

Think Globally  
**Act Locally**

# CLIMATE CHANGE STRATEGY

WOKING BOROUGH COUNCIL





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2008 – 2013

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Act Locally

## Foreword

Woking has, through the interests of its Councillors and reflecting our residents' concerns, long been committed to protecting the environment. This commitment to tackling climate change has been widely recognised by the Government through its Beacon award scheme which promotes excellence in delivery of local authorities' services to their communities. The Council has been awarded Beacons for Sustainable Energy (2005 - 2006), Promoting Sustainable Communities through the Planning Process (2007 - 2008) and has recently been awarded the Beacon for Tackling Climate Change (2008 - 2009).

As a Beacon Council our Climate Change Strategy is recognised by Councils across the UK and has also had international recognition. In the last year the Council has been visited by groups from all over the world who are keen to learn about our achievements at a local level.

Woking has accomplished a lot and in the five years since the original Climate Change Strategy was first published in March 2003. Many of the key strategies have been achieved in a way that has been self-funding and has involved working with commercial partners and related organisations to meet our environmental goals. As a result, the Council has developed a second version of the strategy which builds upon the achievements of the first and develops new key action points. This strategy includes three new areas for action, which we believe play an integral role in the challenge of mitigating and adapting to climate change these areas are: Water, Working with Business and Community and Residents.

The aim of this strategy is to co-ordinate a wide range of objectives into one comprehensive document that can be used by the Council and Woking's residents, businesses, community groups and others to reduce the Borough's emissions and impact on the environment.

The overall objective is to comply with, and exceed where possible, the targets from Central Government and other best international standards.

Regional estimates developed by Defra show that in 2005 residents, businesses and visitors produced 604,000 tonnes of CO<sub>2</sub> equivalent emissions, this is a reduction from the 649,000 tonnes of CO<sub>2</sub> produced in 2003. The Council are using these figures as a baseline and aim to further reduce CO<sub>2</sub> emissions year on year.

I believe that climate change is one of the most important issues that we as a Council have to tackle and I am proud that Woking as a Beacon Council is leading the way in this field. However, we still have a long way to go and must work together as a Borough to continue to make Woking a green place to live, work and visit.

Cllr Anne Murray  
Leader of the Executive  
April 2008

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## Introduction

The principles of the Climate Change Strategy for Woking incorporate three overarching themes:

- Reduction of borough wide CO<sub>2</sub> equivalent emissions
- Adaptation to climate change
- Promotion of sustainable development

The Council intends to work to tackle climate change through key areas of action. Details of these are outlined in this document. This Climate Change Strategy operates on a long term perspective, but it includes targets and actions to be achieved in both the short and the medium term too.

## What is Climate Change?

Mounting scientific evidence and debate leaves little doubt that climate change is happening and affects all of us. We can all work together to tackle climate change, but what is it?

The climate refers to weather patterns experienced over a long period of time. According to the Met Office, “climate change is the long-term change in climate and is usually used in the context of man-made climate change” (Met Office “Together We Can Make a Difference”, 2007).

The greenhouse effect is the term used to describe the warming of the earth. The diagram below illustrates this.



Due to human activities such as the burning of fossil fuels greenhouse gases have increased and therefore also increased the heat trapped in the atmosphere. CO<sub>2</sub> is the main contributor. According to Defra the Earth has warmed by 0.74°C over the last hundred years. Around 0.4°C of this warming has occurred since the 1970s.

Climate change is a global issue. Internationally, targets and frameworks have been set to tackle climate change. The Rio de Janeiro conference on sustainable development in 1992 saw the issue of climate change being brought out into the international forum. Borne out of this, initiatives such as the Kyoto Protocol (which was agreed in 1997 and came into force in February 2005) and the United Nations Framework Convention on Climate Change, mean that countries around the world are working together to cut emissions of CO<sub>2</sub> to help reduce the causes of climate change.

The effects of climate change are also experienced at a local level so it has been recognised that it will be important to act globally, nationally and locally on this issue.

A number of international and national targets have been set to address the issue of climate change.

### **UK Climate Change Bill**

In 2007 the UK became the first country to adopt a Climate Change Bill. This Bill puts into statute the UK's targets to reduce CO<sub>2</sub> emissions through domestic and international action by at least 60 per cent by 2050 and 26-32 per cent by 2020, against a 1990 baseline.

If action is not taken to reduce greenhouse gases within 30 years there will be an irreversible effect on the global climate. This is why Woking Borough Council took the lead in 2002 and developed its own Climate Change Strategy for the Borough – the Council firmly believes that climate change is not something to be ignored and we all have to act now.

By looking at the everyday needs and services required by the public and provided by Woking Borough Council e.g. waste management, housing, etc, we hope that the Council, local residents and businesses, can all work together to cut down the causes of climate change and in the process make our living environment more sustainable.

### **What is mitigation and adaptation?**

Throughout the strategy action on climate change covers two areas: mitigation and adaptation. Mitigation relates to action taken to tackle the causes of climate change i.e. by reducing greenhouse gas emissions. Adaptation relates to action taken to adapt to the unavoidable effects of climate change caused by increased concentrations of greenhouse gases from human activities.

## What climate change means for us: Think Globally, Act Locally

Global impacts caused by climate change could include temperature rises resulting in the melting of polar ice caps, which in turn could mean sea level rises which subsequently could lead to greater risks of flooding. There is also potential for more frequent severe weather events such as droughts and storms. Temperature changes are also likely to affect seasonal characteristics, changing the life cycles of plants and the creatures that feed on them. These are the general threats faced by the world as a whole but it is perhaps easier to think about the effects of climate change at a more local level.

In the South East of England our climate will change considerably over the next 80 years. In fact, over the last century alone the average temperature has risen by 0.5 °C and summer rainfall has decreased (Rising to the Challenge, UKCIP). Wetter winters and drier summers are anticipated for the South East. An increase in average annual temperatures of between 2 and 4.5 °C is expected by the 2080s as well as a decrease in annual average rainfall of 0-10%. There will be greater seasonal variation in climate and changes in the pattern of extreme events, for example the greater occurrence of hotter than usual summer months.

It's an undeniable fact that for the past few autumns in the UK – our own Borough included – people have had to struggle against hurricane force winds, fallen trees and floods that have devastated homes, schools and businesses. Extreme events such as these are expected to become more frequent.



When contemplating the effects of climate change on the local area, it is important to recognise the need for the community to work together. Woking Borough Council has worked with partners including local people to develop a Community Strategy for the Borough with aims such as a clean, healthy and safe environment at its core. The Climate Change Strategy can help contribute to the Community Strategy by for instance, using alternatives to fossil fuels. This will not only cut greenhouse gas emissions, but also improve air quality locally and help contribute to a clean, healthy and safe environment.

The strategy aims to build on the Council's existing environmental success and to take a carbon neutral (see Glossary of Terms) approach to the future of services and activities within the Borough.

It sets out a range of options which aim to reduce CO<sub>2</sub> equivalent emissions and take further measures to enable the inhabitants and habitats within Woking to adapt to climate change.

## CO<sub>2</sub> and CO<sub>2</sub> equivalent emissions

This document makes references to CO<sub>2</sub> (carbon dioxide) and CO<sub>2</sub> equivalent emissions (e.g. methane, HFCs and other greenhouse gases), but what are they? Humans increase greenhouse gas levels in the atmosphere through many daily activities. When we burn fossil fuels such as oil, coal and natural gas, we release the CO<sub>2</sub> that has been stored in them for thousands of years. Massive burning of fossil fuels in just a few decades has emitted huge amounts of CO<sub>2</sub>.

Living, growing trees help to absorb carbon dioxide from the atmosphere, so our present trend towards deforestation of the planet means that less CO<sub>2</sub> is being absorbed. The two trends – burning more fossil fuels and cutting down more trees – taken together, have increased the concentration of CO<sub>2</sub> in the atmosphere.

