of and monitor the amount of LPG used instead of petrol on dual fuel vehicles. Identify a new supplier for Autogas
EMPT278	Install GPS units in Warden and Neighbourhood Ranger Vehicles
EMPT228	Run a trial of BioDiesel and investigate the use of bio degradable lubricants e.g. hydraulic oil
EMPT 219	Minimise fuel casual and essential consumption within the organisation by ensuring trips are minimised and vehicle sharing is promoted where applicable
EMPT152	Produce leaflet containing guidance for developers on sustainability issues.
EMPT205	Complete the Carbon Management Action Plan
EMPT197	Develop an energy conservation programme

## **Nottingham Declaration**

Chesterfield Borough Council has recently signed the Nottingham Declaration, a pledge to actively tackle climate change and help the UK deliver its national climate change targets. By signing the Declaration, the Borough Council has agreed to develop plans with partners and local communities over the next two years to address the causes and impacts of climate change. Since many of the sources of CO<sub>2</sub> also produce NO<sub>2</sub>, these projects could also act to improve local air quality.

## **North East Derbyshire Local Accessibility Partnership Strategy and Action Plan Draft November 2007**

Through the Derbyshire Local Transport Plan (LTP) 2006-2011, Derbyshire County Council are working on an Accessibility Strategy which looks at how people can access to key services such as healthcare and healthy food shopping by means other than the private car across the North East Derbyshire Area which includes Chesterfield. The Partnership Objectives that share common goals with the air quality Strategy:

- Encouraging more journeys by walking and cycling
- Improving access to public transport information
- Working with employers to provide facilities to support sustainable transport for staff
- Locating new developments, including community facilities and green spaces, within existing settlements
- Promoting healthier lifestyles, thereby reducing the need to access healthcare.

## 1.7 Air Quality Strategy Aims

The Air Quality Strategy Aims and associated actions are listed on the following pages. A summary of the Aims are listed below:

- LOCAL AIR QUALITY MANAGEMENT..... 16**  
AQ1: Chesterfield Borough Council will continue to implement the Local Air Quality Management Process and complete all appropriate assessments by the relevant deadlines.
- LOCAL AIR QUALITY MONITORING..... 17**  
AQ2: Chesterfield Borough Council will continue to improve and expand the current ambient air quality monitoring network. All available opportunities to obtain funding to replace older equipment and invest in new software and technologies will be explored. The Council will also continue to evolve the current monitoring network to maximise efficiency of the monitoring programme and associated expenditure.
- PARTNERSHIP WORKING..... 18**  
AQ3: Chesterfield Borough Council will aim to secure partnerships with other Departments, neighbouring Authorities and organisations which have an interest and contribution to the local air quality in Chesterfield.
- LAND USE AND TRANSPORT PLANNING ..... 20**  
AQ4: Chesterfield Borough Council will continue to use the local Planning Process, The Local Plan, Local Transport Plan and Development Control as a means to ensure that local developments and transport measures consider and where possible aim to mitigate their impact on local air quality in Chesterfield.
- TRANSPORT INITIATIVES..... 22**  
AQ5. Chesterfield Borough Council will work with Derbyshire County Council Transport Department to investigate various transport initiatives that aim to understand and mitigate the impact of road traffic on local air quality in Chesterfield.
- COMMERCIAL TRANSPORT EMISSIONS..... 24**  
AQ6: Chesterfield Borough Council will work with Derbyshire County Council, local freight and fleet operators and taxi firms to encourage the use of methods and technologies which will mitigate their impact on local air quality in Chesterfield.
- PUBLIC TRANSPORT ..... 26**  
AQ7. Chesterfield Borough Council will work with Derbyshire County Council and local bus operators to encourage increased uptake of public transport in Chesterfield.
- SUSTAINABLE TRANSPORT..... 28**  
AQ8. Chesterfield Borough Council will work with Derbyshire County Council to encourage the use of sustainable transport options in order to reduce car usage across the Borough.
- AWARENESS RAISING ..... 29**  
AQ9. Chesterfield Borough Council will continue to raise awareness of local air quality issues in Chesterfield by utilising all available opportunities to raise the profile of air quality amongst the residents and businesses of Chesterfield.
- LOCAL BUSINESS EMISSIONS..... 30**  
AQ10. Chesterfield Borough Council will work with Derbyshire County Council, the Environment Agency, local industries and businesses to encourage the use of methods and technologies that aim to improve local air quality.
- LOCAL DOMESTIC EMISSIONS ..... 31**  
AQ11. Chesterfield Borough Council will work with Derbyshire County Council and the local community to encourage and aim to reduce emissions from domestic properties across the Borough.

