



AIR QUALITY STRATEGY



Executive Summary

Stevenage Borough Councils Air Quality Strategy forms an integral part of Stevenage's air quality management. The air quality strategy provides a means of prevention and reduction of any potential air pollution exceedances in Stevenage. National air quality objectives are set out in the Air Quality Strategy for England, Scotland, Wales and Northern Ireland published in January 2000.

In 2003 Stevenage Borough Council produced its Updating and Screening Assessment (USA) of which the aim was to assess the air quality in Stevenage. This assessment and the following Progress reports, submitted in 2004 and 2005 show that currently Stevenage meets the targets set out by central government.

The air quality strategy aims to integrate different Council departments to produce a multi-disciplinary forum for the routine consideration of current and potential air quality issues and to put in place provisions to maintain air quality below existing health based standards.

The air quality strategy is designed to be a living, working document, which will be regularly updated. Any changes such as legislation or any pollution exceedances will result in the air quality strategy being updated.

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INTRODUCTION

Under the Environment Act 1995 the Government was required to produce an air quality strategy to map out the future of ambient air quality policy in the United Kingdom. After a period of consultation the first Strategy, *The United Kingdom National Air Quality Strategy* was published in 1997. The main objective of the strategy is to provide the best practicable protection to human health by setting health based objectives for seven main air pollutants. These pollutants are as follows:

- Benzene
- 1,3 butadiene
- Carbon monoxide (CO)
- Lead
- Nitrogen dioxide (NO₂)
- Particles (PM₁₀)
- Sulphur dioxide (SO₂)

A revised version of this strategy was published in January 2000 – *The Air Strategy For England, Scotland, Wales and Northern Ireland – Working Together for Clean Air*, and was revised again in 2002 to include changes in objectives, which are set out in the *Air Quality (England) Amendment Regulations 2002*.

Every Authority is required to test for the above pollutants against national levels set (see appendix 1). Should any of the pollutants exceed the set levels then an Air Quality Management Area (AQMA) will be designated to look at ways to improve the air quality. If a local authority has not designated any AQMA's then the local authority is not under any obligation to prepare an air quality strategy (*Local Air Quality Guidance Notes LAQM.G2(00)*), However the Government and the Mayor of London both recommend that all local authorities produce an air quality strategy regardless of whether or not they have any AQMA's, (*Policy Guidance Notes LAQM.PG(03)*), as air quality strategies can help local authorities take air quality considerations properly when developing policies.

Stevenage Borough Councils air quality strategy brings together a number of other strategic areas with a view to maintaining and improving air quality in Stevenage, including the Community Strategy that is being prepared by the Local Strategic Partnership. This refers to the actions of improving air quality management and reducing air pollution, in order to improve the health and well-being of everyone who lives in Stevenage.

It also builds on the work of the Stevenage BC Environmental Performance Review, which recommends an expansion of the information available to the public, together with further interpretation to assist in making it more meaningful.

This report describes the effects of pollution on air quality and health and the work that is currently undertaken by the Council and others to minimise this impact. This includes the statutory requirements in respect of the air quality management, recent developments and measures taken, or to be taken, to implement them.

In implementing this Strategy, the Council has three broad objectives:

- To protect the air we breathe.
- Partnership working for air quality management.
- Education and provision of information.

Why Promote Better Air Quality?

Up to 24,000 persons die prematurely every year in the UK because of the effects of air pollution. Many thousands more require hospital treatment (*DETR 2000*).

The health cost behind such statements to individuals and families is immense; there are also very significant economic costs to the NHS and through lost productivity in the workplace. But the impact of poor air quality is not constrained to any one location or solely to adverse health effects. Man's activities across the planet are now stated (*Dr R Pachuri 2002*) to commit us to continued global warming, climate change and the considerable consequences of these.

Promoting better air quality will help us to safeguard the good air quality in our district for future generations to enjoy (*Brunland Report 1987*), improve our areas where air quality is less satisfactory and contribute in a positive way to tackling more global issues.

Towards Better Human Health

The main reasons for tackling poor air quality are the link between air quality and the quality of life and the need to minimise the risk of poor air quality to human health (*LAQM.PG(02)*).

Modern medical statistics allow us to see the relationship between our health and concentrations of individual pollutants in the air that we breathe. In particular the relationship between exposure to small particles (PM₁₀) and death rates and hospital admissions is now well documented consistently across the world. Ground level ozone too is a particular culprit for acute respiratory health problems and early death in vulnerable groups. Other pollutants such as benzene, 1, 3-butadiene, polycyclic aromatic hydrocarbons (PAHs) are known initiators of cancer in humans with no absolute safe levels.