Humans are responsible for other greenhouse gases as well. Methane is released through landfill waste, intensive agriculture, coal mining and leaky natural gas lines. Industrial



products emit Hydrofluorocarbons (HFCs). Less than 200 years since human beings began making major emissions, greenhouse gas concentrations are rising to levels higher than any yet seen in human history – and they will rise much more in the years ahead unless we take action now.

In Woking, it is estimated that in 2005 residents, businesses and visitors produced 604,000 tonnes of CO<sub>2</sub> equivalent emissions mainly by sending our waste to landfill, using our cars and consuming energy from non sustainable sources. This 604,000

tonnes of CO<sub>2</sub> would fit into 604,000 hot air balloons. The Council's Climate Change Strategy aims to reduce CO<sub>2</sub> emissions year on year using these figures as a baseline.

## Key theme 1: Planning and Regulation

The way in which developments are regulated, planned and built and the way in which resources are used to do this can determine whether or not they are sustainable. Simply by re-evaluating how and where we build things we can reduce emissions and help adapt to some of the issues climate change will bring about.

As one of the key objectives of the Climate Change Strategy is to promote sustainable development, the Planning system is an ideal tool through which we can work to address issues relating to climate change. The Council was pleased that their good work in this area was recognised through it being awarded Beacon status for Promoting Sustainable Communities through the Planning System 2007-8.

The Government acknowledges that Planning has a key role to play in helping to tackle Climate Change. The White Paper *Planning for a Sustainable Future* (published May 2007) sees this role as aiding the shift to low carbon and renewable forms of energy supply and also helping to ensure that new development, through its location and design, is resilient to the inevitable changes in climate. A *Planning Policy Statement on Planning and Climate Change* was published in December 2007 which sets out the Government's national policies on how planning should contribute to reducing emissions and stabilising climate change and take into account the unavoidable consequences. It states that in developing Local Development Frameworks (which sets out planning policy for future development), Local Planning Authorities should provide a framework that promotes and encourages renewable and low-carbon energy generation and encourage the delivery of sustainable buildings. The Council is committed to promoting sustainability as an integral part of its Local Development Framework.

One of the principal ideas we are working to promote in connection with development and land use is that of an 'environmental footprint'. This refers to the CO<sub>2</sub> equivalent emissions that land use, be it a field, office block or housing estate, produces from heating, methane generation, etc. The aim is to encourage a lower, less harmful level of CO<sub>2</sub> in a site's environmental footprint, with the overall objective that any new land use reduces CO<sub>2</sub> emissions by 80% compared to the previous use. This would mean that if an office block was replaced with a housing estate, the housing estate would have to incorporate sustainable/renewable energy which result in significantly lower CO<sub>2</sub> emissions than produced by the office block.

Essentially there are four main elements of sustainable development which can be taken account of in the local planning system:

### Location

Average car use generates over three tonnes of CO<sub>2</sub> emissions a year, equivalent to approximately a third of the household generated CO<sub>2</sub>. Nearly half of all households in the Borough of Woking have two or more cars. The location of new development, in respect of the need for people to travel to places of work, shops, schools and entertainment, can have a significant impact on CO<sub>2</sub> emissions and the Planning Policy Statement on Planning and Climate Change provides guidance on factors that should be considered when selecting land

for development. By locating new development near to public transport services, the need to



travel by private carbon-fuelled vehicles can be reduced. Accessibility to public transport in the Borough has been modelled on the basis of Woking town centre as the primary destination. Reference to the Public Transport Accessibility Model (PTAM) provides a general indication of how dependent the occupiers of a new development may be on private transport. More information on PTAM can be found in the Climate Neutral Development Guidance.

## Layout

The layout of a site and its buildings can be devised so that it is more sustainable. For example buildings or windows can be positioned to take advantage of passive solar gain (warmth generated from sunlight). Terraced housing and flats are also more environmentally sustainable as compared with detached and semi-detached housing because heat loss through walls and roofs is minimised through such schemes. By considering these issues, the energy requirements of a home can be reduced by 20%. This relates to one of the main strategy objectives of reducing CO<sub>2</sub> emissions.

## Landscape

The landscape around a development can help to reduce energy consumption. For instance, trees, hedges and shrubs can create shelter from the wind, reducing heat loss; or they can create sun traps reducing the need for heat and providing shading in summer to reduce the need for artificial air conditioning. But trees can also have a negative impact by creating overshadowing against south facing developments which limits passive solar gain during colder times of the year. The siting of vegetation in relation to a development is something to be considered, both in terms of siting new development near already established vegetation or conversely planting new vegetation near already built development. It is also important to consider the effect that the planning system can have in protecting landscapes from changes in climate. This is discussed more in Theme 7 on Green Spaces

## Sustainable Construction Measures

Energy use in buildings providing services such as water, heating and lighting equates to 50% of the UK's CO<sub>2</sub> emissions. This can be reduced through tackling water efficiency e.g. storing rain water; installing renewable energy sources as a means of power e.g. photovoltaic cells (solar panels) or wind turbines; installing community heating or Combined Heat and Power; improving insulation and thereby reducing loss of heat; and through the minimisation of waste. Through its *Building a Greener Future policy statement* (July 2007), the Government has committed to reducing carbon emissions from domestic buildings to ensure that all new homes will be zero-carbon by 2016. This will be delivered through revisions of the Building Regulations and the Code for Sustainable Homes, but it also sees the planning system as supporting the delivery of this timetable; in the *Planning Policy Statement on Planning and Climate Change* it looks to planning authorities to work with other partners to encourage the delivery of sustainable buildings.



Sustainable development in terms of planning will be sought through existing legislation, standards and guidance. The Climate Neutral Development Guidance relates the Climate Change Strategy's objectives specifically to the Local Plan. It advocates a range of good practice measures that enable new development to have reduced (or neutral) risk from changes in climate. In preparation of its Local Development Framework the Council will

produce a Climate Neutral Development Supplementary Planning Document (SPD) which will provide guidance on how to incorporate climate neutral technologies (such as solar panels and sustainable drainage systems) within new developments. When adopted the SPD will become a material planning consideration, and will be taken in to consideration when decisions are made on planning applications.

### Case Study: Development of 54 apartments and town houses St. Peters Convent, Maybury

A development of 34 one- and two-bed apartments and 16 three- and four-bed houses (including eight social landlord homes) was completed in Maybury with high environmental credentials. It achieved a 32% reduction of CO<sub>2</sub> emissions based on 2006 building regulations through the installation of a biomass boiler to provide space heating for the development and a small scale gas-fired CHP engine to supply domestic hot water and electricity.



Critical Planning considerations for the Council were how and where the biomass fuel would be stored and how the CHP and biomass boiler would work in tandem. C Plan, a software system

adopted by the Council, was used to model the carbon savings that would arise from supplying CHP and biomass heating for the entire development.

Number	Action	Timescale	Progress
1.1	Encourage the widespread adoption of higher standards promoting development that is more sustainable.	1-3 years	The Council will work with the Climate South East to promote the issue of climate change in planning. The council has adopted C Plan software to assist with ensuring that new development has incorporated renewable energy technologies.
1.2	Incorporate planning policies which will ensure that new development in the	1-3 years	The Council seeks to achieve the Code for

	Borough contributes to a reduction in CO <sub>2</sub> equivalent emissions of greenhouse gases through the Local Development framework. The Core Strategy of the LDF is due for adoption in December 2010.		Sustainable Homes Level 3 for new residential developments from 2008; Code Level 4 from 2010; and seeks BREEAM “excellent” ratings for non residential developments.
1.3	Consider options for expansion of the decentralised energy system in Woking including CHP within the town centre and elsewhere within the Borough.	1-3 years	
1.4	Continue to share information and carry out ‘peer support’ work with other local planning authorities as initiated through Beacon Status programmes.	1-5 years	
1.5	Continue to liaise with neighbouring authorities to establish whether joint working/unified action would be possible in complying with Institute of Lighting Engineers (ILE) guidelines and in the reduction of light pollution.	1-3 years	This issue is to be raised with the Surrey Climate Change Partnership

## Key Theme 2: Energy

Energy efficiency is key to the Climate Change Strategy. Wasted energy or poorly managed energy provision, particularly through heating, can result in high CO<sub>2</sub> equivalent emissions being produced, loss of money and damage to the environment.

