

Sustainable Environment Strategy

2010-2020



WOKINGHAM BOROUGH COUNCIL

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Sustainable Environment Strategy 2010-2020

Improving the quality of life, now and for future generations, by respecting our environment and protecting it from the impact of our activities and from growth

	ENGAGE Raising awareness, fostering respect for our environment and changing behaviours	TAKE ACTION Minimising waste, pollution and greenhouse gas emissions.	PREPARE Planning for the likely impacts of climate change and managing limited resources efficiently
In the next 10 years we will:	 Demonstrate leadership in raising awareness through publicity campaigns, events, educational visits and improved website information Promote, to people of all ages, the true benefits of behaving more responsibly towards the environment, including smart meters and home audits Champion community groups, older people's forums, schools and businesses to deliver green projects, including new flagship buildings Conserve, value and enjoy the green character and biodiversity of the area Initiate behaviour change by promoting community spirit and training "Climate Change Ambassadors" within the council and community 	 Lead the way in carbon reduction, including the Carbon Trust Local Authority Carbon Management Programme and Carbon Reduction Commitment Encourage residents to improve the energy efficiency of their homes through advice and support Motivate and support local businesses to reduce their carbon footprint through initiatives, such as, the LoCUS partnership and Sustainable Routes project. Enable more sustainable travel through enhancing pedestrian, cycle and bus routes, improving public transport and promoting low carbon vehicles Ensure that our planning policies require new developments to be sustainable. Strive to improve air quality in the borough Increase recycling and reduce the amount of waste sent to landfill 	 Identify the risks and opportunities presented by inevitable changes in the climate (characterised by wetter winters and hotter, drier summers) and develop an adaptation action plan to address these Minimise our reliance on fossil fuels by increasing the amount of renewable energy produced and enhancing the economic competitiveness of the Borough Prepare for high future water stress caused by population growth, high usage rates and climate change Champion and promote procurement of local goods and services Mobilise and support businesses to invest in green innovation to facilitate growth
We will have succeeded if, by 2020:	 80% of residents feel well-informed on local environmental issues and understand the impact of their actions on the climate A programme of project and events has been run with communities and schools, including achieving Eco Schools awards We have developed at least one green school and a demonstration retrofitted house More residents are actively involved in preserving and enjoying the countryside, through volunteering, health walks and recreation Domestic housing and transport carbon emissions have reduced by 20% 	 Carbon emissions on our estate have fallen by 40% reducing energy costs and avoiding financial penalties thus easing the burden on the tax payer No household on benefits live in homes with a SAP rating less than 35 helping to reduce fuel poverty At least 600 local businesses have accessed advice on energy management and sustainable transport Car travel per head has reduced All new homes are being built to the zero carbon standard and produce 10% renewable energy There are no areas within the borough where nitrogen dioxide concentrations in the air exceed national air quality objectives. At least 50% of household waste is recycled or composted 	 We are all better prepared for extreme weather events, particularly flooding The Borough generates at least 10% of its energy from renewable sources Reduced water use to 135 litres per person per day Sustainable procurement practices are demonstrated by the Council, its partners and local businesses The Wokingham economy develops into a leading edge area for green technology

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1. Introduction

The aim of the Sustainable Environment Strategy is to improve the quality of life, now and for future generations, by respecting our environment and protecting it from the impact of our activities and from growth.

Wokingham Borough is changing. Over the coming years, we will see the expansion of four communities with significant new housing development and economic growth. Whilst this is vital in ensuring that the Borough remains successful, it needs to be balanced with the need to conserve natural resources and protect our environment.

There is increasing pressure on limited natural resources and greater stress on local biodiversity. Quality of life is negatively impacted by increasing food and energy costs and traffic congestion. Furthermore, climate predictions indicate that in the future we will see wetter winters; hotter, drier summers and more extreme weather events. Our current activities simply cannot be sustained. Therefore, the strategy commits us all to:

- 1) ENGAGE Raising awareness, fostering respect for our environment and changing behaviours
- 2) TAKE ACTION Minimising waste, pollution and greenhouse gas emissions.
- 3) **PREPARE -** Planning for the likely impacts of climate change and managing limited resources efficiently

We recognise that the Council cannot protect the environment on its own and we need to energise all businesses, communities and partner organisations in the Borough, such as, the University of Reading, Environment Agency, Energy Savings Trust, and utilities companies, to tackle this global challenge. We need to raise public awareness across all age groups from schools to older people's forums. Mobilising young people is key to this – they are more environmentally conscientious and able to adapt their behaviours. They will also be the generation to confront the negative environmental consequences if we fail to take action now and plan for future climate change.

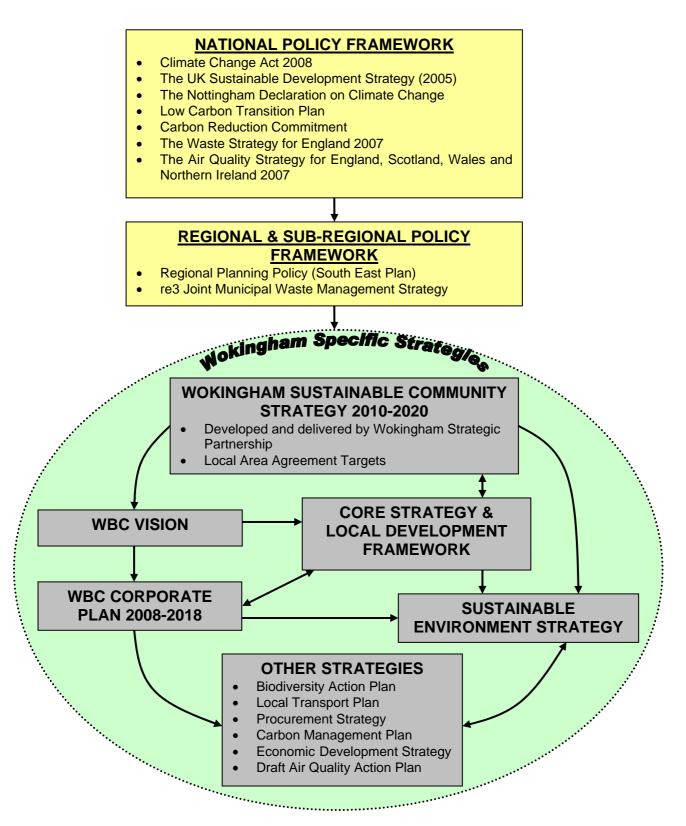
The Council will lead the way by reducing carbon emissions on our own estate. This will save the Council money through reducing energy spend and avoiding costly penalties, so easing the burden on Council tax payers. We will also promote sustainable development and transport through our Local Development Framework and Local Transport Plan. We want to promote local business creation and employment that minimises the use of natural resources and reduces the need to travel. Furthermore, by helping businesses manage limited resources more efficiently, we can support them in becoming more competitive.

Early messages from the coalition Government suggest a strong commitment to the agenda. However, any changes to Government policies or performance measures that affect the document will be picked up through regular monitoring and the document reviewed accordingly.

We have always been an area that offers an excellent quality of life and an attractive local environment. We must all pull together now to ensure that this continues in the future.

2. Policy Context

This Sustainable Environment Strategy has been produced within a framework set by national, regional and local policies, which are summarised below and described in more detail in Appendix 3:



3. The Local Picture

The area is prosperous with low levels of crime and deprivation and good levels of health. Significant population growth is predicted in the future but this has the potential to impact negatively on the environment unless effective action is taken. Below are some key points about the local environment – more detailed analysis is available in Appendix 4.

Ecological Footprint

- The ecological footprint is a measure of human demand on the Earth's ecosystems. It compares human demand with the Earth's ecological capacity to regenerate. The world average Ecological Footprint is 2.2 gha/per person (global hectares per person) compared to ecological capacity of 1.8 gha/per person.
- The Ecological Footprint of the UK is 5.3 gha/per person. The ecological footprint for the South East region stands at 5.65 gha/per person, higher that the UK as a whole. The affluent Wokingham Borough has an ecological footprint of 5.88 gha /per person. This is simply not sustainable.

Carbon Dioxide Emissions

- Carbon dioxide is the main man-made contributor to global warming. In 2007, 40% of carbon dioxide emissions were from the energy supply sector, 22% from road transport, 17% from business and 14% from residential fossil fuel use.
- Most of Wokingham's emissions are derived from the domestic sector accounting for 391 Kt CO₂ emissions in 2007. Apart from West Berkshire, this represents the highest emissions level in Berkshire and is well above the county average of 349 Kt CO₂. This is due to relatively high energy usage and a higher than average proportion of detached dwellings (46%).
- The Borough has high levels of car ownership (53.2% of households have 2 cars or more) and because of the semi rural nature of the area and lack of public transport, Wokingham residents have a propensity to use their cars more frequently than in other areas.
- In 2008, CO₂ emissions from the Council's own operations (including transport) measured 14078 tonnes. The Borough has reduced its carbon dioxide emissions by 3.9 percent between 2005 and 2007, which compares favourably with other authorities in Berkshire.

Renewable Energy

• Wokingham Borough is the home of the Green Park wind turbine, which has become a landmark of renewable energy in the Borough and surrounding areas. The Government has a target to produce 10% of electricity from renewable sources by 2010. Although the Borough is exceeding this Government target for wind electricity

(due to the wind turbine at Green Park), it is falling short in terms of other renewable energy technologies, such as, biomass, hydro and solar power generation.