PM₁₀ is estimated to cause between 12,700 and 19,500 annual deaths in the UK (B.F Walter *et al* 2000). There is much that we do not yet know:

- What is the active component in PM₁₀ that causes ill health?
- How do particle numbers and particle size relate to health effects in exposed populations?
- Is ozone implicated in the onset of asthma?

Importantly we lack vital knowledge about the potential synergistic health impacts of breathing in cocktails of polluted air. The full cost of poor air quality on human health may yet be double the figures so far estimated.

Continuing research will doubtless increase our understanding of the relationship between air pollution and ill health. However we should not stall action where the potential threat to human health is of such magnitude. We should be acting now to protect the generally good air quality that exists locally, tackle areas of poorer air quality and embrace good practice to minimise the potential for health effects in this District.

Sources of pollution

Generally, the closer to a source of air pollution we are then the higher our exposure will be. Important sources include local industry, local traffic, construction work, central heating systems and bonfires. In Stevenage there are no major polluting industrial sources and the dominant local impact on air pollution is from heavily trafficked roads such as the A1 (M). Even so, roads will normally only significantly influence air quality close to them, with pollutant concentrations dropping off to background levels within tens of metres.

Notwithstanding the above, many pollutants can travel large distances with the prevailing winds. Small concentrations of such pollutants are always present in the atmosphere and are referred to as the 'back-ground concentration'. Larger concentrations of 'trans-boundary pollution' may cause air

pollution episodes far distant from their point of release. For instance many people will be familiar with acid emissions from UK power stations impacting on Nordic ecosystems ('acid-rain').

Likewise the UK experiences regular air pollution episodes of PM₁₀ and ground level ozone caused by polluted air arriving from continental Europe.

Weather and topography

Weather conditions, or meteorology, are a key influence on pollution transport in the atmosphere and a dominant factor in determining how much pollution will arrive at any one location. This in turn determines how much pollution we will be exposed to and therefore what, if any, its potential effect on health might be. In particular wind-speed and direction (both over short time periods and as long-term averages) dictate our exposure to pollution from any source. The dominant wind direction for the district is South Westerly.

In the summer, energy from the sun is also an important factor in pollutant production, breakdown and transfer. Summer sun drives the chemical reaction that produces ground level (tropospheric) ozone from a cocktail of volatile organic compounds (VOCs) and oxides of nitrogen. The sun also heats the ground causing vertical air currents (thermals) that influence the way pollutants mix in the atmosphere and hence our exposure to them.

Topographical features such as tall buildings or valleys may also prevent airflow from flushing out polluted air to replace it with relatively unpolluted air. Canyonised streets are particularly prone to accumulating traffic related pollution because of this effect, on occasions this might cause significantly elevated levels of pollution with relatively low volumes of traffic. The planned layout of Stevenage with its roundabouts and wide verges means that this is not a problem locally.

Climate Change

Since the industrial revolution our activities have contributed to the rate of climate change, for example deforestation, burning fossil fuels and increasing the quantities of certain components released to the atmosphere.

Global warming is probably the effect that we are most familiar with. Naturally occurring greenhouse gases include water vapour, carbon dioxide, methane, nitrous oxide, and ozone. Certain human activities, however, add to the levels of most of these naturally occurring gases and prevent heat leaving the planet, thereby warming beyond the comfort or survivability of many species. This includes humans as many of these pollutants have adverse effects on people with asthma. Steps have been taken to reduce these emissions, largely through cleaner technology.

Ozone at ground level is produced when sunlight reacts with pollution and so reducing pollution will also affect levels of ozone. Ozone is however an important consideration for essential functions of the planet. It forms a protective layer high in the stratosphere preventing high levels of damaging ultraviolet radiation reaching the earth's surface. The effects of too much UV radiation include skin cancer, cataracts and crop damage. Concerns about ozone depletion in the upper atmosphere or stratosphere led to ratification of the Montreal Protocol (1987) restricting the manufacture and use of substances such as chlorofluorocarbons and halons. Since then NASA has reported that the rate of depletion is reducing and that there are hopes for recovery (NASA 2003).

Finally sulphur dioxide is created when fossil fuels are burnt and it can aggravate human lung conditions and contributes to acid rain. The international community is generally agreed that these pollutants must be reduced and a unified approach is needed to tackle trans-boundary pollution.