By using energy more carefully, using alternative sources, or creating more effective heating, CO<sub>2</sub> equivalent emissions will be reduced while helping to promote sustainable development and well being. This will be to the benefit of public services, fuel poor residents and businesses both economically and in terms of creating a more comfortable environment.

### Renewable technologies



Woking Borough Council is also seeking to promote the use of renewable and sustainable energy sources in order to reduce emissions that are harmful to the environment. A prime example of this is its use of combined heat and power (CHP) technology for its own offices and other town centre locations where the fuel may initially be a low carbon fuel such as natural gas. This can be replaced later by a renewable fuel such as biogas, biomass or a fuel cell deriving its hydrogen from renewable fuels. Another example is the use of photovoltaic cells (solar panels as they are commonly called) that collect energy from the sun and convert it into energy. Both of these mitigate the production of CO<sub>2</sub> type gases.

### Fuel Poverty

Fuel poverty - when a household finds it too expensive to heat their home – is a serious issue. The Council wants to make heating an affordable commodity for more council tenants and to provide warmer, more comfortable homes with associated benefits for people's health. As at March 2007, almost 98% of Authority housing properties were heated for 10% of income or less (for sheltered housing) or £10 per week or less (for non-sheltered housing).

The Council also promotes energy efficiency and installation schemes to make heating more affordable for private homes. The Private Sector Housing Team work with owner occupiers and landlords to help identify and eliminate potential risks to health and well-being, in particular targeting vulnerable people living in the poorest housing conditions and at risk to fuel poverty. The assistance available includes:

- Advice via Homelink on ways to maximise household income and reduce fuel usage
- Direct measures provided by Homelink's Handyperson service such as draft excluders and free installation of low energy light bulbs
- Safe and Warm Grants (means tested) for urgent works such as provision of thermostatic controls and programmes to central heating and replacement doors and windows.

In addition, the Council is working with other local Councils in West Surrey and North East Hampshire to deliver an enhanced grants programme to tackle fuel poverty for vulnerable owners and tenants of hard to reach and hard to treat homes in partnership with other organisations and existing grant schemes. The grants programme will target disadvantaged households and tenants within homes of multiple occupation, where they do not currently meet the government's Decent Homes Standard (the government defines a decent home as '*one which is wind and weather tight, warm and has modern facilities*'). Greater levels of thermal efficiency within 'non decent' homes can often improve a home to meet a 'decent standard'.

### Case Study: Brockhill Sheltered Housing

Brockhill is an 'extra-care' sheltered housing scheme operated by Woking Borough Council for elderly residents. It boasts a large scale domestic solar photovoltaic installation and a CHP system. This innovative and unique combination of technologies enables Brockhill to



receive sustainable energy from the CHP plant and renewable energy from the photovoltaic roof. This approach makes a positive contribution to the Council's Climate Change Strategy targets.

The solar photovoltaic roof alone saves around 25 tonnes of CO<sub>2</sub> emissions a year. The combined system of photovoltaics and CHP will save around 4,734 tonnes of CO<sub>2</sub> emissions in its lifetime and provide a 100% renewable and sustainable

energy source. Brockhill a total generation capacity of 111.5 kW (81.5kWp photovoltaics and 30kW CHP).

Number	Action	Timescale	Progress
2.1	The Council is to bring all of its own exterior lighting into compliance with ILE guidelines as part of its planned maintenance programmes.	3-5 years	Work will be ongoing under the Council's planned maintenance programmes.
2.2	Consideration to be given to addressing fuel poverty in private homes by 2010/11.	5-10 years	A 'Winter Warmer' insulation programme for private households was launched in 2002 and since then cavity and loft insulation has been provided to 1480 homes in the borough free of charge.  Residents can receive

			free advice on improving the energy efficiency of their home and national grant schemes through the Energy Saving Trust's Energy Advice Centre on 0800 512 012.
2.3	Generate 20% of the Council's electrical energy requirements from renewable sources by 2011	3-5 years	In 2007 the Council generated 11% of the Council's electrical energy requirements from renewable energy sources.

2.4	Generate 100% of the Council's electrical and thermal energy requirements from renewable and sustainable energy sources by 2011	1-3 years	In 2006, the Council generated 94% of its electrical and thermal energy requirements from renewable and sustainable energy sources.
2.5	Achieve a year on year improvement of 3% per annum in energy efficiency of both Council owned and privately owned residential property using the Home Energy Conservation Act (HECA) methodology.	1-3 years	HECA requires every UK local authority with housing responsibilities to submit an energy conservation report to Government identifying measures that significantly improve the energy efficiency of all residential accommodation in their area; and to report on progress made in implementing the measures.
2.6	Reduce the carbon emissions of existing council owned housing through energy efficiency and renewable energy improvements above and beyond minimum requirements as set out in the Decent Homes Standard and by achieving an average SAP rating of 84 across all properties by 2012.	1-3 years	Using the findings from Oak Tree Road refurbishment project, assess current refurbishment specifications for Council owned housing to identify cost effective carbon reduction measures and develop suitable procurement channels for their implementation.

2.7	Adopt a low carbon homes programme based on the findings from the Oak Tree Road project. The aim will be for 1,000 homes in the borough to be classified as low carbon by 2012.	3-5 years	Consideration will be given to identifying a variety of measures to increase the installation of energy efficiency measures and microgeneration technologies in private homes including signposting to accredited installers and available funding.
2.8	<p>The Council will collaborate with four other Councils on an enhanced grants programme which will aim to:</p> <p>Bring 1000 'non-decent' properties up to a 'decent' standard through appropriate energy efficiency measures.</p> <p>Help 800 vulnerable residents to escape fuel poverty through income maximisation and better thermal efficiency, resulting in reduced bills.</p> <p>Bring 20% of non-decent Houses of Multiple Occupation up to a decent standard through energy measures.</p>	1-3 years	

## Key Theme 3: Waste

Waste is a growing problem, and its appropriate disposal is a central part of the work to reduce the effects of climate change because of the impact it has on the production of



greenhouse gases. Landfill sites are fast filling up, and combined with the resulting greenhouse gases they create, the way we treat waste needs to be re-evaluated.

The Environment Agency has estimated that the UK's waste amounts to 434 million tonnes each year. Landfilling the biodegradable element of

this waste has a detrimental impact on the environment through the production of greenhouse gases, methane and CO<sub>2</sub>.

For each tonne of biodegradable material, paper, card, food, garden and textile waste sent to landfill it is estimated that between 200m<sup>3</sup> to 400m<sup>3</sup> of greenhouse gas is produced which contributes to global warming.

The municipal solid waste (MSW) collected for treatment and disposal by Woking Borough Council is predominately comprised of wastes collected from domestic households. The Department for Environment Food and Rural Affairs (DEFRA) documented that in 2006/07 some 29.1 million tonnes of MSW was generated in England, with 16.9 million tonnes sent to landfill and around 68% of the material sent to landfill was biodegradable.

Whilst households do not contribute the largest quantities either on a national basis or in most local authority areas, household waste does present a major disposal problem because its high organic content can give rise to a pollution risk. (DTI, 1998:p6)

The challenge for local authorities including Woking has been made clear in the Government's Waste Strategy for England 2007. Specifically we need to curb the growth in household waste, reduce the overall tonnages of waste collected and increase the quantity of material sent for recycling and composting.