## Local Air Quality Management

**AQ1: Chesterfield Borough Council will continue to implement the Local Air Quality Management Process and complete all appropriate assessments by the relevant deadlines.**

<b>Actions to implement the Local Air Quality Management Process:</b>
1) April 2007: Detailed Assessment (DA) required for Derby Road, Chatsworth Road and Chesterfield Road.
2) Winter 2008/2009: Declaration of an Air Quality Management Area (AQMA)
3) Autumn 2009: Further Assessment required for Derby Road, Chatsworth Road and Chesterfield Road; required within 12 months of declaration of an AQMA.
4) Autumn 2009: Detailed Assessment required for NO <sub>2</sub> at Whittington Hill
5) Autumn 2009: Detailed Assessment required for PM <sub>10</sub> at Whittington Moor.
6) April 2009: Update and Screening Assessment; screening of all sources of air pollution in Chesterfield, required every three years.
7) Autumn/Winter 2010: Air Quality Action Plan (AQAP); required within 12-18 months of the declaration of an Air Quality Management Area.
8) April 2010: Detailed Assessment or Progress Report in 2010; type of report required for submission is dependant on the outcome of the Update and Screening Assessment
9) April 2010: Annual Air Quality Action Plan progress report.



## Local Air Quality Monitoring

**AQ2: Chesterfield Borough Council will continue to improve and expand the current ambient air quality monitoring network. All available opportunities to obtain funding to replace older equipment and invest in new software and technologies will be explored. The Council will also continue to evolve the current monitoring network to maximise efficiency of the monitoring programme and associated expenditure.**

Actions to implement the Local Air Quality Management Process:	Timescale
1) Continue to maintain and regularly calibrate the air quality monitoring equipment, ensuring data capture rates of at least 90%.	Ongoing
2) Continue to collect and expose NO <sub>2</sub> diffusion tubes on a monthly basis and ensure resultant data collated onto national database.	Ongoing
3) Annual re-distribution of selected diffusion tube locations as part of continual screening of NO <sub>2</sub> across Chesterfield, where possible ensuring all locations are at building facades.	Ongoing
4) Use ADMS Roads to assess concentrations of NO <sub>2</sub> at various locations within the Borough	short
5) Purchase Envivue 2000 Data Logging and Reporting Software and Enviweb based website to provide the reporting of real-time air quality information on the Internet.	short
6) Cessation of SO <sub>2</sub> real-time monitoring programme and closure of the Staveley Stables Air Quality Station. This is considered prudent since the SO <sub>2</sub> Air Quality Objectives are no longer at risk of exceedence within Chesterfield. In addition the air quality at Staveley is well below the Air Quality Objectives and since the analysers are reaching the end of their operational lives, replacement would be an unproductive expense.	short
7) Seek funding for an ultrasonic wind speed and direction sensor for roadside Air Quality Station.	short
8) Re-house the NO <sub>2</sub> and Teom analysers into a more compact unit for easier relocation to roadside sites. The plan is to conduct monitoring for 6-monthly periods at locations showing potential exceedence of NO <sub>2</sub> Objective identified during the ongoing diffusion tube screening programme.	medium

## Partnership Working

**AQ3: Chesterfield Borough Council will aim to secure and renew existing partnerships with other Departments, neighbouring Authorities and organisations which have an interest and contribution to the local air quality in Chesterfield.**