It is now known that carbon dioxide emissions contribute towards global warming. In order to address this issue the European Union and subsequently the UK has introduced policies to reduce emissions. At local government level these policies have taken the form of improving energy efficiency in the

home. This is being achieved in a number of ways including issuing grants for essential improvements to boilers and standards of insulation. The Home Energy Conservation Act 1995 also requires that Local Authorities have strategies to improve energy efficiency in all housing.

Stevenage Borough Council has implemented the Home Energy Conservation Act in order to comply with the government's aim to reduce carbon dioxide (CO₂) emissions by 30% by 2010. In 1996 the Council commissioned Waltham Forest Energy Services Ltd (SBC 1996) to review the current position within Stevenage and to assess whether an energy saving of 30% was achievable. At that time the estimated emissions of CO₂ was 200 k Tonnes/year. It concluded that a 25% improvement was possible however this largely hinged upon private households and landlords deciding to improve their properties.

In order to achieve this, the Council set out a comprehensive Energy Efficiency Policy to bring these issues to public attention. In 2001 Environmental Health commissioned Cambridge Housing and Environmental Consultants to undertake a survey of housing conditions and energy efficiency in Stevenage (SBC 2001). Total carbon dioxide emissions for Stevenage were estimated as 93,985 tonnes per year compared with 200,000 tonnes in 1996.

Stevenage can achieve further reductions through improving public awareness of the issue and improved insulation. In 2002 the Environmental Health department further increased its budget for energy efficiency and subsequently administered over 180 grants, approximately 90% of which were for heating and insulation.

In April 2001 a new energy tax was introduced for businesses with the intention of encouraging industries to reduce their emissions of carbon dioxide.

Our aims are:

- **To set up a working group of interested parties with a view to signing up to the Nottingham declaration on Climate Change**

Outcome:

- **Commitment to prepare a plan with the local community to significantly reduce the local authority's greenhouse gas emissions and to encourage all sectors of the community to do likewise. (Environmental Performance Review 2003)**

LOCAL ACTION

Local Air Quality Management

The Environment Act 1995, Part IV requires the government to establish a National Air Quality Strategy in which ambient air quality objectives for eight main pollutants are set out (in the glossary). The main pollutants are benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, particles, sulphur dioxide and ozone. These pollutants are important as they have implications, primarily for human health but also for the wider environment.

The Council has a duty to assess air quality in certain locations against the government's air quality objectives. Locations will vary but will be where the public is likely to be exposed over a significant period of time. If there are any areas within the Borough where the objectives are not likely to be met within the specified period then these must be designated an Air Quality Management Area (AQMA). Once this is done policies must be formulated to improve the air quality with the specific pollutant in mind. Stevenage has no air quality management areas at present.

The Council is required to review its air quality periodically to assist it formulate its own strategy thereby offering a more sustainable, long term goals for air quality standards. The government is considering imposing tougher targets for certain pollutants and it is important that the Council considers this when assessing its current compliance.

Air quality monitoring provides the backbone to knowledge about current air quality and enables the prediction of future trends in air quality. The long-term gathering of data is vital to ensure statistically valid results, which form the basis for local air quality management actions. This includes assessing whether SBC will achieve the National Air Quality Standards and Objectives.

The Stevenage Borough Council Air Quality Review and Assessment

The first Air Quality Review and Assessment for Stevenage was completed in June 2000 in accordance with the National Air Quality Strategy (DETR 2000). Following detailed modelling by AEA Technology the conclusion was a detailed assessment that Stevenage would not need to progress to any of the pollutants. The review did suggest that this might be required for nitrogen dioxide in the event of further development along side the A1M.

The second Air Quality Review and Assessment was completed in 2003 and called Updated and Screening Assessment (USA) of air quality in Stevenage. The USA was written to identify matters that may have changed since the 2000 review and assessment, which might lead to a risk of an air quality objective, (set out in appendix 1), being exceeded. The USA identified that there was no need to progress to a detailed assessment for any of the pollutants.

Air Quality Progress reports were submitted in 2004 and 2005, both reports identified five locations within the Borough where there has been an increase in nitrogen dioxide levels. As the public are not regularly exposed in these areas there was no need to progress to a detailed assessment, although these areas will continue to be monitored and reviewed on an annual basis.

It was also decided that benzene monitoring would discontinue from July 2005 as the results for the past 11 years have been continually below the national objective set.