Since the introduction of the alternate weekly waste and recycling collection scheme in Woking, the Borough has seen a significant reduction in the amounts of waste being sent to landfill. This is due to the increasing proportion of waste collected for recycling which has risen from 6,491 tonnes in 2004 (before the scheme was in place), to 14,272 tonnes in 2006/07 – an increase of almost 120% in three years. In February 2008 just over 42% of Woking's household waste was being sent for recycling.



The Joint Municipal Waste Management Strategy (JMWMS) produced by the Surrey Local Government Association constitutes a 20 year plan for introducing environmentally and financially sustainable waste management practices in the county, covering the period

running from 2006 to 2026. The JMWMS accounts for new objectives and changing targets such as the Landfill Directive and statutory recycling and recovery targets.

### Case Study: Organic Kitchen Waste Collection Trial - Green Cone food waste digesters

Through this project, it is intended to seek 200 volunteers in the Borough of Woking to trial food waste digesters and to ask them to self monitor the quantities of food they divert from the waste stream; the ease of use of the food waste digesters; and issues around the practicality of using the food waste digesters. Questionnaires will be used to help identify the factors that impact on the behaviours of residents when using complementary systems for treating food waste.

Number	Action	Timescale	Progress
3.1	Investigate mechanisms and opportunities for joint working between the Surrey authorities, with the community and waste industry, and consider existing initiatives	1-3 years	
3.2	Work towards promoting our waste related activities under an overarching message/logo, and participate in relevant national campaigns	1-3 years	The Council will work with the Surrey Authorities Waste Network and other relevant forums to progress this action.
3.3	Demonstrate our commitment to resources management through corporate actions and procurement processes, in particular the use of sustainable and environmental products and materials.	5-10 years	The Council has adopted a Procurement Strategy with the objective to 'encourage environmentally advantageous products and services'.
3.4	We will aim to achieve an average zero waste growth per head of population by 2010, and seek to de-couple waste growth from economic growth, with total municipal waste arisings growing only in line with increased population	1-3 years	
3.5	Encourage all schools in Woking to educate children in waste minimisation, collection and treatment issues and help them deliver co-ordinated education campaigns.	5-10 years	The Council's Neighbourhood Team participates in the Junior Citizen initiative, and arranges school assemblies in Partnership with Surrey Waste Management.
3.6	Coordinate with appropriate authorities to enforce the exclusion of commercial waste from the household waste stream, and champion the principle that "the polluter should pay" in relation to	5-10 years	

	creating and managing waste. At the same time we will support the minimisation and recycling of commercial waste.		
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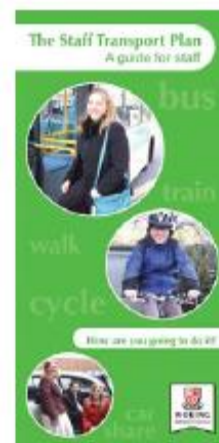
3.7	Encourage the public to change their purchasing and consuming habits and support re-use events and centres to enable goods and materials to be re-used, repaired and exchanged.	5-10 years	The Council will support the development of Woking Freecycle Network and other relevant initiatives to encourage re-use activities.
3.8	Promote home composting as well as kerbside organic collections and develop kerbside recycling and bring site collection systems to achieve or exceed recycling and composting rates of 40% by the year 2010 and 45% by 2015, regardless of any lower national targets.	5-10 years	The Council is trialling the use of Green Cone Food digesters as part of a possible solution to organic waste (see case study under this theme).
3.9	Develop systems to collect both garden waste and kitchen waste from householders by 2010.	1-3 years	
3.10	Collect a wide range of recyclable materials, consistent with market quality standards, and look to maximise the value of collected materials by seeking joint agreements with market outlets.	5-10 years	The Council's recycling collection infrastructure has given rise to recycling rates in the order of 40% to date, and includes provisions to collect a mix of dry recyclables.
3.11	Monitor waste arisings and composition in order to inform waste minimisation schemes and future targets; and support options for maximising the re-use and diversion of bulky items from disposal.	5-10 years	
3.12	Investigate opportunities to recycle commercial waste collected by authorities, and lobby the manufacturing/retail sector and national government to tackle the issue of retail packaging in particular.	5-10 years	

## Key Theme 4: Transport

Emissions from vehicles account for a significant proportion of CO<sub>2</sub> equivalent emissions but emerging government strategies and new technologies should enable us to tackle this issue and make transport greener.

In October 2000, Woking Borough Council introduced its own Staff Travel Plan for Council staff. This was reviewed and relaunched in 2007. Policies such as car sharing, encouraging cycling and working from home are designed to result in a measurable reduction in the number of journeys and miles undertaken by Council officers whilst vehicle emissions limits will ensure that car journeys undertaken for Council Business will result in reduced environmental impacts.

The Government's 'Powering Future Vehicles' Strategy has a key objective that 10% of new UK vehicles will be low carbon – using less than 100kg per kilometre of CO<sub>2</sub> equivalent - by 2012. This has encouraged the investigation into vehicle fuel efficiency and zero or low emission fuels. Technologies are becoming increasingly available which enable this goal of zero or low emissions e.g. vehicles which run on liquefied natural gas, electricity, natural gas and compressed natural gas. The Council will encourage use of these sustainable alternatives for its own operations, the local taxi fleet and across the wider community.



The Department for Transport published 'Making Smarter Choices Work' in 2005. This highlighted the role that local government can play in encouraging communities to consider their transport options, and choose alternatives to single occupancy vehicle journeys where practical. The Council will use a range of communications channels to raise awareness of smarter travel choices, and will encourage use of Transport Plans amongst local businesses and organisations.

Number	Action	Timescale	Progress
4.1	Promoting the use of low carbon vehicles and Promotional campaign with fuel station operators in the Borough to encourage the provision of alternative fuels (LPG, CNG, LNG, Hydrogen) at local filling stations.	1-3 years	
4.2	Awareness raising event/campaign for local businesses to encourage implementation of company travel plans  See theme 9	1-3 years	
4.3	Retaining the carbon offset charge for the use of Council car parks and the hypothecation of the charge to the Climate Change Fund. Charging level	1-3 years	

	to be reviewed annually.		
4.4	Target a Woking Car Club membership of 200 individual users by 2012.	3-5 years	
4.5	Review facilities for cyclists and pedestrians in all of the Borough's town and village centres and adopt an action plan to account for any identified improvement priorities through Transport for Woking.	3-5 years	Woking Borough Council and Surrey County Council were successful in securing £1.82 million from Cycling England for the improvement of cycling facilities in the Borough over the next three years. Top priorities include improvements to the Woking Cycle Network; upgrades to the Basingstoke Canal Towpath and improved cycle storage at rail stations.
4.6	Promotional campaign through Council publications to raise awareness of Smarter Travel choices, targeting residents and the business community.	1-3 years	
4.7	The Council will continue to press Surrey County Council to bring all their lighting, particularly street lighting, into compliance with the ILE guidelines.	1-3 years	In September 2004, Surrey County Council was successful in gaining a PFI bid for the improvement to the quality and efficiency of street lighting. Progress on this bid and compliance with ILE guidelines will be monitored.

## Key Theme 5: Procurement

When purchasing goods or services, it is possible to adopt environmental policies that account for impacts on climate change. Environmental and climate change impacts occur through both the source and nature of the goods purchased. For example the use of timber from non-sustainably managed forests or a non-sustainable type of fuel used in vehicles.

It is necessary to purchase services in a more sustainable way by looking at factors such as service delivery options and contracts to encourage suppliers and contractors to operate environmentally sound and sustainable procurement policies. An example of this could be specifying the use of low carbon fuel for contractors' vehicles. The Council will use its own procurement strategy to aid mutual understanding of the impacts on climate change of the procurement of goods and services between the Council and its suppliers and contractors.



The Local Government Sustainable Procurement Strategy was launched in November 2007 and tasks individual Councils, and the sector as a whole, with a series of actions to ensure that procurement is undertaken in a more sustainable manner. Woking Borough Council will use the 'Flexible Framework' to monitor progress towards this agenda, and focus action on priority spend categories that are identified for Local Government within this Strategy.