Energy Efficiency

 In 2008/09, the energy efficiency of a random sample of households claiming income based benefits was measured by postal survey. 7.3% of sampled dwellings in the Borough had a low energy efficiency rating and 30% had a high energy efficiency rating. Comparing this performance with other local authorities, Wokingham Borough have relatively fewer households with a low energy efficiency rating and performed in the upper middle quartile (top 50%) for its proportion of households with a high energy efficiency rating. This is likely to have a positive impact on minimising fuel poverty.

Impacts of Climate Change

- For the South East of England, the UK Climate Impacts Programme predicts that over the next 30 years there will be an increase in average annual temperatures of between 2-2.5 °C and 4-4.5 °C and decreases in annual average rainfall of up to 10%. This masks seasonal variations - wetter winters and drier summers with rain increasing by 20% in winter and decreasing by between 8% - 23% in summer.
- The likely effects of climate change include increases in flooding, drought and extreme weather events. These can create risks and opportunities, such as, impacts to transport infrastructure from melting roads or buckling rails, increases in tourism, damage to buildings from storms, impacts on local ecosystems and biodiversity, scope to grow new crops, changing patterns of disease and impacts on planning, the local economy and public health.
- In May 2005, the Environmental Agency categorised 2.76% of all properties in Wokingham as being at risk of flooding and within the flood zone. By July 2007, this number had increased to 7%.

Countryside, Landscape and Nature Conservation

 The Borough has 4 Sites of Special Scientific Interest, but no Special Areas of Conservation or Special Protection Areas (SPA). There are also 134 Wildlife Heritage Sites and one regionally important Geological site. Although there are no SPAs in the Borough, around 30% of the Borough lies within the 5km protection area for the Thames Basin Heath SPA.

Waste and Recycling

 In 2007/08, nearly 38% of household waste was recycled or composted in the Borough, which is well above the national average (30.9%). The Council is currently set to achieve its NI192 target of 40% recycling or reuse and also its Local Area Agreement stretch target (NI193) of reducing landfill from 60% of overall waste in 2007/08 to 40% in 2010/11. The kerbside green waste collection scheme has been expanded to cover 53,000 properties (85% of the Borough).

Water

- In southern and eastern regions of England, where rainfall is comparatively low, per capita water consumption tends to be higher than elsewhere. Subsequently, all south-eastern areas are classified as seriously water stressed.
- The average person in England and Wales uses 150 litres of water a day. This is significantly more than comparable European countries. By 2020, with increasing population and housing growth, the demand for water could increase by 5% (equivalent to 800 million extra litres of water a day).
- Those households supplied by Thames Water, which includes Wokingham, consume an average of 167 litres of water, per person per day. This is higher than any other water company in the UK. To a lesser extent, Wokingham is supplied by South East Water, which has an average consumption of 156 litres of water per day.

Transport

- The 2001 Census indicated that the Wokingham Borough has over twice the number of households with 3 or more cars than the national average. This has a negative impact on traffic congestion and emissions.
- The Council, in conjunction with local schools, successfully achieved over 6% of school journeys undertaken by bicycle by 2006 and is on course for achieving a 25% increase from the 2000 baseline level by 2016.
- 55.2% of residents travel outside the Borough to work. Most residents (18.4%) travel to Reading with a further 9.6% travelling to Bracknell for the purpose of employment. This places a strain on both the environment and transport infrastructure.

Air Quality

• A detailed assessment of air quality in Wokingham Borough in 2003 indicated that the annual mean objective for nitrogen dioxide would not be met in parts of the Borough - in particular, areas around the M4 motorway. Subsequently, an Air Quality Management Area was declared in the affected areas in 2004 resulting in increased air quality monitoring and an action plan. In total, 235 local authorities in the UK have declared Air Quality Management Areas.

4. Strategic Priorities

Through consultation with our stakeholders and residents, we have identified three strategic priorities for a sustainable environment over the next ten years. These are:

- 1. **ENGAGE** Raising awareness, fostering respect for our environment and changing behaviours
- 2. TAKE ACTION Minimising waste, pollution and greenhouse gas emissions.
- 3. **PREPARE** Planning for the likely impacts of climate change and managing limited resources efficiently

The next section will expand on these strategic priorities and identify key short-term and long-term actions that will be undertaken over the next ten years.

4.1 Strategic Priority 1 - ENGAGE - Raising awareness, fostering respect for our environment and changing behaviours

This priority focuses on the Council's plans for achieving a healthy and sustainable natural environment by leading an ambitious agenda for changing attitudes and behaviour across all sectors of society. This is a sizeable task. Changing behaviours is a complex matter and innovative policies and practical solutions will be required at every level, involving schools, community groups, businesses and partners and in particular reaching young people.

Biodiversity is a key component of sustainable development and there is a direct relationship between a high quality and wildlife rich environment and a vibrant local economy. Whilst 12,460 new homes will be built in the Borough by 2026, residents are keen to maintain and enhance the borough's environment for future generations. Many people value our countryside for quiet enjoyment (be it walking, wildlife watching, or cycling), spiritual refreshment and general well being. National surveys have shown that birds and wildlife were the primary reason influencing the decision of 59% of visitors to the countryside. Research is also showing that biodiversity influences our quality of life in more subtle ways. Mere visual contact with "nature" can reduce our stress levels, promote well being and even increase patient recovery rates in hospitals. The attractive local environment also encourages businesses to base themselves in the Borough contributing to a prosperous economy.

We will encourage people to understand the value of their environment and grasp the concept that natural resources are limited. We will also empower people, businesses and communities to take corrective actions, which will both protect the environment and save money. The Council will develop a programme of measures that will engage and involve all people, so that the messages and behaviour changes become more tangible. This could be through promoting more sustainable practices designed to reduce our environmental footprint and minimise costs (i.e. turning off the lights, cycling to work, etc.) or encouraging involvement in local "green" enhancement projects.

Environmental issues are already being driven by many of our residents, but people power needs to be matched by the example of community leaders. To kick-start this activity, Wokingham Sustainable Environment and Climate Change Partnership (a subgroup of Wokingham Borough Strategic Partnership) has been successful in bidding for funding to launch a "Climate Change Ambassador" training programme. The project will train volunteers from within partner organisations and the community to become ambassadors on environmental issues. They will be expected to disseminate this learning throughout their organisation and/or community creating a cascade of awareness raising.

Key to changing attitudes and behaviours is to capture the enthusiasm of our young people. They are more environmentally conscientious and able to adapt their behaviours and will have a leading role in reforming the way we all use natural resources in the future. They will also be the generation to confront the negative environmental consequences if we fail to take action now and plan for future climate

change. Therefore, we will particularly target our publicity and awareness raising campaigns at this age group.

Success Story 1: Wokingham Borough manages 238 hectares of country parks and open spaces, which protect biodiversity and help to increase public awareness of the environment. The largest of these, Dinton Pastures, is the third most visited attraction in Berkshire. Countryside Services have delivered a large number of biodiversity enhancements in the last 5 years and offer a range of activities to get local residents and businesses involved. For example, staff from CISCO in Green Park put on their wellies to build a log pile for Great Crested Newts in the Park as part of a team building day.



In the next 3 years, we plan to:

- Demonstrate leadership in raising awareness through publicity campaigns, events, educational visits and improved website information
- Promote, to people of all ages, the true benefits of behaving more responsibly towards the environment, including smart meters and home audits
- Champion community groups, older people's forums, schools and businesses to deliver green projects.
- Conserve, value and enjoy the green character and biodiversity of the area
- Initiate behaviour change by promoting community spirit and training "Climate Change Ambassadors" within the council and community

In the next 10 years, we plan to:

• Develop new flagship community buildings that are exemplars of environmental sustainability.

We will have succeeded, if by 2020:

- 80% of residents feel well-informed on local environmental issues and understand the impact of their actions on the climate
- A programme of project and events has been run with communities and schools, including achieving Eco Schools awards
- We have developed at least one green school and a demonstration retrofitted house

- More residents are actively involved in preserving and enjoying the countryside, through volunteering, health walks and recreation
- Domestic housing and transport carbon emissions have reduced by 20%

4.2 Strategic Priority 2 – TAKE ACTION - Minimising waste, pollution and greenhouse gas emissions.

Since signing the Nottingham Declaration on Climate Change in December 2007, the Council has been leading the way in carbon management by actively reducing its own carbon emissions. The Council has been participating in the Carbon Trust's Local Authority Carbon Management Programme, has carried out a full audit of energy use across all its buildings and is currently implementing an action plan to reduce its carbon footprint. The aim is to reduce emissions under the control of the organisation, including buildings, vehicle fleets, street lighting and waste, and save the participating Councils money. Furthermore, being a part of the scheme has allowed us to receive £286,000 grant funding to deliver 8 projects - all will have a payback time of 5 years or less and will generate a further £85,000 per annum cost saving to the Council. Example projects are installing loft and cavity wall insulation, upgrading light systems and boiler replacements. The Council's Medium Term Financial Plan includes £100,000 per annum capital funding for the next three years for carbon management, which is further detailed in the Carbon Management Plan. The Council has an ambitious target of 40% reduction in carbon emissions by 2020, which will also result in considerable financial savings as energy use is minimised.