Our aims are:

- **To build a statistically valid body of air quality data providing a vital tool for use in land-use and transport planning and as an educative resource.**
- **To monitor NO₂ using diffusion tubes across Stevenage.**
- **To run a real-time monitoring station measuring NO₂ and PM₁₀.**
- **To place the real-time monitoring station in areas of possible exceedence of the National Air Quality Standards and Objectives.**

- **To carry out monitoring to an appropriate standard having regard to the validity of results cost and the availability of resource.**
- **To review and assess air quality in Stevenage against the National Air Quality Standards and Objectives in-line with statutory timescales.**
- **To review and assess air quality against the proposed National Air Quality Standards and Objectives for 2010**

Outcomes:

- **To monitor NO₂ at 15 sites and to review these sites annually.**
- **To produce a review and assessment of air quality on a three yearly cycle**

Authorisation of Prescribed Industrial Processes

Some forms of pollution can be controlled through the regulation of specific industrial processes by the issue of Permits or Authorisations.

The Pollution Prevention and Control (England and Wales) Regulations 2000 (the “PPC Regulations”) were introduced under the Pollution Prevention and Control Act 1999 and build on existing systems. The PPC Regulations are gradually replacing the pollution control regime set up under Part I of the Environmental Protection Act 1990 (EPA 1990). This transitional process will be completed by 2007.

The PPC Regulations introduce three separate, but linked, systems of pollution control:

- Integrated Pollution Prevention and Control (IPPC), which covers installations known as A(1) installations, which are regulated by the Environment Agency;
- Local authority Integrated Pollution Prevention and Control (LA-IPPC) which covers installations known as A(2) installations, which are regulated by local authorities;
- and, Local authority Pollution Prevention and Control (LAPPC), which covers installations known as Part B installations, also regulated by local authorities.

All three systems require the operators of certain industrial and other installations to obtain a permit to operate. Once an operator has submitted a permit application, the regulator then decides whether to issue a permit. If one is issued, it will include conditions aimed at reducing and preventing pollution to acceptable levels. A(1) installations are generally perceived to have a greater potential to pollute the environment than an A(2) installation, and Part B installations would have the least potential to pollute.

At the present time there are three A(1) installations regulated by the Environment Agency, and eighteen Part B processes regulated by Stevenage Borough Council, within the Borough.

Our aims are:

- **To inspect processes ensuring compliance with conditions laid down in the Authorisation and upgrading, in-line with timescales laid down in guidance.**
- **To improve the performance of prescribed processes with regard to emissions to atmosphere.**

Outcomes:

- **To inspect all authorised processes in accordance with a risk based regime.**
- **To review authorisations on a four yearly cycle from the date of their issue.**

Statutory Nuisance

Environmental Health undertakes a number of tasks connected with air quality. These include responding to complaints, direct monitoring of key pollutants, investigating the causes of any increases in pollution or accidents impacting on air quality, authorising and inspecting industrial processes, providing data to the network and to members of the public.

Nuisance from businesses were few in number but there is potential for dust nuisance to arise from construction sites. Whilst these events are also quite rare the impact on health and the environment can be more obvious and serious requiring rapid action. Despite Stevenage being largely covered by smoke control zones bonfires account for approximately 90% of the complaints received each year but these are dealt with very quickly and effectively.

Stevenage has monitored nitrogen dioxide and benzene for a number of years at strategic points around the Borough. This provides valuable information about the long-term quality of the air and may help detect decreases trends in quality.

Part three of the Environmental Protection Act 1990 requires local authorities to inspect their districts for the presence of statutory nuisance, to investigate complaints that suggest nuisance and to serve abatement notices where statutory nuisance is found to exist. To this end Environmental Health investigates any incident of nuisance arising from smoke, fumes, odours and dust. In 1972 much of Stevenage was designated a smoke control area with the exception of the Chells area. The extent of this area is currently under review with the intention of extending the area currently covered.

Dark smoke from commercial premises is controlled by The Clean Air Act 1993, except where it is from a prescribed process. It allows for the creation of smoke control areas.

Our aims are:

- **To provide an efficient and effective statutory nuisance investigation service in-line with our Local Performance Indicators.**
- **To use our formal powers of enforcement in-line with the Enforcement Concordat and the Council's Enforcement Policy.**

Outcomes:

- **To respond to all complaints of statutory nuisance within four working days of receipt of the complaint.**

Air Quality and Partnership

Stevenage is part of the Hertfordshire and Bedfordshire Network, which collectively monitors air quality within Hertfordshire and Bedfordshire. This partnership helps to provide a more comprehensive view of air quality issues throughout the region and because the data is published on the Internet it provides instant public access to air quality information.