Number	Action	Timescale	Progress
5.1	Inform principal contractors and suppliers regarding the Council's commitments to tackling Climate Change.	1-3 years	
5.2	Undertake product reviews to identify sustainability and climate change issues associated with national priority spend areas.	5-10 Years	
5.3	Undertake a review of opportunities for procurement in partnership (e.g. through the Local Strategic Partnership and Surrey Procurement Network) to identify priority areas for joint procurement which will reduce sustainability and climate change impacts.	3-5 years	

## Key Theme 6: Education and Promotion

By creating wider knowledge of climate change and sustainability through education and publicity, we can more easily help to bring about the changes we need to make. This theme recognises the need for Woking Borough Council and partners to communicate effectively with residents of all ages and backgrounds to aid understanding of climate change. This must encourage local action to mitigate factors that contribute to climate change and to ensure awareness of adaptation measures that residents will need to make to account for the changing climate. The Council supports the Woking Local Agenda 21 Group which is the Council's preferred partner for engaging with residents.

This theme sets out to inform the public of the potential local impacts of climate change and to explain the Council's aims in reducing CO<sub>2</sub> emissions and how it hopes to work to reduce the effects of climate change. By making everyone aware and encouraging people to do their bit we hope to enable residents to become ambassadors of climate change and environmentalism within the local community and to help them to demonstrate why it is important for everyone to play their part in promoting a more sustainable way of living.

Education on these issues will be tackled with individual residents, community groups and in schools with programmes such as 'Eco Schools', which provides schools with a structured framework for addressing climate change in the longer term. We also need to teach children how the climate is expected to change in their lifetime and how they can play a part in local action, as future custodians of the Borough.

Woking Borough Council also needs to incorporate climate change issues into the Community Strategy and the remit of the Local Strategic Partnership. This will ensure that local public service organisations and their partners are working towards common objectives that will account for climate change issues and capitalise on funding and partnership working that will be enabled through the Local Area Agreement. Another important way to encourage support is through enlisting the active help of other local organisations and groups.

Promotion of what the Council is doing is essential. The more people know and understand, the more likely they are to want to help reduce the effects of climate change. This strategy document sets this scene but publicity for the activities which it encompasses will need to be ongoing.

### Case study: Woking People of Faith Forum

Woking People of Faith Forum is a new, exciting initiative led by members of the Borough's different faith organisations and individuals. It is a charitable organisation overseen by a group of trustees and a management committee with representatives from different faiths. The group is supported by Woking Borough Council. The forum believes that, by working together on practical community issues and lobbying government agencies to help those in greatest need, a more cohesive society for the benefit of all the people living in the Borough of Woking can be created.

Climate change is a community issue, common to all faiths. In September 2007, a presentation of the Council's climate change work was given to a meeting of the forum. This served to raise awareness of the work and the important contribution that the group could

make in terms of taking forward this revised strategy. In October 2007, members of the forum, along with other community group representatives, were invited to take part in a focus group as part of the strategy consultation.

Number	Action	Timescale	Progress
6.1	Produce an Internet based resource as an educational tool to raise awareness of climate change and provide clear recommended actions for the community regarding climate change mitigation and adaptation.	1-3 years	
6.2	Provide a quarterly update to the local media regarding progress towards the Climate Change Strategy for inclusion in 'Go Green Woking' or similar column (Subject to discussion with Woking News and Mail)	1-3 years	
6.3	Work with schools in the Borough to achieve Eco Schools awards and link this with self assessment against the Government's Sustainable Schools 'eight doorways'. A bulletin for schools is to be produced.	3-5 years	
6.4	The Council will develop a programme to provide 10 schools in the Borough with energy efficiency and renewable energy advice and support.	1-3 years	
6.5	Aim to set up a programme where local stakeholders and Council Officers can become 'Climate Change Ambassadors' where the Council provides training and information to enable this, potentially linked to the Government's 'Together We Can' programme and Surrey County Council's 'Green Champions' initiative.	1-3 years	
6.6	Facilitate a Climate Change Strategy Action Plan for the Woking Local Strategic Partnership, to include commitments from the partners, accounting for Local Area Agreement priorities.	3-5 years	

6.7	Develop a Woking Climate Change Network through Window on Woking by 2009.	3-5 years	
6.8	Designate one Climate Change Working Group meeting per year as an Annual forum to which local residents and organisations are allowed to attend and ask questions.	1-3 years	
6.9	Continue to run the Thameswey Tours of the Council's sustainable and renewable energy initiatives as a way of sharing information with other local authorities about alternative sources of energy.	Ongoing	One tour is scheduled every month for up to 28 people to attend.

## Key Theme 7: Green Spaces

Changes in seasonal weather characteristics such as drier, warmer summers and colder, wetter winters will affect local plant and animal life. With the prospect of drier, hotter summers, there is likely to be a greater need for irrigation and water resource management.

With higher rainfall likely during winter months coupled with projected longer periods of dry weather in summer, there is a greater chance of flash rises and falls in local river water levels. This is particularly problematic in areas of development, where increasing the impermeability of land increases the risk of flooding. The installation of Sustainable Drainage Systems (SUDS) can help reduce surface run-off, thereby reducing the risk of flooding, and can also help with improving the quality of water, especially when low river levels occur during the summer. The creation of areas which can be used for water storage and provide valuable wetland habitats in areas susceptible to flooding is an important part of the strategy to cope with increased rainfall. The Council's proposals for the former Westfield Tip include such measures along with flood protection bunds.

Water is a resource that can become scarce during the summer months (highlighted in the last few years by regular hose pipe bans), and with an increased demand, this situation will require greater management. One way to reduce the pressure on water resources is through the re-use of storm water. By collecting storm water through SUDS, water can be supplied for irrigation without imposing on scarce resources. The collection of water from the roofs of public buildings for re-use for irrigation and for flushing toilets has already been adopted on new build schemes in Woking. Examples can be seen at Waterer's Park and in Woking Park.

To complement this we can plant vegetation that requires less water e.g. drought tolerant species and use shelter and shade to reduce the amount of water lost through evapotranspiration (the natural process by which plants take up water). For example the replacement of annual bedding with herbaceous species adapted to thrive in drier climates will reduce the demand for watering during summer. In addition, improving the organic soil content will help to improve its water holding capacity. Some of these measures are and the use of surface mulches are promoted in the Climate Neutral Development Guidance and have been adopted as good practice for the Council.

Water is also important to the built environment in making it more attractive. The practice of installing water fountains and other water features is common in hotter climates and could be done in Woking too. Such features can be kept operational using recycled water to avoid the need to replenish losses of water through evaporation. Again an example of this can be seen at Woking Park where restored ponds are kept topped up by rainwater collected from the roof of the adjacent swimming pool. Coupling such installations with the use of renewable and sustainable energy to reduce fuel consumption will make them viable in the context of the Climate Change Strategy.

Although trees are beneficial to the natural environment in many ways, including absorbing CO<sub>2</sub> from the atmosphere, their planting must be carefully considered in the local environment. Tree planting can have damaging effects in some areas where there are natural underground stores of water (known as aquifers) as this leads to vast quantities of water being lost through evapotranspiration. Also, trees can reduce the amount of water

available to surrounding plants by depleting soil moisture in summer months and this can lead to the desiccation of land. This impact can be reduced in part by the selection of tree species which are adapted to survive in drier soils. Tree planting therefore needs to be carefully planned and good practice developed in future editions of the Climate Neutral SPD (link to planning theme).