<b>Potential partnership working:</b>
1) Various departments at Chesterfield Borough Council that all have a valuable contribution to make to the Strategy. i.e. Planning, Sustainability, Energy Efficiency (HECA), Licensing (taxis), Car Parking Management Team and Heads of Service (fleet management).
1) Chesterfield Borough Council Pollution Control Section and Derbyshire County Council Transport Department on all aspects of transport initiatives in Chesterfield.
2) Chesterfield Borough Council Pollution Control Section and Derbyshire County Council Corporate/Business Travel Planner, School Travel Planner and Walk to School Campaigns to encourage more sustainable travel choices.
3) Chesterfield Borough Council Air Quality Officer and taxi licensing Officers, Derbyshire County Council Bus and Rail Transportation and Freight Quality Partnership to discuss all aspects of commercial transport emissions.
4) Chesterfield Borough Council Air Quality Officer, Energy Efficiency and Sustainability Officers, Derbyshire County Councils Energy Efficiency Officers, Climate Heroes Campaign Manager and Local Authority Carbon Management Programme Officer to discuss all aspects of energy efficiency and climate change issues within Chesterfield.
5) Chesterfield Borough Council Air Quality Officer and Derbyshire County Councils Cycling/Greenways/walking Officers to discuss all aspects of sustainable transport choices in Chesterfield. This could be achieved through the Cycle Liaison Group Meetings.
6) Chesterfield Borough Council Air Quality Officer, Derbyshire County Council and local bus operators and to discuss the potential of forming a Bus Quality Partnership.
7) Chesterfield Borough Council Air Quality Officer, Taxi licensing officers and local and taxi operators to discuss the potential of forming a Taxi Quality Partnership.
8) Chesterfield Borough Council and Derbyshire County Primary Care Trusts to discuss all aspects of current air quality issues and its potential impact on the health of Chesterfield residents.
9) Chesterfield Borough Council, Derbyshire County Council and Local Strategic Partnerships.
10) Chesterfield Borough Council, Derbyshire County Council, neighbouring Authorities, local community, local businesses and stakeholders and interested parties to form a Clean Air Partnership to discuss all aspects of local air pollution – a possible action to be achieved through CHART

LSP Transport Action Theme Group.

11) Chesterfield Borough Council Air Quality Officer and all interested Air Quality Officers within Derbyshire to discuss all aspects of local air quality management.

## Land Use and Transport Planning

**AQ4: Chesterfield Borough Council will continue to use the local Planning Process, The Local Plan, Local Transport Plan and Development Control as a means to ensure that local developments and transport measures consider and where possible aim to mitigate their impact on local air quality in Chesterfield.**

<b>Actions to implement the Local Air Quality Management Process:</b>	<b>Timescale</b>
1) Continue to work with Derbyshire County Council and to contribute to Derbyshire Local Transport Plan.	Ongoing
2) Encouraging a sustainable mix of land uses and minimising the need to travel through the location of new development (local Plan Policy GEN4)	Medium and Long
3) Establish protocol between Development Management and Environmental Services to ensure possible air quality impacts of new development are identified and properly assessed throughout the planning application process.	Short
4) Ensure that air quality is taken into account when deciding applications for planning permission (local Plan policies TRS1 and EVR24)	Short
5) Use conditions or section 106 agreements to secure appropriate mitigation measures and/or funding for air quality monitoring related to the development.	Medium
6) In considering new air quality monitoring and survey work, liaison between the Major Sites officer and the Air Quality officer shall ensure that future development pressures that may have an influence on local air quality be considered when siting the monitoring equipment.	Medium
7) The principles of PPS23 in respect of air quality will be implemented by Chesterfield Borough Councils Planning Services	Ongoing