It has been recognised that pollution from one area can often drift and affect another. For this reason Stevenage belongs to the Herts and Beds Environmental Protection Group that meets regularly to discuss issues and legislation relating to all aspects of environmental pollution. Smaller sub groups have also been formed to focus on specific issues such as air quality and noise etc. This has been an effective forum and has enabled rapid integration of new legislation into policy.

Our aims are:

- **To continue to work in partnership with all authorities in Herts and Beds through membership of the Herts and Beds Air Quality Network and Environmental Protection Group**

- **To continue to work with Herts County Council, the Highways Agency, the Environment Agency and other relevant bodies in the prediction, measurement and reduction of polluting emissions from both roads and industry.**
- **To freely reciprocate in data exchange with Herts County Council to promote understanding of local air quality issues and to maximise opportunities to inform and influence future local transport plans (LTPs).**

Outcomes:

- **To adopt a more strategic approach to managing air quality.**
- **To improve our working arrangements with HCC in respect of air quality.**

Land Use Planning

LAQM General Guidance Note (LAQM.G4(00), Air Quality and Land Use planning states that under section 54A of the Town and Country Planning Act 1990, planning authorities have to decide on planning applications according to the development plan, unless material consideration suggest otherwise. Any air quality consideration that relates to land use and its development can be a material consideration.

The land use planning system is integral to improving air quality to the determination of planning applications. A key objective of the Local Plan is 'to secure the protection and enhancement of the physical (built and natural) environment of the District'. Work is expected to begin in the review of the Local Plan in 2003/04.

Environmental Health also plays a vital role in making recommendations for planning applications with regard to air quality issues. We will continue to ensure that this liaison process works effectively and efficiently.

Our aims are:

- **To ensure that air quality impacts from development in the District are properly weighed through the planning process. In particular where proposed development might cause the breach of a National Air Quality Objective, or where a development might be proposed in a location where a breach of such objectives is already likely.**
- **To ensure that the revision of the Local Plan deals appropriately with the issue of air quality.**
- **To ensure that the planning liaison between the Planning and Environmental Health continues to be efficient and effective.**
- **To generate auto-consult buffers around industrial processes and major roads to ensure that air quality issues are properly considered where planning applications are submitted within these buffers.**
- **Require air quality impact statements to be submitted for significant developments as appropriate.**

Outcomes

- **To deal with the issue of air quality appropriately, within the confines of the land use planning system.**
- **Implementation of a GIS layer triggering planning consultation for areas where raised levels of air pollution may make them likely to exceed the National Air Quality Standards and Objectives.**

Transport Planning

There is some liaison between Environmental Health and the Transport Group, which will become more important as Stevenage continues to develop. Whilst the Borough has extensive networks of paths and cycle routes the need to shift the emphasis from the car to alternative, more efficient and clean methods of transport have been embraced and continues to influence planning decisions (SBC 2003).

As highway authority, Hertfordshire County Council (HCC) has a statutory duty to produce a Local Transport Plan (LTP). Government transport policy, enshrined in both national and regional planning guidance, emphasises the importance of integrating land use planning and transport planning.

This Plan has strong links with the District Plan. It is anticipated that further developments of the infrastructure will receive full consideration whilst incorporating and promoting the aims above.

The aims of the Hertfordshire Local Transport Plan (LTP) are:

- To reduce levels of emissions from road transport which effect human health and local flora and fauna
- To support the national programme to reduce the impact of climate change .
- To reduce the volume of car traffic by encouraging alternative means of transport
- To encourage necessary traffic to use the Primary Route Network, which, wherever possible avoids major urban areas
- To work with district councils to monitor and assess pollution levels

Our aims are:

- **Partnership working with HCC to ensure that transport and land-use considerations are fully integrated, particularly in the review of the Stevenage BC Local Plan. Work on the Freight Quality partnership and the Joint Highways panel.**
- **To continue to support the concessionary travel scheme for the elderly and disabled.**
- **To actively support cycling and walking improvements throughout the district to minimise the need to travel by car, in line with the Stevenage Cycling Strategy and the proposed Stevenage Walking Strategy**

Outcomes:

- **To minimize any adverse effects of the transport system on the built and natural environment and thereby improve public health**

A Strategic Approach to Air Quality

Stevenage plays an important role in protecting the air we breathe, working in partnership to secure air quality management and providing information about air quality.