Energy costs are expected to increase considerably in future years – Ofgem estimate a 25% increase by 2020. The increasing cost of fuel also impacts upon the wider community. Those who are on benefits or low/fixed incomes may be at increasing risk of fuel poverty as the price of fuel escalates. Working with the Energy Savings Trust, the Council will ensure that they are well-informed of grants available for retrofitting their properties to improve thermal efficiency.

The limited availability natural resources also increases costs for local businesses (making it difficult to compete in a global market). For example, transport relies primarily on increasingly expensive fossil fuels. Businesses can make considerable savings from developing sustainable travel strategies and introducing more efficient transport fleets. In turn, more sustainable travel choices will also improve congestion and the air quality of the Borough. The Council is a partner in two projects that are designed to support businesses in reducing their use of energy. The LoCUS project will work with commercial landlords to help reduce their business tenant's carbon footprint and the Sustainable Routes project that will provide advice and funding for the development of transport plans.

Businesses will increasingly need to find innovative ways to work, such as encouraging home working while the Council will work to increase the facilities for sustainable travel, such as, enhancing pedestrian, cycle and bus routes, improving public transport and promoting low carbon vehicles. This will include continuing to explore opportunities for low-emission zones that encourage traffic onto major routes rather than through existing residential roads.

The recently adopted Core Strategy will ensure that new developments are sustainable from the outset with higher levels of energy efficiency, good transport links and ample green space. The type, location and density of homes, businesses and community uses have a major role to play in determining the energy demand of their development and uses. The use of sustainable technologies, such as, solar panels, photovoltaics, combined heat and power and biomass, should be considered and incorporated into developments at the design stage to contribute to renewable energy. The Sustainable Design and Construction Supplementary Planning Document (SPD) aims to ensure that all forms of development seek to maximise opportunities to incorporate current best practice in energy efficiency and decentralised, renewable and low carbon technologies. The SPD will promote the use of sustainable techniques and materials in the construction of buildings and structures. It will be designed to help developers think through the impacts and will offer real (often cost effective), alternative solutions to developments. It will provide clear and accessible information that can steer choices towards sustainable development.

Success Story 2: The re3 partnership between Bracknell Forest, Reading and Wokingham Borough Councils and Waste Recycling Group (WRG) was set up to increase the amount of waste that is reused, recycled and composted across the three boroughs and to minimise the amount of waste sent to landfill.

The re3 household waste recycling centre at Smallmead won the national "letsrecycle" Civic Amenity Site of the Year award in 2009. The judges recognised how the new facility, 'had achieved recovery rates of 60% and 99% public satisfaction'.



In the next 3 years, we plan to:

- Lead the way in carbon reduction, including the Carbon Trust Local Authority Carbon Management Programme and Carbon Reduction Commitment
- Encourage residents to improve the energy efficiency of their homes through advice and support
- Motivate and support local businesses to reduce their carbon footprint through initiatives, such as, the LoCUS partnership and Sustainable Routes project.
- Ensure that our planning policies require new developments to be sustainable.
- Increase recycling and reduce the amount of waste sent to landfill

In the next 10 years, we plan to:

- Enable more sustainable travel through enhancing pedestrian, cycle and bus routes, improving public transport and promoting low carbon vehicles
- Strive to improve air quality in the Borough

We will have succeeded, if by 2020:

- Carbon emissions on our estate have fallen by 40% reducing energy costs and avoiding financial penalties thus easing the burden on the tax payer
- No household on benefits live in homes with a SAP rating less than 35 helping to reduce fuel poverty
- At least 600 local businesses have accessed advice on energy management and sustainable transport
- Car travel per head has reduced
- All new homes are being built to the zero carbon standard and produce 10% renewable energy
- There are no areas within the borough where nitrogen dioxide concentrations in the air exceed national air quality objectives.
- At least 50% of household waste is recycled or composted

4.3 Strategic Priority 3 – PREPARE- Planning for the likely impacts of Climate Change and managing limited resources efficiently

Demand and use of natural resources in the Borough is particularly high. If the whole world were to use resources at the same rate as our residents, then 5.88 planet earths would be needed to sustain the global population. This is clearly not sustainable and in order to address this, we will all have to make significant changes to the way we live and work. Furthermore, some changes to the climate are already inevitable as a result of our past activities. It is predicted that climate change will bring changes in rainfall and storm intensities, temperature and water shortages. To maintain our quality of life, we must plan our natural environment, buildings and infrastructure to withstand the changes to our climate (for example, ensuring that road surfaces can cope with higher temperatures). Communities and businesses also need to be ready. It is important to control the impacts of extreme weather events on health. We must ensure that we look after our wellbeing and quality of life by minimising pollution, managing disease risks and limiting exposure to UV and extreme heat.

While as individuals we can make our contribution by reducing our personal carbon footprint, using alternative methods of transport, reducing household fuel use and recycling, there is also a social responsibility on local organisations. The local business community, the public and voluntary sectors, our universities and places of learning, all have a vital role to play in the transition of Wokingham to a low carbon Borough, with thriving sustainable businesses and communities, which are resilient to the effects of climate change.

The movement to a low carbon future, which is adapted to climate change, brings both challenges and opportunities. Sir Nicholas Stern made clear in his report 'The Economics of Climate Change' (2006) that early intervention to prevent the worst impacts of climate change will be far more effective and cost far less. If we act sooner, it could cost as little as 1% of GDP compared with as much as 20% if we do not.

The first stage in terms of adaptation is to develop a better understanding of the threats and opportunities that climate change will have on the Borough. To do this, we will be working with a post-graduate student from the University of Reading to develop a Local Climate Impact Profile (LCIIP) for the area over the coming year. This project will help the Council and its partners plan more effectively for the impacts of climate change. For example, it will ensure that we are better prepared to minimise the economic instability and disruption that follows extreme weather events, such as, storms and snow.

The opportunities to reduce costs associated with wastage and to become less dependent on natural resources is greater than ever. The Economic Development Strategy identified green technology as an area of significant growth for our economy (i.e. electric cars, renewable energy technologies, etc.). We are well-placed to capitalise on this. The University of Reading is a market leader in this field, and the new Science Park will help drive this agenda forward. By embracing this market, we can be at the forefront of global economic issues, create jobs and grow our economy in this area, whilst also contributing to positively to sustaining our environment. We must take advantage of new markets and opportunities for local investment. We should support new leisure opportunities, localised tourism and active and vibrant local communities.

Success Story 3: Wokingham Borough has a good record in renewable energy generation projects. The Borough exceeds the national targets for the generation of renewable wind energy and is home to the iconic Green Park wind turbine and visitors centre. It also performs well in the generation of energy from biogas with capacity being provided by generators at Wargrave Sewage Treatment Works. The Hawthorns Primary School in Woosehill was the very first school in Berkshire to install solar panels.



In the next 3 years, we plan to:

- Identify the risks and opportunities presented by inevitable changes in the climate (characterised by wetter winters and hotter, drier summers) and develop an adaptation action plan to address these
- Champion and promote procurement of local goods and services
- Mobilise and support businesses to invest in green innovation to facilitate growth

In the next 10 years, we plan to:

- Minimise our reliance on fossil fuels by increasing the amount of renewable energy produced and enhancing the economic competitiveness of the Borough
- Prepare for high future water stress caused by population growth, high usage rates and climate change

We will have succeeded, if by 2013:

- We are all better prepared for extreme weather events, particularly flooding
- The Borough generates at least 10% of its energy from renewable sources
- Reduced water use to 135 litres per person per day
- Sustainable procurement practices are demonstrated by the Council, its partners and local businesses
- The Wokingham economy develops into a leading edge area for green technology

5. Monitoring and Evaluation

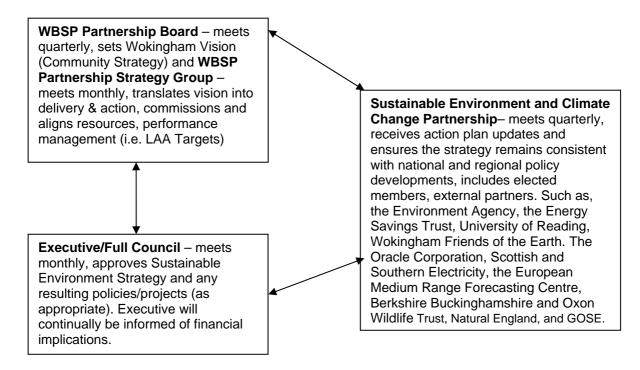
The Wokingham Sustainable Environment and Climate Change Partnership, a subgroup of the Strategic Partnership (WBSP), will lead on implementing and monitoring the Sustainable Environment Strategy. The purpose of the Sustainable Environment and Climate Change Partnership is:

- To provide a strategic leadership role in promoting local environmental and carbon management issues through partnership working, ensuring that local needs and priorities inform policy development and by taking forward specific environmental projects that add local value.
- To act as a delivery vehicle for aspects of the Wokingham Local Area Agreement (LAA) and Sustainable Community Strategy, the aim of which is to promote and improve the environmental well-being of the area.

The Group meets quarterly and members include the Environment Agency, the Energy Savings Trust, University of Reading, Wokingham Friends of the Earth, the Oracle Corporation, Scottish and Southern Electricity, the European Medium Range Forecasting Centre, Berkshire Buckinghamshire and Oxon Wildlife Trust, Natural England, GOSE, Elected Members and representatives from the business community. The group will receive updates on delivery against the action plan and oversee the development and implementation of the strategy.