8) Air quality to be considered in the development of new Local Development Framework, including all Development Plan documents and Supplementary Planning Documents, when formulating relevant Development Control policies and site allocations for specific uses.	Medium
9) Air Quality issues to be considered in production of 'sustainable Design' Supplementary Planning Document.	Medium
10) Investigate producing interim guidance on planning and air quality, including a checklist of mitigation measures, to be made available to developers	Short
11) Work with Derbyshire County Council Travel Planner to investigate the possibility of producing planning guidance documents to be sent out with all appropriate planning consents. The travel planning guidance document will also be available to download from Chesterfield Borough Councils WebPages.	Medium

## Transport Initiatives

**AQ5. Chesterfield Borough Council will work with Derbyshire County Council to investigate various transport initiatives that aim to understand and mitigate the impact of road traffic on local air quality in Chesterfield.**

Transport Initiatives that could be implemented in Chesterfield:	Timescale
1) Work with Derbyshire County Council in developing a Chesterfield Transport Plan.	Ongoing
2) Continue to contribute to the CHART LSP Transport Action Theme Group to discuss transport issues in Chesterfield and brainstorm possible solutions and transport initiatives.	Short
3) Investigate the feasibility and potential role on traffic management and local air quality of construction of an access bridge over the River Rother at The Avenue site to allow traffic to utilise the A617 instead of the A61 South (Derby Road).	Long
4) Investigate the feasibility of analysing the traffic using the A61 and the A619 in Chesterfield in order to provide source apportionment data. This will provide detailed baseline data and will allow actions to target those transport sources contributing the most to local air pollution.	Long
5) Investigate the feasibility of linking traffic counting units with air quality monitoring equipment in order to provide detailed information regarding traffic flows/speeds and levels of NO <sub>2</sub> and PM <sub>10</sub> .	Medium
6) Investigate the feasibility of 'Park and Ride' at periphery locations in Chesterfield, giving priority to locations that will alleviate traffic using the A61 South (Derby Road), A619 (Chatsworth Road) and A619 (Chesterfield Road).	Long
7) Investigate the feasibility of establishing Sustainable Distribution Scheme for town centre business deliveries.	Long
8) Investigate the feasibility of a Low Emission Zone (LEZ) on the A61 South (Derby Road), A619 (Chatsworth Road) and A619 (Chesterfield Road).	Long

9) Explore the possibility of investment in low emission vehicles to be used within Chesterfield Borough Council's area.	Medium
10) Investigate the feasibility of the integration of satellite navigation with local air quality data.	Long
11) Investigate the feasibility of remote emissions testing regime or a roadside emissions testing regime.	Medium
12) Work with Derbyshire County Council and Chesterfield Borough Council Development Control to assess the air quality benefits of the development of the proposed Chesterfield-Staveley Regeneration route, which forms part of the Markham Vale Development and could be pivotal in improving air quality in Staveley and Brimington.	Long
13) Explore the provision of real-time information on the public transport system across Chesterfield, with public display stands at Chesterfield train, bus and coach station.	Long

## Commercial Transport Emissions

**AQ6: Chesterfield Borough Council will work with Derbyshire County Council, local freight and fleet operators and taxi firms to encourage the use of methods and technologies which will mitigate their impact on local air quality in Chesterfield.**

<b>Actions to mitigate impact of commercial traffic on local air quality:</b>	<b>Timescale</b>
1) Support the implementation of the policies in Chesterfield Borough Councils Environmental Management Programme which aim to reduce fuel use and therefore the associated emissions of the Council Fleet vehicles.	Ongoing
2) Support the implementation of Chesterfield Borough Councils Environmental Management Programme target EMPT262, the development and launch of a Green Travel Plan.	Ongoing
3) Work with the Freight Quality Partnership and local fleet operators to encourage the use of lower emission vehicles and technologies, using less polluting fuels, improving vehicle maintenance, promotion of fuel efficient driving and prevention of unnecessary engine idling.	Short
4) Work to develop a Taxi Quality Partnerships to encourage the use of lower emission vehicles and technologies, using less polluting fuels, improving vehicle maintenance, promotion of fuel efficient driving and prevention of unnecessary engine idling.	Short
5) Develop air quality best practice guides for circulation amongst bus, freight and taxi operators.	Short
6) Investigate the feasibility of a smoky vehicles campaign to tackle excessively smoky vehicles.	Short
7) Investigate the feasibility and potential for air quality measures to be incorporated into Chesterfield Borough Council Taxi licensing Regime E.g. reduction of licence fee for low polluting vehicles and LPG vehicles, review engine capacity policy, review vehicle specification standard.	Medium
8) Investigate the feasibility of an Idling Vehicles Campaign, focussing on problem areas such as Beetwell Street, schools and taxi ranks etc	Short
9) Work with local fuel suppliers to increase the availability and awareness of alternative fuels at Service Stations across Chesterfield.	Long