However, we are all able to influence local air quality through making green choices in our behaviour. In Stevenage, the most beneficial changes in behaviour are likely to come from changing our mode of transport. Such changes might include choosing to walk or cycle instead of using the car or where this is not possible sharing lifts, or using the bus and train.

Energy savings can be made across many of our other activities too. Making our homes more energy efficient by ensuring they are adequately insulated, that the boiler is serviced and that we don't leave unnecessary lights on will lower our energy consumption. As energy consumption falls the pollution burden associated with fossil fuel combustion also falls, both at the local level due to emissions from homes and the regional level from power station emissions.

The following objectives consider both short term (up to one year) and longer term goals, these will be reviewed annually against service plan objectives.

Short-term objectives for the Air Quality Strategy – Timetable for Discussion

Objective	Actions	Monitoring and review	By whom
Meet air quality objectives in the National Air Quality Strategy	<p>Review annual data and assess associated risks to residents in Stevenage</p> <p>Participate in the regional network</p> <p>Attend environmental protection groups meetings and apply appropriate developments locally</p>	Undertake full review and assessment of air quality in accordance with the legislative timetable	<p>Environmental Health</p> <p>Environmental Health</p> <p>Environmental Health</p>
Provide an efficient and effective service to respond to customer requests	<p>Review and update the air quality data on the Council web site</p> <p>Investigate publication of monthly data and appropriate interpretation of the results</p> <p>Publish air quality alerts on the Stevenage Borough Council web site</p> <p>Identify additional links such as national weather and air quality archives</p>	<p>Survey of complainants</p> <p>Hit counters for this web page</p>	<p>Environmental Health</p> <p>Environmental Health</p> <p>Environmental Health</p>
Raise public awareness on air quality issues	<p>Liaise with the Environmental Campaigns team to promote initiatives to prevent bonfires, such as recycling.</p> <p>Consider contributing to the Stevenage Chronicle</p> <p>Disseminate information on air quality and related health effects to doctors' surgeries</p> <p>Publish the Air Quality Review and Assessment documents and distribute to library etc.</p> <p>Consider opportunities to extend health promotion work to include air quality</p> <p>Promote the government grant programme for upgrading insulation and provide general advice</p>	To be considered	<p>Environmental Services</p> <p>Environmental Health</p> <p>Environmental Health</p> <p>Environmental Health</p> <p>Environmental Health</p>

Objective	Actions	Monitoring and review	By whom
To work with local businesses to achieve effective reduction of emissions	<p>Inspect all prescribed processes in line with the current guidance</p> <p>Review annual emissions for all processes</p> <p>Encourage all operators to consider the benefits of environmental management systems</p> <p>Survey the area periodically in order to identify unauthorised processes</p> <p>Implement pilot scheme to enforce the prohibition of permitting vehicle engines to idle</p>	Monitor achievements against inspection targets	Environmental Health
To establish a working party to look at climate change	To explore signing up to the Nottingham declaration on Climate change	To be considered	Interested parties from SBC and community groups
Identify and address air quality issues through the Local Plan and Development Control	<p>Ensure the continued inclusion of air quality in the Local Plan</p> <p>Provide guidance to planning regarding sustainable and specific development of sites</p>	Monitor achievements	<p>Planning Policy team</p> <p>Environmental Health and Development Control team</p>
Establish links with the County Council's Congestion Reduction Topic Group to secure an integrated approach	<p>Establish communication flow to identify and share information that may impact on air quality</p> <p>Where appropriate ensure appropriate consultation on developments that may have air quality implications</p>	To be considered	<p>Environmental Health</p> <p>Planning</p>

Medium to long term objectives for the air quality strategy – Timetable for Discussion