These groups and the monitoring and reporting arrangements are illustrated in the diagram below:

Sustainable Environment Strategy Monitoring Arrangements



Although the strategy vision and priorities are set for a ten year period, the action plan is designed to be fully updated every three years. Any policy change from the new coalition Government will be picked up through regular monitoring and review of the strategy and action plan. The action plan is intended as a working document which will also be subject to continuous review to ensure that it remains responsive, appropriate and up-to-date. There will be quarterly meetings with the Executive Member to review and evaluate the strategy, action plan and resources to ensure that we are focusing on the key priorities and value for money. Any changes to the action plan will be presented to and approved by the Sustainable Environment and Climate Change Partnership. Any financial costs incurred during the delivery of the Action plan will be agreed by Wokingham Borough Council's Executive.

6. Contact Details

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APPENDIX 1: STAKEHOLDER ANALYSIS

The stakeholders for the Wokingham Borough Sustainable Environment Strategy will include every person and organisation within Wokingham and beyond. For example, the partners in the Wokingham Sustainable Environment and Climate Change Group, school pupils, older people, the University of Reading, schools, colleges, local businesses, voluntary sector, social enterprises, neighbouring authorities, families and children, minority groups, the Environment Agency, re3 and GOSE.

The sustainable environment vision and strategic priorities have been developed through consultation with partner organisations, including the members of the Wokingham Sustainable Environment and Climate Change Group, stakeholders at the 2010 Wokingham Borough Strategic Partnership Community Conference and through public consultation through Wokingham Borough Council's website and the Citizen's Panel. The priorities are consistent with the Wokingham Sustainable Community Strategy.

Consultation Results

The Council received a total of 96 responses from the website and the citizen's panel consultations.

The consultation found that 78.7% of respondents agreed with the Vision for the Sustainable Environment in the Wokingham Borough as set out in the strategy whilst 21.3% did not. Those that did not agree tended to either wish to see firmer actions to support delivery of the vision, be concerned about its deliverability in light of future housing growth or did not believe that climate change is a threat.

80.9% of respondents also agreed with the four Sustainable Environment priority areas.

The consultation demonstrated considerable support for the strategy vision and its priorities. Feedback provided by the consultees has been considered in assembling the final draft of the strategy. Most of the concerns have been addressed in the detail of the strategy and the action plan. The comments and feedback tended to fall into distinct categories including improving recycling facilities, adapting to the impacts of a changing climate (including flooding, and drought), encouraging more sustainable approaches to transport, working with the water companies to promote improved water management and increasing renewable energy generation throughout the Borough.

Other points raised included support for smart metering, use of broadband to reduce the need to travel and a request to see the Council taking the lead in promoting sustainability.

As a result of the feedback we have received from the public, the Council has included more detail and actions on sustainable transport options, engaging more with local water companies, and is working more closely with neighbouring authorities.

APPENDIX 2: ACTION PLAN 2010-13

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation		
	Strategic Priority 1 – ENGAGE Raising awareness, fostering respect for our environment and changing behaviours						
1.1	Demonstrate leadership in raising awareness through publicity campaigns, events, educational visits and improved	More residents feel well- informed on local environmental issues and understand the impact of their actions on the climate.	Organise a Staff Environment Day to launch the Wokingham Sustainable Environment Strategy by September 2010.	Rhian Hayes Senior Strategy officer	Staff capacity - Use the Environmental Forum to share out the workload.		
	website information		Survey a sample of Wokingham residents to establish a baseline position for the level of understanding of climate change and	Rhian Hayes Senior Strategy officer	Staff Capacity - Use the Environmental Forum to share out the workload.		
			environmental issues in the Borough by March 2011.		Low response rate – Promote through the Sustainable Environment and Climate Change Partnership		
1.2	Promote, to people of all ages, the true benefits of behaving more responsibly towards the	A programme of 10 projects and events has been run with communities and schools, including achieving Eco Schools	Organise a programme of events with schools and communities to launch the Wokingham Sustainable Environment	Rhian Hayes, Ian Gough, Pete Baveystock and the Sustainable Environment and	There is not enough resource to organise a programme of events - Use the		

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
	environment, including smart meters and home audits	awards by 2013.	Strategy	Climate Change Partnership	Environmental Forum to share out the workload. Schools and community groups are not interested in working jointly – Tailor the programme to their needs and interests.
1.3	Champion community groups, schools, older peoples forums and businesses to deliver green projects, including new flagship buildings	At least one community green project set up.	Facilitate a pilot green community project within Wokingham – creating a network of volunteers to coordinate green activities in a town or parish locality. The council will help the project bid for funds and provide advice and expertise where possible by March 2013	Sustainable Environment and Climate Change LSP Group	Not able to secure the commitment of towns and parishes to run the pilot – Promote project to them at an early stage making clear the true benefits. Not enough resource available to develop the project – Seek opportunities to share partner resources.

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
		Work with schools to map curriculum opportunities and barriers to behaviour change.	Set up a workshop with teachers and pupils to explore the opportunities how best to engage young people in sustainable behaviour.	Rachael Wardell Head of Strategy and Partnerships Rhian Hayes Senior Strategy Officer	
1.4	Conserve, value and enjoy the green character and biodiversity of the area.	More residents are actively involved in preserving and enjoying the countryside, through volunteering, health walks and recreation	Continue to manage a network of safe and attractive Country Parks, Local Nature Reserves, Parks and open spaces for residents and visitors	Chris Buggy Countryside Service Manager	Lack of resources – Capitalise on new funding streams and encourage volunteering.
		Encourage the use of our green spaces and public rights of way by all members of the community.	Increase public awareness of the Rights of Way Network to people all age groups and abilities	Rebecca Walkley, Countryside Officer	
1.5	Conserve, value and enjoy the green character and biodiversity of the area.	The number of Local Wildlife Sites (LWS) and Local Biodiversity Sites (LGS) that can be said to be in positive management will have increased from the baseline set in 2008-9	An updated Wokingham Borough Biodiversity Action Plan has been adopted by the Council by December 2012	Andy Glencross Biodiversity Officer	

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation	
			There has been no loss of Biodiversity Action Plan priority habitats and species.	Andy Glencross Biodiversity Officer		
			Deliver the new Suitable Alternative Natural Greenspace (SANG) at Rooks Nest by April 2011.	Andy Glencross Biodiversity Officer		
1.6	Initiate behaviour change by promoting community spirit and training "Climate Change Ambassadors" within the Council and community	More residents are actively involved in driving forward environmental issues and raising awareness.	At least 30 community ambassadors have been appointed and trained by March 2012	Rhian Hayes, Senior Strategy Officer and Sustainable Environment and Climate Change LSP Group	LAA funding is withdrawn - Seek new funding streams including from local businesses.	
	Strategic Priority 2 – TAKE ACTION Minimising waste, pollution and greenhouse gas emissions					
2.1	Lead the way in carbon reduction, by completing the Carbon Trust Local Authority Carbon Management Programme and	Carbon emissions on our estate will have been reduced and be on target to have fallen by 40% by 2020.	Meet our target for National Indicator 185 of an 8% reduction in our carbon dioxide baseline emissions by 2011.	lan Gough Energy Officer	Not enough resource available to make necessary changes in buildings for energy savings Explore options to ring	

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
	prioritising the Carbon Reduction Commitment				fence cost savings for future carbon management projects
			Engage profitably in the Carbon Reduction Commitment	Ian Gough Energy Officer	Risk of costly penalties - Partner with other local organisations involved on CRC programme to share best practice
			Develop a new Carbon Management Plan by summer 2010	lan Gough Energy Officer	No risks identified
			To reaffirm our commitment to the Nottingham Declaration by December 2011	Rhian Hayes Senior Strategy Officer	No risks identified
			Ensure that our display energy certificates are awarded on an annual basis and that there are systems in place to ensure that they improve on an annual basis	Ian Gough Energy Officer	Risk of financial penalties - Partner with other local organisations involved on CRC programme to share best practice
			Improve upon current capacity of 15% of total energy from renewable	Ian Gough Energy Officer	Not capitalising on savings benefits of generating own

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
			sources with a target of achieving 25% renewable energy generation (of the total energy used) by 2015		energy - Work with utilities companies to advance renewable energy projects for income purposes.
			All schools will have achieved an upgrade in their display energy certificates by 2013	lan Gough Energy Officer	Risk of financial penalties – continue to explore new funding opportunities.
			Install cavity wall, pipe and loft insulation in 50% of Council buildings by 2013	lan Gough Energy Officer	Not capitalising on financial savings from conserving energy – Develop a clear business case.
			Deliver 3 low energy lighting projects in Council Buildings	lan Gough Energy Officer	Not capitalising on financial savings from conserving energy - Develop a clear business case.