Woking Borough is rich in heathland and woodland, comprising approximately 100 hectares of heathland and 22% coverage of secondary woodland. Together they comprise vitally important habitats for biodiversity and are important in 'greening' the urban environment. However, the impacts of climate change are likely to affect both these types of vegetation. Heathland may be adversely affected by a reduction in soil moisture, fire damage and possibly migration of species as they become intolerant to their surroundings. There is already some anecdotal evidence that wet heathland habitats are becoming drier with resultant threats to important plant species. Climate change may have an effect on local woodlands too. Some types of trees such as beech, which are common in some parts of the Borough, are susceptible to prolonged summer droughts. Shallow rooted trees may be affected by high winds and suffer root damage. These issues must be tackled through partnership working with agencies such as the Environment Agency, Surrey Heathland Project and Surrey Biodiversity Network. Fire prevention plans are being developed for Woking's Heathlands following an extensive fire on Chobham Common in 2007. Together we can pool knowledge of habitats, the likely impacts of climate change and the best way to manage these.

#### **Case Study: The Hoe Valley**

Following a detailed feasibility investigation and close consultation with the Environment Agency, a scheme was developed for the Hoe Valley consisting of landscaped earth bunds, flood defence walls, channel improvements, bridge improvements and replacement and provision of flood storage. It is intended that this scheme will defend 198 existing homes, 63 gardens, 14 community buildings, 153 new homes and seven public roads against flooding to an extreme one-in-100 year standard.

#### **Case Study: The Surrey Heathland Project**

Fire risk is one of the potential consequences of longer, drier hotter seasons. The Surrey Heathland Project has seen the preparation of management plans to ensure improved fire protection measures including the provision of fire breaks and the removal of scrub areas that are a fire risk to nearby houses and also dry out the wet heathland. New ponds and wet heathland habitats have also been created at Sheets Heath.

#### **Case Study: Woking park ponds**

A comprehensive pond restoration and enhancement project was recently completed at Woking Park. The scheme has involved re-excavation of a completely overgrown pond and substantial improvements to an existing badly eroded duck pond. Local wildlife including frogs, ducks and dragonflies, have been quick to move back into the new ponds.

Over 300 tonnes of sediment have been removed from the ponds and re-modelled on site; 170 metres of a specially engineered clay lined trench installed to aid water retention and over 1600 species of grasses, shrubs, ferns and aquatic plants introduced to improve the amenity interest and biodiversity value of this part of the Park. The scheme has also included the construction of a water cascade, artificial stream, viewing area, timber decking

and a rain water harvesting system which collects rainwater from the roof of the swimming pool in order to provide top-up water during the drier summer months.

Number	Action	Timescale	Progress
7.1	Implement SUDS best practice in the management of the Council's own land and buildings and working with the Environment Agency, Thames Water and developers to create wetlands in or near existing floodplains with a view to enhancing capacity of the floodplain.	5-10 years	Significant work has been undertaken in the Hoe Valley, see <a href="#">case study</a> .
7.2	In partnership with the Environment Agency develop strategies and action plans for the river courses running through the Borough (Hoe, Wey, Bourne) with a view to assisting in the reduction of the risk of flooding.	1-3 years	<p>As part of the pond restoration work at Woking Park, additional flood storage capacity for the Hoe Stream has been incorporated. In addition to flood storage, a rainwater harvesting scheme was also incorporated to divert the rainwater from the swimming pool into the restored ponds. A Flooding and Land Drainage Task Group was set up to address issues relating to flooding emergencies and flood prevention.</p> <p>A Strategic Flood Risk Assessment for the Borough was completed in February 2007. This assessment identifies the areas at risk of flooding and will be used to inform the sites that come forward for development.</p>

7.3	Pursuing the use of irrigation systems that integrate the re-use of storm water in the management of Council land.	3-5 years	The Climate Neutral Development Guidance incorporates good practice on rainwater harvesting and recycling of greywater and this will be furthered in the forthcoming Climate Neutral Development Supplementary Planning Document (refer to theme 1: Planning and Regulation).
7.4	In partnership with the Surrey Heathland Project, Surrey Biodiversity Network, and the Environment Agency the Council to commission a study of existing heathland, and its relationship with existing/potential buffer zones to identify opportunities to enhance site reliance to climate change; review management plans to ensure fire prevention/containment is effective on heathland sites; encourage the development of strategic planning for the management of lowland heathland in response to climate change across the Thames Basin heaths; and review biodiversity action plans to consider the implications of climate change for the Borough's heathland, woodland, rivers and wetlands.	3-5 years	Ongoing partnership working through Surrey Heathland Project, Surrey Biodiversity Network and the Environment Agency.  The Council completed a Thames Basin Heaths Special Protection Area Interim Study in June 2006. This looks at creating access to new recreational spaces to relieve pressure which arises from residential development in the vicinity of the heathland.
7.5	Ensure the Council's future planning and investment in outdoor play facilities and services includes measures to ensure they continue to be 'fit for purpose' by responding to risks associated with higher temperatures.		Potential measures include provision of shade, availability of drinking water, provision of water play features and lighting of play areas to enable extended use into summer evenings.

## Key theme 8: Water

Water is an integral part of this strategy. Its availability is likely to be affected by climate change through periods of drought and flooding. The Council is looking at ways of managing and adapting to these risks and also ways to promote water efficiency throughout the Borough.



Water in the Borough is provided to all domestic and non domestic properties by Three Valleys Water. Based on the data from Three Valleys Water, average daily water consumption in Woking is approximately 170 litres/person/day, this is considerably higher than the average household in England and Wales of 150 litres/person/day.

Water issues are closely linked to several other themes in this strategy. The provision and removal of water to domestic and non domestic properties uses a significant amount of energy, about 2% of total energy used in the UK. Reducing the amount of water consumed within the Borough would therefore also reduce the Borough's energy consumption.

### Flood mitigation

The UK Climate Impacts Programme's 'Rising to the Challenge' publication describes the effects of climate change on the South East of England. It suggests that river flooding will increase during winter months due to wetter ground conditions and there will be an increase in daily rainfall totals.

Following extensive flooding in the Hoe Valley in autumn 2000, a report was commissioned by the Environment Agency to investigate the flooding which occurred and the possibility of providing flood defences and alleviation measures for residents at risk. The report concluded that the flood had an estimated return period of 15 years. Over 100 properties were affected and it was estimated that as many as 300 could be at risk of flooding for a more serious event with a 1-in-100-year flood. Over the last 3 years the Council has been involved in a series of flood alleviation schemes to protect homes and other buildings in this area. (See Key Theme 7: Green Spaces)

### Drought

Woking, like most other boroughs in the South East of England, is a densely populated area with low levels of rainfall and a high level of per capita water consumption. Changing weather patterns are already becoming established with wetter winters and drier summers resulting in long periods of drought. Government predictions for future water availability in the UK show that this region will suffer from high future water stress. Efficient use and management of water is therefore necessary.

### Water efficiency

The average water consumption in Woking exceeds the national average of 150 litres of water used per day. This level of use is not sustainable in the long-term. The government target is for per capita consumption of water to be reduced to 130 litres per person per day by 2030. Reduced consumption can be achieved easily through behaviour change and by adopting the following measures within homes.

- Water efficient appliances
- There are a range of appliances which reduce water consumption in the home including; dual flush systems and hippos for toilets, water efficient washing machines and aerated taps and shower heads which mix air into the water jet and reduces the water flow.

#### Water meters

- It is generally agreed that water meters reduce the average water use within a household by 10% and save on average £37 a year. Meters can be fitted to households free of charge by water providers. Residents can visit [www.3valleys.co.uk](http://www.3valleys.co.uk) or call 01707 268 111 for more information.

#### Water harvesting

- Water butts and whole building water harvesting systems collect rainfall and store it to be reused at a later date. This helps to alleviate water demand and also reduces the risk of flooding.

### Case Study: Oak Tree House

Oak Tree House, a three bedroom detached house in Knaphill was acquired by the Council as a show case for testing a wide range of water and energy measures. Its refurbishment has been designed to minimise the environmental impact of the house and maximise the quality of life for those living in it.