Investigate the expansion and modification of the local monitoring network in anticipation of the West of Stevenage	<p>Consider funding implications of expansion of local monitoring network</p> <p>Work with the highways agency to obtain traffic data to form a base line prior to development and subsequent data after development</p> <p>Review the placement of the real time monitoring equipment prior to development</p> <p>Liase with North Herts Council regarding development of the Great Ashby Estate and its potential impact on air quality</p>	To be considered	Environmental Health
To investigate the establishment of an Air Quality Strategy for the whole of Hertfordshire and Bedfordshire	Instigate consultation with the other local authorities re actions within next year's work plan of the Environmental Protection Sub-group.	To be considered	Environmental Health
Extend the current Smoke Control Area to cover all parts of the Borough	Apply to the Secretary of State to extend the current SCA to cover Chells and other areas currently excluded	Confirmation of Order	Environmental Health
Closer working arrangements with Hertfordshire Highways	Mutual exchange of information in respect of complaints, and service requests related to air quality arising from traffic	To be considered	Environmental Health/Herts Highways
	Provision of road traffic reports in respect of annual assessments and specific schemes	Opportunity for SBC to input into decision making processes	Herts Highways
Increase awareness of the links between air quality and health effects	Examine potential for joint working and information sharing with the Health Authority and the Public Care Trust	Improved liaison with health bodes	Environmental Health/Public Care Trust

References

- B. F Walter & Felix R. Fitzroy, Aug 2000 *Air Pollution and Mortality in a Sample of British Cities*,
- DEFRA, 2000, *Air Quality Regulations 2000*.
- DEFRA, 2000. *Part IV of the Environment Act 1995 Local Air Quality Management Draft Policy Guidance*, DEFRA 2002, LAQM.PG(02)
- DEFRA, 2003, *Part IV of the Environment Act 1995, Local Air Quality Management. Technical Guidance LAQM TG(03)*
- DEFRA, 2005, *Part IV of the Environment Act 1995 Local Air Quality Management. Policy Guidance: Addendum LAQM.PGA(05)t*
- Dr. R. K Pachauri., Chairman, by address, IPCC Delivered at the Eighth Conference of the Parties to the Framework Convention on Climate Change, October 30, 2002, New Delhi
- SBC (1996) HECA Report October 1996 - report prepared by Waltham Forest Energy Services Ltd
- SBC (2001) Private Sector House Condition and Energy Efficiency Survey – Report undertaken by Cambridge Housing and Environmental Consultants
- SBC (2003) Stevenage District Plan Second Review – Revised Deposit Plan Incorporating PICs and FPCs
- SBC Environmental Performance Audit 2003
- SBC 2003 Local Air Quality Review And Assessment: *Updating And Screening Assessment 2003*
- SBC 2004 Local Air Quality Management Review And Assessment: *Annual Air Quality Progress Report 2004*
- SBC 2005 Local Air Quality Management Review And Assessment: *Annual Air Quality Progress Report 2005*
- The Air Quality Strategy for England Wales and Northern Ireland. *Working Together for Clean Air* DETR, January 2000
- The Brundtland Report. 1987. In the spirit of sustainable development stated as ‘Development that meets the need of the present without compromising the ability of future generations to meet their needs’ Our Common Future

Useful Websites

www.stevenage.gov.uk

www.hertsbedsair.org.uk

www.defra.gov.uk/environment/airquality/index.htm

GLOSSARY of TERMS

Air Quality

The air that we all breathe is a complex mixture of gases and particles. Even in what we would consider to be highly polluted air, the amount of pollution is very small and measured in parts per million (ppm) or more commonly parts per billion (ppb). There are many interacting variables that cause the air quality around us to vary greatly through space and time; a brief introduction to the most important factors is given below:

Air Quality Monitoring

Stevenage employs two types of air quality monitoring:

Passive monitoring;

This type of monitoring is the simplest type of monitoring and is used by SBC to measure concentrations of nitrogen dioxide and benzene. This form of monitoring utilises a cheap and simple plastic tube with a reactive gauze at one end. The tube is exposed for a month and then sent off for analysis to give results as one-month averages. This method enables us to monitor a number of sites across the District giving good spatial data and investigation of areas potentially suffering from air pollution problems.

Real-time monitoring;

This type of monitoring involves computerised sampling equipment that continuously monitors pollution levels in the air drawn into the analysers. SBC uses such equipment to monitor nitrogen dioxide and PM10 levels adjacent to Lytton Way at present. This method is expensive and requires regular calibration and maintenance, however it produces data that give a detailed insight into air pollution over short time spans.

Auto-consult layer

A computer field that triggers the Planning department to consult Environmental Health, or other consultees, for their expert opinion.

Canyon Streets

A canyon street is defined as one where the height of the buildings lining the street is greater than half the width. Such streets often prevent pollution, typically from traffic, being effectively dispersed. This leads to a build up of pollutants in the air of such streets giving rise to higher pollutant concentrations than might otherwise be anticipated. Stevenage does not have any areas like this.