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
			Complete review of the part night light and remote monitoring street lighting pilot project and report results to Executive in December 2010 Upgrade the current building management system in Shute End	Alison Dray Street Co- ordination Manager Dave Halley Assistant Engineer Ian Gough Energy Officer	Cost of new equipment and viability of retrofitting existing equipment – Develop a clear business case. Not capitalising on financial savings from conserving energy – Develop a clear business case.
			Deliver the boiler upgrade project in 50% of Council's estate by 2013	lan Gough Energy Officer	Not capitalising on financial savings from conserving energy - Develop a clear business case.
			Work with local schools to encourage behaviour change and to reduce energy use.	 lan Gough Energy Officer Children's Services. 	Unwillingness amongst schools to run behaviour change programmes – Tailor the programme to fit with schools needs

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
2.2	Encourage residents to improve the energy efficiency of their homes through advice and support	Domestic housing emissions have reduced by 15%.	Work with our partner, the Energy Savings Trust, to provide detailed information and advice to residents - in particular, targetting those people most at risk from fuel poverty (i.e. the elderly, those on low/fixed incomes and those on benefits)	Mary Glome, Principal Environmental Health Officer Energy Savings Trust	Increasing prosperity may mean more energy is used - Promote behaviour change.
2.3	Motivate and support local businesses in reducing their carbon footprint	At least 125 local businesses have accessed advice on energy management through the LoCUS projects by March 2013.	Project employees appointed and schedule of work published by September 2010	Rhian Hayes Senior Strategy Officer in partnership with other local authorities.	Project fails to reach required number of businesses - Engage the Business Skills and Enterprise partnership at an early stage.
		Local businesses will be given advice and access to grants to improve their sustainable transport through the Sustainable Routes project by March 2013.	Work with other Councils on the Sustainable Routes Project to help businesses develop sustainable travel plans	David Wilby, Planning Policy Officer in partnership with other local authorities.	Advice does not result in more sustainable transport options being taken up – Regular, clear promotion and sharing of best practice.

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
2.4	.4 Enable more sustainable travel, to reduce congestion and improve health through enhancing pedestrian, cycle and bus routes, improving public transport and promoting low carbon vehicles This is at the heart of our planning	Reduce car travel per head.	The Local Transport Plan 3 will be adopted by March 2011 and other sustainable travel strategies, including the Staff Travel Plan, the Cycling Strategy, School Travel Plan Guidance to follow.	Matthew Gould, Transport Planning Policy Manager Matthew Gould,	
	the development of the new Strategic Development Locations.		numbers (NI177) from the 2008/09 figure of 3,100,405. The 2009/10 target is 3,050,000. The 2009-10 figure and future target are still being calculated and should be ready by 17 th May 2010.	Transport Planning Policy Manager	
			Explore opportunities for low-emission zones that encourage traffic onto major routes rather than through existing residential roads.	Matthew Gould, Transport Planning Policy Manager	
		Increase cycling levels	Make cycle training available to all primary schools by 2011 and to	Jill Bissell, Cycle Training Coordinator,	Unwillingness amongst schools to run cycle training

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
			all secondary schools, by 2012.	Road Safety Team	programmes – Develop a tailored programme to fit school needs.
		100% of schools have a School Travel Plan by December 2011	Encourage sustainable travel methods for school children by promoting travel plan guidance to schools	Heather Eley Schools Transport Officer	Unwillingness amongst schools to develop travel plans - Investigate current and future barriers of working with school.
		Reduce car travel among children travelling to school to 30% by 2011 by encouraging schools to set up walking buses and promoting schools' guidance	Encourage sustainable travel methods for school children travelling to school, by increasing the uptake in Active First with 20 schools involved by 2012	Heather Eley Schools Transport Officer	Failure of schools to commit to Active First - Investigate current and future barriers of working with schools.
		5	Ensure road safety instruction is offered to all nursery, primary and secondary schools	Julie Pillai, Road Safety Officer	No risks identified
			Encourage walking to school by promoting the annual 'Walk to School Week' and 'Walk on Wednesday' and 'Park	Julie Pillai, Road Safety Officer and Heather Eley, Schools Transport	No risks identified

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
			and Stride' schemes.	Officer	
		Improve the accessibility of public transport	Increase the number of bus routes with stop specific timetable information to 90% by 2011	Rebecca Brooks Policy Planning Officer	Changes in bus services may lead to a reduction in accessibility - Better real time information systems will help people adapt to these changes
			Improve access to essential services by non-car modes of travel to 83% by 2010	Heather Ely, Schools Transport Officer	Changes in bus services may lead to a reduction in accessibility – Keep under regular review. Better real time information systems will help to people adapt to these changes
2.5	Ensure that our planning policies require new developments to be sustainable.	All residential development should achieve at least the mandatory Code for Sustainable Homes Level, including water consumption.	Code for Sustainable Homes Level 3 to be mandatory for all new housing from October 2010	Edward Rehill Senior Planning Policy Officer	Objections from developers over site viability – Support with sound evidence base.

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
		Encourage developers to build to a higher Code than what is mandatory. Zero carbon residential development by 2016.	The Managing Development Delivery DPD will set renewable energy/ Code for Sustainable Homes targets in advance of the mandatory requirements in 2012. South East Policy NRM11 - Residential development of more than 10 dwellings and non-residential development of 1000m ² (major development) or greater to secure at least 10% of their energy from decentralized, renewable or low-carbon technologies from May 2010. Adopt and implement the Sustainable Design and Construction SPD	Edward Rehill Senior Planning Policy Officer Edward Rehill Senior Planning Policy Officer Edward Rehill Senior Planning Policy Officer	Objections from developers over site viability - Support with sound evidence base. Objections from developers over site viability – Support with sound evidence base.

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
		Non-residential development should achieve at least the mandatory BREEAM level. Encourage non residential development – to be built to best practice standards which at the current time are BREEAM (Building Research Establishment Environmental Assessment Method) 'very good' or 'excellent' Plan for Zero carbon non- residential development by 2019	Implement the Core Strategy, including Policy CP1 (Sustainable Development)	Edward Rehill Senior Planning Policy Officer	No risks identified
			The Managing Development Delivery DPD may set renewable energy/BREEAM targets in advance of the mandatory requirements in 2012.	Edward Rehill Senior Planning Policy Officer	Objections from developers over site viability - Support with sound evidence base.
2.6	Strive to improve air quality in the Borough	Work towards the target that there are no areas within the borough where nitrogen dioxide concentrations exceed national air quality objectives	Develop new Air Quality Action Plan to reduce impacts on local air quality and continue to monitor air quality in the Borough.	Erica Taylor Scientific Officer Joe Dray Principle environmental Health Officer	Activity to improve air quality in the area is unsuccessful. Many air quality problems are outside the control of the Council Work more closely with the Highways Agency and the Environment

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
					Agency
2.7	Increase recycling and reduce the amount of waste sent to landfill	Reduce the waste produced from WBC office operations and increase recycling	Implement further recycling at the Civic Offices, rolling this out to all key operational buildings by end 2012	Belinda Kennedy Procurement Officer	Staff do not increase recycling behaviours accordingly - Use the Environmental Forum as a conduit for promotional work
		Continue to improve recycling and re-use rates within the Borough	Set up a community furniture re-use project in the Borough by March 2011.	Steve George, Social Enterprise Manager	Required funding does not become available - Seek new funding streams, including from partners
			Manage the Joint Municipal Waste Management Strategy Action Plan with re3 Partners Develop waste collection strategy for new Waste & Recycling Contract start in April 2012	Pete Baveystock, Waste Manager	Levels of waste increase due to economic recovery - Promote behaviour change programmes to improve levels of recycling

No.	Action	Target	Milestones	Lead Officer/ Resources	Risk and Mitigation
			Reach 40% recycling by March 2011		

	Strategic Priority 3 - PREPARE Planning for the likely impacts of climate change and managing limited resources efficiently					
3.1	Prepare for the impacts of climate changes, including extreme weather events (particularly flooding).	Identify the risks and opportunities presented by inevitable changes in the climate (likely to be wetter winters and hotter, drier summers) and develop an adaptation action plan to	Develop a Local Climate Impact Profile for the Borough by May 2011.	Neil Badley Head of Corporate Services Rhian Hayes Senior Strategy Officer.	No risks identified	
		address these.	Develop a comprehensive adaptation risk assessment and adaptation action plan for the Borough by March 2012 (as part of NI 188)	Neil Badley Head of Corporate services Rhian Hayes Senior Strategy Officer.	No risks identified	
3.2	Minimise our reliance on fossil fuels by increasing the amount of renewable energy produced and enhancing the economic competitiveness of the Borough	Work towards the target that at least 5% of our energy comes from renewable sources by 2013	Implement the requirements of the South East Policy NRM11 - Residential development of more than 10 dwellings and non-residential development of 1000m ² or greater to secure at least 10% of their energy from decentralized, renewable or low-carbon technologies.	Edward Rehill Senior Planning Policy Officer & Rhian Hayes Senior Strategy Officer	No risks identified	

			Encourage the installation of solar panels and other renewable technology on existing homes and community buildings, such as, churches	Sustainable Environment and Climate Change LSP Group	No risks identified
			Explore decentralised energy generation as a way of generate income from our estate and that of our partners	Re3 partnership LoCUS team Ian Gough Energy Officer LSP Partners	No risks identified
3.3	Prepare for high future water stress caused by population growth, high usage rates, decreasing household sizes and climate change.	Work towards the 2020 target that water use is reduced to 135 litres per person per day.	Establish the water footprint of the council buildings and develop a water management plan for the council buildings by 2013	lan Gough Energy Officer	Metering information may not be available or easily accessible - Work with utility companies to improve access to accurate water usage data.
			Establish the water footprint of the Borough and develop a water management plan for the Borough by 2013	Ed Rehill Senior planning Officer Environment Agency	May be unable to access reliable information for this project - Work with utility companies to improve access to accurate water usage data.