Water efficiency measures include:

- All kitchen appliances are of the highest water efficiency standards;
- A 3,500 litre water harvesting tank is situated underground, collecting water from the roof to flush the toilets and feed the washing machine and outside taps;
- The shower and taps for the bathroom and kitchen are aerated, reducing water use;
- The garden is planted with drought resistant plants thereby requiring less water.

For more information about this project and measures that you could implement in your own home to save both water and energy, visit [www.woking.gov.uk](http://www.woking.gov.uk) or call 01483 755855.

Number	Action	Timescale	Progress
8.1	Reducing water use to 130 litres per person per day by 2018	5-10 years	The Council has been promoting water efficiency devices including hippos, water butts and other low water

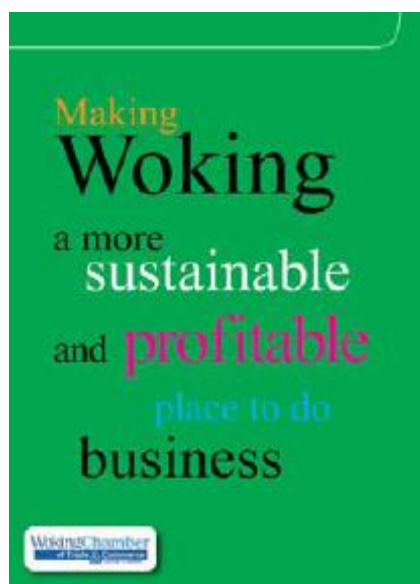
			devices.
8.2	Encourage the uptake of water meters within private sector homes in the Borough.	5-10 years	According to Three Valleys Water 30% of homes in Woking had a water meter in January 2008. The Council will promote uptake of water meters in the Borough.
8.3	The Council will reduce water consumption in all of its buildings by 50% from current levels by 2012	1-3 years	The Council has implemented various water efficiency / conservation technologies in the Civic Offices, including cistern dams, tap regulators, flow controls, waterless urinals and water recycling. Further initiatives will be explored.
8.4	New developments to include water efficiency measures and to sustain water levels in surrounding landscapes and adapt to flood risks.  In addition, an integrated approach to water demand and rainwater disposal will be considered including Sustainable Drainage Systems (SUDS).  See Key Theme 1	1-3 years	A number of back pumping and water harvesting schemes are now being supported by the Council.
8.5	Water efficiency to be promoted to schools within the Borough in partnership with Three Valleys Water.  See Key Theme 6	1-3 years	
8.6	As part of the Council's Low Carbon Homes Programme residents will be offered advice and support on how to make their homes more water efficient. The Council's aim is for 1000 homes to implement water saving measures by 2012 through the programme.	1-3 years	A variety of measures to increase water efficiency in private homes and gardens are on show at Oak Tree House.

## Key theme 9: Working with Business

Encouraging local businesses to become more sustainable has become increasingly important in Woking as it is only with a combined effort, together with residents and the Council, that the Borough's CO<sub>2</sub> emissions will be reduced. This theme signposts businesses to useful sources of information and highlights the incentives for businesses to becoming more sustainable.

Benefits of a greener business:

- Increased efficiency of businesses
- Reduced costs
- Increased profits
- Improved staff retention
- Enhanced profile
- Future proofing against legislation



Initiatives are already in place to help businesses.

Organisations such as the Woking Chamber of Trade and Commerce, Surrey County Council, Business Link Surrey and Woking Local Agenda 21 have worked together to get sustainability on the agenda of businesses in Woking. In November 2006, a programme of breakfast meetings began for local businesses to meet with environmental organisations. Woking was also host to the well attended and received Chartered Institute of Building 'Woking Means Business' exhibition in October 2007 and continues to promote the agenda at local annual exhibitions and conferences.

### Case Study: The Woking Asian Business Forum

The Woking Asian Business Forum (WABF) encourages and supports the development of Asian businesses in the Borough.

WABF intends to identify Asian businesses with potential and provide them with the support services they need in order to develop and grow. The Council is keen to engage with the forum to provide information and support on tackling climate change.

### Case Study : Repopoint

Repopoint is a digital print solutions firm based in Woking. The company has committed itself to a general policy of minimising the impact of its operations on the environment and

will continue to develop good economic, social and environmental practices using, wherever possible, sustainable and renewable resources.

Measures implemented to date include:

- Offering clients a Web to Print solution, enabling clients to order print, create bespoke templates and proof artwork via the Internet, eliminating the need for costly couriers and postage.
- Using e-mail for all quotations, giving a faster service and saving postage, paper and envelopes.
- Installing a database clean-up service to improve client data, saving approximately half a ton of paper (previously created as returned post).
- Working with suppliers to reduce waste packaging.
- Ensuring that no electrical equipment is left on stand-by mode overnight.
- Ensuring all windows are double-glazed.
- Good quality paper waste, end of rolls and Foamboard off-cuts are given to local schools.
- Sourcing all paper used in the business from sustainable farmed forests and using an elemental chlorine free or recycled product unless otherwise specified by clients.
- China mugs and glasses are used throughout the company rather than disposable items.

It is estimated that these sustainability measures could save the business up to £19,500 per year.

*Mike Webb, Chairman, Repropoint*

Number	Action:	Timescale	Progress
9.1	<p>Improve the availability of information resources for local businesses on incorporating sustainability. Work with established service providers such as Woking Chamber of Trade and Commerce, Woking Asian Business Forum and Business Link to promote existing services, such as environmental checklists and assist in development and promotion of new initiatives.</p>	1–3 years	<p>Information is already provided on the website but this needs to be made more easily accessible and clearly defined for different sectors. Several businesses have already been in contact with Business Link.</p>
9.2	<p>Work with local businesses through the Woking Chamber of Trade and Commerce to encourage 50% of its members reduce potable water consumption by 25% from current levels by 2012</p> <p>Refer to Key Theme 8</p>	1-3 years	
9.3	<p>In partnership with Business Link and the Woking Chamber of Trade and Commerce, the Council will facilitate 50% of businesses to implement a company travel plan.</p> <p>Refer to theme 4</p>	1-3 years	
9.4	<p>Create a local carbon reduction fund to enable businesses to offset their carbon emissions for local climate change projects.</p> <p>Refer to Key Theme 10.</p>	1–3 years	

## Key theme 10: Community and Residents

This Climate Change Strategy sets out policies and specific actions to help avert and adapt to climate change, and to ensure a sustainable future for the Borough. A key aim of the Strategy is to help develop a collective community response. This is essential – residents and businesses have a vital role to play as well as the Council itself.



### **BUILDING A SUSTAINABLE COMMUNITY**

on Environment and Development in 1992 (the Rio Earth Summit).

LA21 aims to build upon existing local government strategies and resources (such as Corporate plans, vegetation management plans, and transport strategies) to better integrate environmental, economic and social goals. LA21 encourages action within the community and disseminates information through meetings and events for residents, on subjects such as 'Extreme Weather' and 'Water Efficiency'.

The Woking Solar Frontier project was launched in January 2007 and was the start of the Council's strategy for making the Borough a pioneering Low-Carbon Community. The project was delivered in partnership with the Energy Centre for Sustainable Communities Ltd to help residents become more energy efficient and to provide information on renewable energy sources and trusted installers. Advice was provided to 1,100 residents and the scheme led to the installation of energy efficiency measures saving 172 tonnes of CO<sub>2</sub> per year (with 6,488 tonnes of CO<sub>2</sub> saved over the lifetime of the measures).

The second phase of the project is the Low Carbon Homes Programme. This scheme is centred around the retrofit of a detached three-bedroom house with energy and water efficient measures and renewable energy technologies. It is intended that these technologies will be tested onsite and that residents can visit to gain more information and see the technologies installed.

During the review of this Strategy, the Council consulted local residents on climate change issues. The results showed that 49.3% of residents have changed their lifestyle a little in order to reduce their impact on climate change. 43.4% of respondents said that they have changed their life significantly. We'd like to see this figure reach 100%.