Environmental Performance Review

An audit of Stevenage BC's environmental performance, commissioned by the Council in 2003, to generate an action plan looking at the sustainability agenda.

Microns

1 micron is 1 millionth of a metre.

Nitrogen dioxide

Nitrogen dioxide – or NO₂ - is a pollutant gas produced by the combustion of fossil fuels

Nottingham Declaration on Climate Change

Commitment by Local Authority to prepare a plan with the local community to significantly reduce the local authority's greenhouse gas emissions, and to encourage all sectors of the community to do likewise.

Particulates / PM10

Particulates are small pieces of dust less than 10 microns in diameter.

Stratospheric ozone layer

A layer of ozone gas that surrounds the earth at a height of between 15 and 35 Km, beneficial to life on earth as it absorbs the harmful ultra violet (UV) radiation from the sun.

Tropospheric ozone

Ground level ozone - or tropospheric ozone – is created when bright sunshine shines on polluted air causing a chemical reaction. This ozone is of concern to human health.

Appendix 1

National Air quality Standards

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 ug/m ³ (5ppb)	running annual mean	31.12.2003
	5 ug/m ³ (1.5 ppb)	annual mean	31.12.2010
1,3 Butadiene	2.25 ug/m ³ (1ppb)	running annual mean	31.12.2003
Carbon monoxide	10 mg/m ³ (10ppm)	Maximum daily running 8-hour mean	31.12.2003
Lead	0.5 ug/m ³	annual mean	31.12.2004
	0.25ug/m ³	annual mean	31.12.2008
Nitrogen Dioxide	200 ug/m ³ (105 ppb) not to be exceeded more than 18 times a year	1 hour mean	31.12.2005
	40 ug/m ³ (21 ppb)	annual mean	31.12.2005
Particles (PM ₁₀)	50 ug/m ³ (gravimetric)	not to be exceeded more than 35 times a year as a daily mean (24 hours)	31.12.2004
	40 ug/m ³ (gravimetric)	annual mean	31.12.2004
	**50 ug/m ³ (gravimetric)	not to be exceeded more than 7 times a year as a daily mean (24 hours)	31.12.2010
Sulphur Dioxide	350 ug/m ³ (132 ppb) not to be exceeded more than 24 times a year	1 hour mean	31.12.2004
	125 ug/m ³ (47 ppb) not to be exceeded more than 3 times a year	24 hour mean	31.12.2004
	266 ug/m ³ (100 ppb) not to be exceeded more than 35 times a year	15 minute mean	31.12.2005

** The new particles objectives for England and Wales are not yet in place

Source: DEFRA 2003 Part IV of the Environment Act 1995 Local Air Quality Management

APPENDIX 2

Diffusion Tube Site Details

Site Name	Site Description	Location	Description from Box 1.4
SITE 1- Town Centre (TL2423)	Urban Centre U3	Bus station	Public may be regularly exposed
SITE 2- Gunnells Wood Rd (TL2223)	Urban Industrial U5	Open road	Public not regularly exposed
SITE 3- Ashdown Road (TL2125)	Suburban SU	Residential street	Public not regularly exposed
SITE 4 – Monks View (TL2224)	Urban Background U4	Residential cul-de-sac	Short term exposure
SITE 5 - Bedwell Crescent (TL2424)	Urban Background U4	Open site, no exposure	Public not regularly exposed
SITE 6 - Salisbury Road (TL2625)	Urban Background U4	Near housing	Outside housing / school
SITE 7 - Letchmore Road (TL2523)	Urban Background U4	Near housing and school	Outside housing / school
SITE 8 - High Street (TL2523)	Kerbside U1	In front of offices	Places of work
SITE 9 - Fishers Green (TL2625)	Urban Background U4	Open area	Public not regularly exposed
SITE 10 - Magpie Crescent (TL2522)	Kerbside U1	Close to residential	Short term exposure
SITE 11 - Brighton Way (TL2522)	Urban Background U4	Open area	Public not regularly exposed
SITE 12 - Newlyn Close (TL2422)	Urban Background U4	Close to residential	Short term exposure
SITE 13 - Chadwell Road (TL2322)	Urban Background U4	Little residential	Public not regularly exposed
SITE 14 - Whitney Drive	Roadside U2	Close to school/residential	Public not regularly exposed
Car Park – Lytton Way	Roadside U2	Council Car Park	Public not regularly exposed but near railway and bus station

**Nitrogen Dioxide trends over 11 years
(not bias adjusted)**