3.4	Champion and promote procurement of local goods and services.	Continue to improve the Councils Environmental footprint, demonstrating a sustainable use of resources.	Sustainable procurement practices are demonstrated by the Council, its partners and local businesses.	Rachael Maughan, Procurement Manager	People are not prepared to pay for more expensive sustainable goods particularly in a slow economy – Promote the real benefits of behaviour change.
3.5 Notice	Mobilise and support businesses to invest in green innovation to facilitate growth	The Wokingham economy develops into a leading edge area for green technology.	Work with the University of Reading on knowledge transfer projects with a particular focus on green technology.	Andrew Nicholls, Economic Development Officer and Rhian Hayes Senior Strategy Officer	The University Science Park does not go ahead – Regular communication with University.
4.1	NI 185 - Percentage CO2 reduction from LA operations	Baseline - Carbon emissions from Council stationary operations 15,179 Kg Carbon emissions from Transport operations 1,539,603Kg set in 2-008- 2009	The Council has adopted NI 185 into its LAA The Council has a target of reducing its carbon footprint by 8% by 2011 Having successfully enrolled on the Carbon Trust Local Authority Management Programme the Council will prepare a Carbon Management Plan.	lan Gough Energy Officer	Availability of significant capitol investment needed to deliver savings – Develop a clear business case.

4.2	NI 193 Percentage of municipal waste land filled Expressed as a percentage of all waste	Baseline in 2008/2009 = 66% Target for 2010/2011 = 40%	The Council has adopted NI 195 into its LAA The Council has already achieved its target of reducing its percentage municipal waste land filled 40% by 2011	Peter Baveystock Waste Manager	No risks identified
4.2	Ni 186 Per capita reduction in CO ₂ , emissions in the LA area. Expressed in Kt CO ₂ equivalent Data is derived from comprehensive billing information provided by the energy suppliers'.	The indicator measures the amount of CO_2 generated, from transport, industry and residential sectors area. 2005 (Baseline) Industrial = 285 Domestic =391 Transport = 219 Overall per CO_2 capita = 59 2007 Industrial = 291 Domestic = 391 Transport = 213 Overall per CO_2 capita = 5.7 No local target has been set for this indicator	Work with partners on projects such as the Locus and Sustainable Routes projects.	Sarah Sesay Performance Officer	Energy use across all sectors will increase as the economy recovers - Behaviour change programmes will help to reduce use of energy
4.4	NI194 - Air quality -	Council has a target of	Baseline of NOx 35,708	lan Gough	Availability of

	% reduction in NOx and primary PM10 emissions through local authority's estate and operations	reducing its NOx and primary PM10 emissions by 8% by 2011	PM10 1,071 set in 2008- 2009	Energy Officer	significant capital investment needed to deliver savings - Work more closely with the Highways Agency and the Environment Agency
4.5	NI 197 Improved local biodiversity – proportion of local sites where positive conservation management has been or is being implemented.	Baseline Proportion of local sites where positive conservation management has been or is being implemented = 74%		Andy Glencross Biodiversity Officer	No risks identified
4.6	NI188 - Adapting to climate change. A process based national Indicator which measures the how well we are assessing the risks and opportunities of extreme weather events and incorporating appropriate action into local authority and partners strategic planning.	The Council is currently at Level 0 of the self assessment Matrix, but is aiming to attain Level 3 by 2011.	To carry out a document review of the Council's key strategies for the inclusion of adaption measures. Undertake a Local Climate Change Impacts Profile.	Rhian Hayes Senior Strategy Officer	That there are enough resources and officer time available to undertake this project - Work with University of Reading student.

4.7	NI187 - Tackling Fuel Poverty. Expressed as % of dwellings occupied by people on benefits with a SAP ratings of below 35 or above 65	2008/09 NI 187a(low energy) = 7% NI 187b(high energy =30 % 2009/10 NI 187a(low energy) = 11% NI 187b(high energy)=18 %	All people who live in properties identified as having a SAP rating of below 35 are contacted by the Energy Saving Trust and given energy efficiency advice	Sarah Sesay Performance Officer in partnership with the Energy Savings Trust	People who are in fuel poverty do not respond to the survey and remain hidden statistics - The ambassadors programme will inform vulnerable groups of the benefits of energy efficiency
4.8	NI 191 Residual household waste per household. Expressed in Kg per head of population.	Target for 2008/2009 = 752 Kg per head of the population Outcome for 2008/2009 = 736 Kg per head of the population Target for 2009/2010 = 752 Kg per head of the population	Current predictions for 2009/2010 indicate that the outcome will be well within target at 715 Kg per head of the population	Peter Baveystock Waste Manager	If the economy recovers more goods will be purchased resulting in increasing levels of waste - Behaviour change programmes will help to reduce use of energy
4.9	NI 192 Percentage of household waste sent for reuse and recycling Expressed as a percentage of all waste	Target for 2008/2009 = 38% Outcome for 2008/2009 = 36.5% Target for 2009/2010 = 39%	Current predictions for 2009/2010 indicate that the outcome will below target with only 36.5% of all waste being sent for recycling. This is due to the general decease in waste as a result of reduced purchasing as a result of the recession.	Peter Baveystock Waste Manager	No risks identified.

APPENDIX 3: POLICY FRAMEWORK

The following provides information on the policy framework at the international, national, regional and local level:

INTERNATIONAL POLICY CONTEXT

The past twenty years has seen a massive growth in the number and extent of environmental legislation and policy. Countries from across the world have come together to agree common approaches to some of the most threatening environmental issues that we face.

- One of the first real international commitments came at the United Nations Conference on Environment and Development (UNCED), otherwise known as the Rio Earth Summit. This was unprecedented for a UN conference, in terms of both its size and the scope of its concerns. It succeeded in bringing governments from around the world together to develop an action plan called The Rio Earth summit (1992) and acted as a catalyst for the development of a number of other international strategies and approaches:
- The UK signed the Kyoto Protocol in 1997, which commits the UK to achieving a reduction in emissions of 12.5% (from 1990 levels) by 2012.
- In 2007 in Bali, these countries agreed in principle to sign up at the 8th Convention on Climate Change in Copenhagen in 2009.
- There is currently work underway to establish an international framework post 2012.

EUROPEAN POLICY CONTEXT

In 2000, the Commission launched the European Climate Change Programme (ECCP). The ECCP has led to the adoption of a wide range of new policies and measures. These include the pioneering EU Emissions Trading System, which has become the cornerstone of EU efforts to reduce emissions cost-effectively. To underpin these commitments, EU leaders set three targets to be met by 2020 on a baseline of 1990 levels: a 20% reduction in energy consumption, a 30% reduction in carbon emissions and an increase to 20% in renewable energies' share of total energy consumption.

The EU Directive on the Energy Performance of Buildings is the most powerful instrument developed to date for the buildings sector. It requires all buildings to have published energy ratings. The Directive should be able to deliver reductions of 35 to 45 million tonnes of carbon dioxide per year within the EU by 2010.

The EU Directive on Waste Electrical and Electronic Equipment (WEEE) and the EU Directive on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (ROHS) both aim to reduce the amount of electrical/electronic equipment being disposed of.

UK POLICY CONTEXT STRATEGY

The UK Government has been particularly proactive over the past 20-30 years and has developed a range of legislation and guidance to protect and enhance our environment.

• The Nottingham Declaration on Climate Change

The Nottingham Declaration was launched in October 2000. The declaration is a voluntary pledge to address the issues of climate change, signed by the Leader and Chief Executive of a council. In signing it, councils are committing to ensure that tackling climate change is a cornerstone of their overall strategy

• Use of Resources: Environmental Footprint

The introduction of the Comprehensive Performance Assessment (CPA) in 2002 required councils (from 2009) to demonstrate how they intend to improve their own environmental performance and demonstrate this. It focuses on the following sustainability indicators; low carbon, low waste, water efficiency, air quality and biodiversity.

• The UK Sustainable Development Strategy (2005)

This strategy places sustainable development at the heart of the land use planning system and at the core of new planning guidance.

• White Paper – 'Our Energy Future: Creating a Low Carbon Economy

The White Paper, 'Our Energy Future: Creating a Low Carbon Economy' (2003), sets out the energy policy to cut the UK's climate change emissions through reducing energy consumed together with a substantial increase in renewable energy. The White Paper details the government's aspiration to generate 20% of UK electricity from renewable energy sources by 2020, and suggests that still more renewable energy will be needed beyond that date. This is further to the existing government target to generate 10% of UK electricity from renewable energy 2010.

• Climate Change Act 2008

Subsequently, the Climate Change Act 2008 puts into statute the government's target to reduce C02 emissions through domestic and international action to 60% below 1990 levels by 2050.

• Low Carbon Transition Plan

The Government Low Carbon Transition Plan (White Paper) was published in July 2009. This plan covers how the UK will begin to transform to a low carbon society by 2020. To facilitate the deployment of renewables, the Government is setting up the Office for Renewable Energy Deployment (ORED). ORED will be working with key organisations and stakeholders to remove barriers to deployment and ensure renewables are delivered in the right places at the right time.