10) Investigate the feasibility of night-time deliveries for industrial zones and town centre locations distanced from residential properties.	Medium
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## Public Transport

**AQ7. Chesterfield Borough Council will work with Derbyshire County Council and local bus operators to encourage increased uptake of public transport in Chesterfield.**

<b>Actions to encourage increased uptake of public transport:</b>	<b>Timescale</b>
1) Work with Derbyshire County Council to support and implement Derbyshire Bus Strategy. The complete Strategy can be found in Appendix 1. The Bus Strategy encompasses the following areas relating to public transport:	Ongoing
a) Develop Bus Quality Partnerships and Punctuality Improvement Partnerships	
b) Introduce an Assessment Framework, maintain Service Standards and design and implement a Strategic Passenger Transport Network.	
c) Improve bus & rail, bus & cycle integration and improve interchange facilities	
d) Ensure public transport provision to new developments.	
e) Consider the practicality and suitability of introducing bus priority measures when planning highways improvements.	
d) Consider possible Park and Ride facilities	
e) Improve the passenger experience	
f) Work in partnership to fund, design, install and maintain new bus shelters	

g) Improve accessibility to and at bus stops where physically practicable.	
h) Improve driver training and customer care	
i) Improving the quality of travel information, roadside information at bus stops printed information and electronic information.	
j) Addressing specialist needs; schools, community and social services transport.	
2) Work with local bus companies to encourage the use of lower emission vehicles and technologies, using less polluting fuels, improving vehicle maintenance, promotion of fuel efficient driving and prevention of unnecessary engine idling.	Short
3) Develop an air quality best practice guide for circulation amongst bus operators.	Short
4) Liaise with the Chesterfield Transport Group (AQ5) to brainstorm and identify areas in the public transport system which could be improved.	Ongoing

## Sustainable Transport

**AQ8. Chesterfield Borough Council will work with Derbyshire County Council to encourage the use of sustainable transport options in order to reduce car usage across the Borough.**

Actions to encourage the use of sustainable travel across Chesterfield:	Timescale
1) Continue to develop a corporate travel plan and encourage local business to do the same through the development of Chesterfield Local Business Partnership. (See AQ 10).	Medium
2) Investigate the feasibility of managing local car parking to promote more efficient use of the car/public transport, E.g. Reduced car parking rates for multiple occupancy vehicles, discount rates for regular public transport users - without detriment to budgets.	Medium
3) Work with Derbyshire County Council to promote the development of school travel plans and developing safer routes to schools.	Ongoing
4) Investigate the monitoring data provided by Whittington Moor Air Quality Station to establish any significant differences in levels of monitored pollutants during and outside term-time. Investigate the possibility of utilising this data to strengthen school/business travel plan campaigns.	Short
5) Promote cycling and walking across Chesterfield, encouraging and supporting the development of greenway links and cycle ways.	Ongoing
6) Encourage Chesterfield Borough Council employees to join car sharing schemes; investigate the possibility of arranging an informal car share scheme for council employees.	Short
7) Work with Derbyshire County council and interested parties in developing a cycling and pedestrian strategy for Chesterfield.	Ongoing

## Awareness Raising

**AQ9. Chesterfield Borough Council will continue to raise awareness of local air quality issues in Chesterfield by utilising all available opportunities to raise the profile of air quality amongst the residents and businesses of Chesterfield.**