### **Case Study: Julian Barnard, Woking Borough Council Employee.**

'For many years I have been aware of the challenges we face in the future regarding Climate Change. I had the privilege of travelling to the former Soviet Union in the early 1990's. I saw a worrying lack of awareness (and I guess finance) to tackle some of their appalling environmental issues. I also travelled out to Sri Lanka to help with the relief following the

Tsunami. Whether directly caused by climate change or not, it highlighted the future we face and we must each take personal responsibility to protect our planet.

Like most people I have taken my cans and glass to the recycling bins over the last few years. Every Saturday I religiously tear out the envelope windows of my week's mails and recycle the remnant. I live a mile from the shops and we do not use the car for shopping unless we are doing what we call a 'tin and packet' big shop once a month. We grow a lot of our own vegetables, have two compost heaps and water butts and source local food through the Farmers Markets and a local farm shop.

Switching off lights at work and home is a passion of mine as is turning off the heating if a jumper would suffice. However, I always recommend that the older people that I work with ensure that they keep their home warm.

At work we now have recycling bins which I have pressed for which prevent the kitchen's cardboard being placed directly into the landfill bin. I would encourage the availability for recycling facilities for the foil containers for the meals on wheels containers. It's a cliché, but if everyone recycled as best they can and was wise about their use of electricity I feel that we could make a difference.'

Number	Action:	Timescale	Progress
10.1	<p>Provide clear messages in an easily accessible format for residents through the Woking website, publications, green events and on information boards at the leisure centre and community buildings. These messages will include top ten tips for sustainability, case studies on what measures residents in the Borough are implementing. Through the Woking Low Carbon Homes Programme residents will be provided with a range of advice and support, detailing what they can do at home to reduce carbon emissions and be more energy and water efficient. A range of practical tools and examples will be developed for residents.</p> <p>For additional information please refer to Theme 3 and Theme 6</p>	1 – 3 years	<p>Information is available on the website (<a href="http://www.woking.gov.uk">www.woking.gov.uk</a>) and information boards are provided outside key energy projects such as the town centre energy scheme and the pool in the park fuel cell. As part of the Low Carbon Homes Programme an existing council property (representative of the housing stock in Woking) has been fully refurbished to high energy and water efficiency standards. The house will be used as a show home with guided tours to show residents the range of options available to them from low cost energy efficiency measures to higher cost renewable energy and water efficiency</p>

			technologies.
10.2	To monitor progress of the Borough as a whole, figures collected by Defra on energy efficiency will be made available to Borough residents.  For specific targets refer to Theme 2.	Ongoing	First figures to be published by Defra in 2009.
10.3	Encourage residents to reduce consumption and consume local produce and use local services	1 – 3 years	
10.4	Create a local carbon reduction fund to enable members of the community to offset their carbon emissions by contributing to local climate change projects.	1 – 3 years	
10.5	Introduce a triennial residents' survey on carbon reduction measures that they have implemented	1 – 3 years	
10.6	Promote car sharing and car club participation in the Borough.	1 – 3 years	

## Conclusion

The actions proposed in this strategy and the progress to date are intended to benefit our local environment and the people that live and work in it.

In publishing this document, the Council aims to set the standard for future action to alleviate the effects of climate change, to raise awareness among local people about the issues at stake and declare its intention to work in partnership with the local community to develop a more sustainable future for the Borough.

The Strategy is an important working document for the Council because it sets out policies for best practice and restates its commitment to green issues. It also highlights how climate change will affect everyone and makes the case for all of us to do our bit. Our generation has led the growth in CO<sub>2</sub> emissions and so our generation needs to take the action necessary to reverse this trend.

## Partnership Working

Throughout this document, partnership working has been highlighted as an effective way of mitigating and managing many of the anticipated impacts of climate change. The impacts are complex and affect many different aspects of the community and environment in which we live. By pooling together the knowledge and management practices of multiple organisations we can achieve the most effective results.

## Timescale

Although many of the actions in this document can be achieved within 1-3, 3-5 or 5-10 years, this strategy is long term in its outlook. While certain targets and goals can be achieved relatively quickly, they must be reviewed on a regular basis in order to accomplish the long term outcomes. This is highlighted by the Royal Commission's targets for reduction in CO<sub>2</sub> emissions - 60% reduction by 2050 and 80% by 2100. While these targets seem distant, by doing our bit continually, we are optimistic they can be achieved.

## Glossary of terms

CHP	Combined Heat and Power
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> equivalent emissions	Greenhouse gases, Hydrofluorocarbons, methane, etc.
GHG	Greenhouse Gas
HECA	Home Energy Conservation Act
HFC	Hydrofluorocarbons
PPG	Planning Policy Guidance
SUDS	Sustainable Drainage Systems
UKCIP	United Kingdom Climate Impacts Programme

Carbon Neutral - refers to products, services and other ventures that have little or no effect on the Earth's climate. This is achieved by reducing and offsetting greenhouse gases (e.g. CO<sub>2</sub> equivalent emissions) associated with the production and delivery of products, services or total operations emissions for an enterprise to achieve a net zero impact on the Earth's climate.

Climate Neutral Development – New buildings and infrastructure that have a neutral effect on the causes of climate change (e.g. CO<sub>2</sub> emissions), and which is at neutral risk from the climate (i.e. is resilient to the predicted changes in climate, such as higher summer temperatures and increased risk of flooding). The Guidance can be viewed at [www.woking.gov.uk/environment/climatechangestrategy/climatechangedevelopment](http://www.woking.gov.uk/environment/climatechangestrategy/climatechangedevelopment).

Community Strategy – This strategy contains local people's key concerns and priorities, based on public consultation. Under six broad themes, it sets out a longer term vision, describing the kind of place people want their communities to be and identifies priorities for action. The themes are community spirit; environment; transport; housing; personal health and well-being; and local facilities and services. The Strategy can be viewed at [www.woking.gov.uk/council/communitystrategy/strategy.pdf](http://www.woking.gov.uk/council/communitystrategy/strategy.pdf).

Environmental Footprint – the amount of CO<sub>2</sub> equivalent emissions associated with a particular building or area. The Council is looking for any new land use to emit 80% less CO<sub>2</sub> than the previous land use. This can be achieved through using renewable and sustainable sources of energy.

Kyoto Protocol – On 16 February 2005, the Kyoto Protocol came into force, seven years after it was agreed in December 1997. 141 countries, accounting for 55% of global greenhouse gas emissions, ratified the treaty which pledges to cut these emissions by 5.2% by 2012 from 1990 levels.

Renewable – in terms of resources this means that they are not limited, their source will never run out, i.e. coal is a finite resource as its stocks are exhaustible, meanwhile wind is renewable as it will forever be available.

Rio de Janeiro Conference on Sustainable Development (1992) – was attended by over 150 nations and created a statement of 27 principles on environment and development. In summary, the Declaration states that individuals and communities must recognise the importance of safeguarding the developmental and environmental needs of present and future generations i.e. make sure that what is taking place is sustainable.

Royal Commission on Environmental Pollution – Independent standing body established in 1970 to advise the Queen, the Government and the public on environmental issues. Advice comes in the form of reports which are the outcome of major studies.

Sustainable – this can refer to development or use of a resource – its use or existence must be able to be continued without being detrimental to the environment, or endangering the resource for its use by future generations.

United Nations Framework Convention on Climate Change (1992) – one of a series of agreements through which countries around the world came together to meet the challenges of climate change.

## **Background Information**

Nottingham Declaration

The science of and evidence for Climate Change

Councils for Climate Change Five Milestone Framework

UK Climate Impacts Programme (UKCIP02)

SEERA: "A Strategy for Energy Efficiency and Renewable Energy" Consultation Draft.

Climate Change Strategy for Woking (Council Publication)

An Innovative Climate at Woking (Council Publication)

Climate Change Strategy for Woking (Update Document) (Council Publication)

Climate Neutral Development – Good Practice Guide

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