• Carbon Reduction Commitment,

The Climate Change Act paves the way for carbon trading and introduces the Carbon Reduction Commitment, which is a mandatory cap and trade scheme for the 5000 or so largest energy using organisations in the country

• The Waste Strategy for England (2007)

This is the Government's vision for sustainable waste management. It sets the agenda for councils and also provides a forward look at potential new legislation. The strategy also has an increased emphasis on climate change.

• The UK Biodiversity Action Plan

International concern for biodiversity originates from the Rio Earth Summit of 1992 when 150 countries, including the UK and the European Community signed the Convention on Biological Diversity. This Treaty aims to conserve the diversity of flora and fauna at a global, national and local scale. To meet its obligations under the Treaty, the Government published its Response to the UK Steering Group Report on Biodiversity in May 1996. This latter document sets out broad objectives for agriculture, forestry, transport and planning. To date, a total of 391 national Species Action Plans and 45 national Habitats Action Plans have been produced as part of the UK Biodiversity process.

• The Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007

The national air quality strategy establishes the framework for air quality improvements measures agreed at national and international level are the foundations on which the strategy is based. It is recognised, however, that despite these measures, area of poor air quality will remain, and that these will best be dealt with using local measures implemented through the Local Air Quality Management (LAQM) regime Local Authorities have LAQM duties under part IV of the Environment Act 1995.

Planning Policy Statement 1 (Sustainable Development) and PPS on Planning and Climate Change – Supplement to PPS1 (December 2007)

PPS1 sets out the Government's overarching planning policies on the delivery of sustainable development through the planning system and instructs planning authorities to prepare robust policies on design and access. Tackling the causes and predicted effects of climate change within the planning system has received significant attention by the Government which has published a supplement to PPS1 on 'Planning and Climate Change' (2007). This PPS sets out a number of key objectives for the planning system in respect of climate change, expecting large developments to gain a significant proportion of energy supply through on-site low carbon and/or renewable energy sources.

• Draft Planning Policy Statement: Planning for a Low Carbon Future in a Changing Climate (March 2010)

This consultation document brings together the Planning and Climate Change supplement to PPS 1 with the 2004 PPS 22 on Renewable Energy into a new draft PPS on Planning for a Low Carbon Future in a Changing Climate. This

new PPS will replace the 2007 and 2004 PPS and it is proposed that it will become a consolidated supplement to PPS 1. This will support and provide an overarching framework for PPS 25 on Development and Flood Risk and emerging planning policies on green infrastructure.

REGIONAL/SUB-REGIONAL POLICY CONTEXT

• Regional Planning Policy (South East Plan)

The South East Plan was adopted in May 2009 and is the Regional Spatial Strategy for the South East covering the period to 2026. It includes a number of policies that cover a wide spectrum of sustainability issues, including CC1 (Sustainable Development), CC2 (Climate Change), CC3 (Resource Use), CC4 (Sustainable Design and Construction), NRM1 (Sustainable Water Resources and Groundwater Quality), NRM5 (Conservation and Improvement of Biodiversity), NRM11 (Development Design for Energy Efficiency and Renewable Energy), NRM12 (Combined Heat and Power), NRM15 (Location of Renewable Energy Development), W1 (Waste Reduction), W2 (Sustainable Design, Construction and Demolition), W11 (Biomass), and M1 (Sustainable Construction).

• re3 Joint Municipal Waste Management Strategy and Action Plan.

In June 2008, the Council adopted the re3 Joint Municipal Waste Management Strategy and Action Plan. This strategy was developed between the re3 partners (Reading, Bracknell Forest and Wokingham) and incorporates the aims of the Government's Waste Strategy for England 2007. The purpose of the strategy is to provide the strategic framework within which the Councils, in partnership with the local people, will take responsibility for the waste that they produce.

Berkshire Nature Conservation Forum

Between 1999 and 2001, the Berkshire Nature Conservation Forum produced 4 Habitats Action Plans for Berkshire, Heathlands, Lowland Unimproved Grassland, Standing Open Water and Associated Habitats, and Rivers and Associated Floodplain Habitats. Berkshire Habitat Action Plans for Woodland and farmland are in preparation. In 2003, the Berkshire Nature Conservation Forum established county steering groups to oversee the implementation of the published county Habitat Action Plans.

LOCAL POLICY CONTEXT

The overreaching vision for the Borough is set out in the **Wokingham Borough Strategic Partnership's Sustainable Community Strategy 2010-2020.** The Sustainable Environment Strategy plays a key role in the delivery of the environmental priorities in the Sustainable Community strategy.

The Local Area Agreement 2008-11 is effectively the delivery plan for the Sustainable Community Strategy and includes 17 priority objectives for the Borough shaped around the Community Ambitions. Of these, the main target relevant to the Sustainable Environment Strategy is National Indicator (NI) 185: CO2 reduction from Local Authority operations; NI 193 - Percentage of municipal waste landfilled; and NI 192 - percentage of household waste sent for reuse, recycling and composting.

The Sustainable Environment Strategy will also be owned by the **Wokingham Sustainable Environment and Climate Change Partnership**. This group is made up of partners that represent the environmental sector providing a point of contact for the local community, local business, education providers and charity groups. Its core responsibilities are:

- To understand the key issues affecting environmental sustainability, including climate change, use of resources, biodiversity, sustainable transport, sustainable procurement waste management and recycling in the Wokingham Borough.
- To ensure appropriate stakeholder representation in development of strategies and plans and overall engagement in Partnership working.
- To provide a forum for exchanging information and good practice.
- To develop the commissioning requests of the WBSP Strategy Group and identify opportunities for joint commissioning where appropriate.

The Sustainable Environment Strategy 2010-2020 will also help to deliver the Council's overall vision for the Borough, which is:

'A great place to live and work, where residents feel valued and the Council promotes economic growth with good quality of life and opportunity for all.'

Other council strategies that are complementary to this strategy include:

• Local Development Framework - Core Strategy (Adopted January 2010)

This document replaces the Local Plan and provides the planning policy framework for the period up to 2026. It includes the development of 12,460 new homes sited in four Strategic Development Locations. As part of this development, the Core Strategy focuses on ensuring the full range of community infrastructure needed to ensure economic sustainability, including transport, education and training establishments, is provided. The Local Development Framework also includes a Sustainable Design and Construction SPD. The emerging Managing Development Delivery Development Framework, may seek over and above the minimum national and regional targets for energy efficiency and renewable energy.

• Corporate Plan 2008-18

Within the context of Wokingham's Vision, it sets out the Council's specific targets for the next ten years. This is due to be refreshed and updated in 2010.

• The Carbon Management Plan

This document sets out how the Council will reduce carbon dioxide emissions by 15% by 2015 and 40% by 2020

• The Local Transport Plan 2006-2011

This statutory document is an integral part of the planning process and specifically aims to deliver value for money solutions to local transport problems, whilst also addressing the role and potential of local transport in delivering a better quality of life.

• Biodiversity Action Plan 2003-2012

This Action Plan aims to raise awareness of the issues affecting biodiversity, through encouraging community involvement and action, encouraging a management sympathetic to wildlife and outlining targets and actions for improving the biodiversity of Wokingham Borough. The Biodiversity Action Plan contains Habitat Action Plans (HAP) for - woodlands, grasslands, wetlands, heathlands and towns and villages.

• Procurement Strategy

The Procurement Strategy outlines the Council's strategic approach to procuring goods, works and services, and how procurement will be managed in the future. The strategy ensures that natural resources are used efficiently and that waste is avoided.

• Economic Development Strategy 2010-2013

The Economic Development Strategy seeks to ensure that Wokingham Borough is a key player in the thriving Thames Valley economy, with leading edge innovation, a highly skilled workforce, and a growing knowledge-based sector set within an attractive environment to live and do business. It recognises that the environment is important in underpinning the good quality of life of the Borough and recognises the challenges of fuel scarcity and the need to develop a low carbon economy and encourage green technologies.

• Draft Air Quality Action Plan

The Wokingham Borough draft air quality action plan will demonstrate how emissions of nitrogen oxides will be reduced in the air quality management area in pursuit of the nitrogen dioxide objective set out in the National Air Quality Strategy. It sets out a package of measures to tackle air pollution from transport. The Draft Air Quality Action Plan is strongly allied with the Wokingham Borough Transport Plan and the Sustainable Environment strategy.

APPENDIX 4: THE LOCAL PICTURE

Borough Profile

Wokingham Borough lies within the Thames Valley and covers an area of 17,892 hectares with a population of 156,000 (Mid 2007 population estimate from ONS). The number of households in the Borough is 57,272 (2001 census) with the average household size of 2.55.

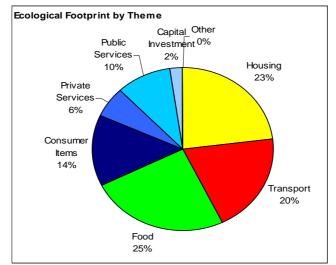
The Borough is characterised by a mix of urban and rural areas. The majority of the population lives in the principal urban areas of Woodley, Earley and Wokingham town. Approximately one third of the Borough's population live in small rural settlements

Wokingham Borough is noted for its charming woodlands, heaths, and peaceful rivers. The River Thames forms a natural boundary to the north of the Borough, whilst the River Lodden flows through the centre and the River Blackwater lies in the south.

The Borough is economically prosperous with good communication links to London and Heathrow. The M4 motorway and A329M are major roads that pass through the centre of the borough as well as two rail lines that connect Wokingham with London and Reading. The attractive natural environment also encourages businesses and their employees to settle in the Borough, contributing to the pressure for development.