<b>Actions to raise awareness of local air quality issues:</b>	<b>Timescale</b>
1) Invest in a marketing design which could be used on all marketing material associated with the Air Quality Strategy Projects. This would ensure that the public associate the various projects with the common aim of improving local air quality. E.g. Sheffield City Council Care 4 Air Campaign.	Short
2) Continue to update and improve the information available on the air quality WebPages on the Internet.	Ongoing
3) Obtain funding to invest in air quality reporting software to provide real-time data on the internet.	Short/Medium
4) Continue to provide all air quality reports and guidance documents on the internet and make available for download.	Short
5) Investigate all potential opportunities to provide air quality seminars and presentations, to provide displays in public places and generate articles for community publications and press releases	Ongoing
6) Investigate the feasibility of producing an air quality publication which would be made available to the public at appropriate venues such Tourist Information, libraries, schools etc.	Short
7) Provide lunchtime seminars for all relevant Chesterfield Borough Council Departments and interested employees regarding local air quality management, the Air Quality Strategy and the contribution that everyone can make to mitigate local air pollution.	Short/Medium
8) Support national and regional environmental initiatives such as Bike to school week and Environment Day etc	Ongoing

## Local Business Emissions

**AQ10. Chesterfield Borough Council will work with Derbyshire County Council, the Environment Agency, local industries and businesses to encourage the use of methods and technologies that aim to improve local air quality.**

Actions to mitigate commercial emissions to air:	Timescale
1) Investigate the feasibility of developing a Chesterfield Business Partnership with an associated award scheme to reward measures such as energy efficiency, effective travel planning, 'greening' vehicle fleets, increasing recycling, joining the Sustainable Distribution Scheme (AQ5) as well as funding local green projects.	Medium
2) Continue to enforce The Pollution Prevention and Control (England and Wales) Regulations 2000, ensuring local industries remain compliant with these regulations.	Ongoing
3) Promotion of energy efficiency measures within Permitted Processes and to provide guidance on assistance available from appropriate Government funded Agencies.	Short
4) Improving the accessibility of information regarding Chesterfields Permitted Processes by developing the website to detail up to date information.	Short
5) To investigate the development of a Considerate Contractors Scheme for all developments and to produce best practice guides to be sent out with all planning consents.	Short
6) Collate a comprehensive database of all emission sources and initiate a screening of all major boilers in Chesterfield – where appropriate, encourage major energy users to invest in more efficient boilers and conversion from coal/fuel oil to gas.	Short
7) Continue to implement Chesterfield Borough Councils Green Procurement Policy and encourage local businesses to adopt similar Strategies through the Chesterfield Business Partnership.	Short/Medium
8) Continue to improve the energy efficiency of the Town Hall and other Chesterfield Borough Council buildings.	Ongoing

## Local Domestic Emissions

**AQ11. Chesterfield Borough Council will work with Derbyshire County Council and the local community to encourage and aim to reduce emissions from domestic properties across the Borough.**

Actions to mitigate domestic emissions to air:	Timescale
1) Continue to enforce the Clean Air Act and associated regulations, including smoke control zones across Chesterfield.	Ongoing
2) Decrease the number of domestic bonfires by investigating the feasibility of developing a 'zero tolerance' to bonfires campaign across Chesterfield.	Short
3) Investigate the monitoring data provided by Whittington Moor Air Quality Station to establish the impact of 'Guy Fawkes Night' on local air pollution. Investigate the possibility of utilising this data to strengthen 'zero tolerance' to bonfires campaign.	Short
4) Continue to implement, develop and monitor the Home Energy Conservation (HECA) Strategy.	Ongoing
5) Continue to improve and encourage the energy efficiency of existing domestic properties in Chesterfield.	Ongoing
6) Continue to improve the energy efficiency of all Chesterfield Borough Councils housing stock.	Ongoing
7) Continue to promote and encourage recycling amongst the residents and businesses of Chesterfield.	Ongoing
9) Continue to improve the energy efficiency of the Town Hall and other Chesterfield Borough Council buildings.	Ongoing