Ecological Footprint

- The ecological footprint is a measure of human demand on the Earth's ecosystems. It compares human demand with the Earth's ecological capacity to regenerate. The world average Ecological Footprint is 2.2 gha/per person (global hectares per person) compared to ecological capacity of 1.8 gha/per person.
- The Ecological Footprint of the UK is 5.3 gha/per person. This is 65% higher than our ecological budget and is among the highest 15 countries on a per person basis.
- There is a direct link between a high GVA (Gross Value Added) and a high ecological footprint as prosperous economies tend to purchase more commodities, use more utilities and travel more. As a result, the ecological footprint for the South East region stands at 5.65 gha/per person higher that the UK as a whole. The affluent Wokingham Borough has an ecological footprint of 5.88 gha /per person which is higher than both the national and regional figures.



Stockholm Environment Institute: Resource and Energy Projections (REAP) 2006

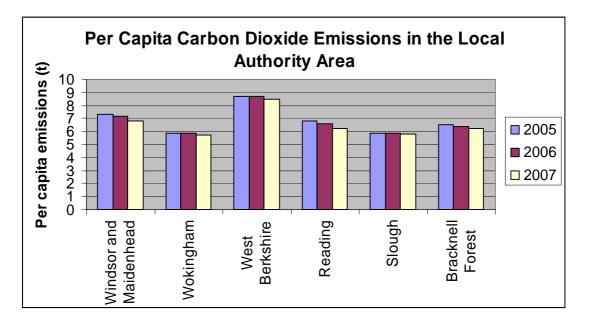
Carbon Dioxide Emissions

- Carbon dioxide is the main man-made contributor to global warming. The UK contributes about two percent to global man-made emissions, which, according to the IPCC, were estimated to be 38 billion tonnes carbon dioxide in 2004.
- Carbon dioxide accounted for about 85 percent of the UK's man-made greenhouse gas emissions in 2007.
- In 2007, 40 percent of carbon dioxide emissions were from the energy supply sector, 22 percent from road transport, 17 percent from business and 14 percent from residential fossil fuel use.
- The table below shows the CO₂ emissions estimates for all Berkshire authorities for 2005-2007 (published by Department of Energy and Climate Change).

						Population	
						('000s, mid-	Per Capita
		Industry and		Road		year	Emissions
	Year	Commercial	Domestic	Transport	Total	estimate)	(t) tonnes
Windsor	2005	369	390	244	1,004	137.0	7.3
and	2006	368	391	237	997	138.8	7.2
Maidenhead	2007	346	383	235	964	141.0	6.8
	2005	285	391	219	894	152.0	5.9
Wokingham	2006	296	400	213	909	153.8	5.9
	2007	291	391	213	895	156.6	5.7
West	2005	483	406	387	1,276	147.1	8.7
Berkshire	2006	501	406	382	1,289	148.8	8.7
	2007	499	399	390	1,288	150.7	8.5
	2005	494	337	126	958	141.9	6.8
Reading	2006	486	332	122	940	142.8	6.6
	2007	447	326	121	894	143.7	6.2
	2005	353	246	102	701	118.9	5.9
Slough	2006	352	248	99	700	119.5	5.9
	2007	349	241	101	692	120.1	5.8
Bracknell	2005	300	256	165	720	111.4	6.5
Forest	2006	303	259	161	722	112.2	6.4
	2007	294	254	159	708	113.5	6.2

The CO₂ emissions estimates for all Berkshire authorities for 2005-2007

- In 2007 Wokingham Borough had the lowest level of carbon dioxide emissions from commerce and industry of all the Berkshire authorities accounting for 291 Kt CO₂ compared with an average of 371 Kt CO₂ for the county as a whole.
- Most of the Borough's emissions are derived from the domestic sector accounting for 391 Kt CO₂ emissions in 2007. Apart from West Berkshire this represents the highest emissions level in Berkshire and is well above the county average of 349 Kt CO₂. With much of the housing stock being good repair and with relatively high levels of energy efficiency, this figure is a refection of the affluence of the Borough characterised by high energy usage and large detached dwellings.
- The Borough's lowest source of carbon dioxide emissions is from road transport at 213 Kt CO₂. Although lower than the county average of 218 Kt CO₂, the Borough still has the third highest carbon dioxide emissions from transport in Berkshire. Wokingham Borough has high levels of car ownership 53.2% of households have 2 cars or more and because of the semi rural nature of the area and lack of public transport Wokingham residents have a propensity to use their cars more frequently than in other areas.
- Carbon emissions from the Councils own from transport operations in 2008/2009 was 1,539,603Kg.



• The table below compares the per capita carbon dioxide emissions for the Berkshire Authorities for the three years between 2005 and 2007.

- In 2007 Wokingham can be seen to have the lowest carbon footprint of 5.7 per capita emissions (t) of all the Berkshire authorities.
- All Berkshire authorities have shown a progressive reduction in carbon dioxide emissions between 2005 and 2007.

Renewable Energy

- Wokingham Borough performs well in the generation of renewable energy and is the home of the Green Park wind turbine, which has become a landmark of renewable energy in the Borough and surrounding areas.
- The Government has a target to produce 10% of electricity from renewable sources by 2010. Although the Borough is exceeding the target for wind electricity (due to the wind turbine at Green Park), it is falling short in terms of other renewable energy technologies such as biomass, hydro and solar power generation.
- In the monitoring year 2007-2008 approval has been granted for one 12m free standing domestic wind turbine, estimated annual energy 11.82 MWh. There have been four planning applications approved for installation of solar panels including one at Hawthorns Primary School. Southfields School has also placed Solar Hot Water and Solar PV on their roofline.

Wokingham Borough Council renewable energy capacity at 31^s March 2009 and 2010 targets

Technology	Installed capacity	Indicative 2010 target		
		Electricity,	% target	
Electricity	Electricity, kW _e	kW _e	attained	
Biogas/sewage gas	250	429	58%	
Wind	2,002	941	213%	
Biomass	0	2,044	0%	
Solar PV	4	309	1%	
Hydro	0	n/a	n/a	
TOTAL	2,256	3,723	61%	

Source: SEE-Stats database, TV Energy for the South East Sustainable Energy Partnership

Fuel Poverty

- Fuel poverty occurs when more than 10% of household income is spent on maintaining an adequate level or warmth and includes non-heating fuel use. Progress in tackling fuel poverty is measured by the improvement in energy efficiency of homes inhabited by people claiming income-based benefits.
- Energy efficiency of a house is measured using the Standard Assessment Procedure (SAP), which is the Government's recommended system for energy rating of dwellings. This assessment procedure can be used as a proxy for fuel poverty in households of people claiming income based benefits, given the link between income poverty and fuel poverty. A SAP rating of less than 35 indicates a house has low energy efficiency (for example low levels of insulation and inefficient heating systems) and a SAP rating of 65 or more is termed as high energy efficiency.

In 2008/09 the energy efficiency of a random sample of 1% of households inhabited by people claiming income based benefits was measured by postal survey. 7.3% of sampled dwellings in Wokingham Borough had a low energy efficiency rating and 30% had a high energy efficiency rating. Comparing this performance with other local authorities, the Borough performed in the top quartile (top 25%) for its proportion of households with a low energy efficiency rating and performed in the upper middle quartile (top 50%) for its proportion of households with a high energy efficiency rating. Therefore, 2008/09 performance overall was good compared to that of other local authorities and future targets set locally should aim to maintain or improve this performance

Impacts of Climate Change

- For the South East of England, it is predicted that over the next 30 years there will be an increase in average annual temperatures of between 2.0 2.50 C and 4.0 4.50 C and decreases in annual average rainfall of 0 10%. This masks seasonal variations wetter winters and drier summers with rain increasing by 20% in winter and a decrease of between 8% 23% in summer. We can expect a changing pattern of more extreme weather with floods and droughts becoming more "normal".
- The United Kingdom Climate Impacts Programme (UKCIP) has provided a number of detailed scenarios for how climate change could impact on the UK. Information on UKCIP's work can be found at www.ukcip.org.uk
- The effects of climate change include increases in flooding, temperature, drought and extreme weather events. These can create risks and opportunities, such as, impacts to transport infrastructure from melting roads or buckling rails, increases in tourism, damage to buildings from storms, impacts on local ecosystems and biodiversity, scope to grow new crops, changing patterns of disease, impacts on planning and the local economy and public health.
- In May 2005, the Environmental Agency categorised 2.76% of all properties in Wokingham as being at risk of flooding and within the flood zone. By July 2007, the number of properties being classified at risk and falling within the flood zone had increased to 7%. The Environment Agency now includes climate change data in its modelling of flood risks. The Wokingham Borough Council Strategic Flood Risk Assessment observes that climate change will represent an increasing risk to flooding in low lying areas and the frequency and severity of flooding will change measurably within a generation. This means that the extreme weather events, such as the Emmbrook School flooding, are likely to become more frequent.
- During the summer of 2003, there were 52,000 additional deaths in Europe as a result of an extreme heat wave.

- In Kent, temperatures peaked at 38.5°C (101.3°F) on 10th August 2003, which resulted in an additional 2,139 heat related deaths in the UK. Hot, dry air can raise the risk of eye and throat infections and breathing problems such as asthma
- The incidence of skin cancers are on the rise
- Climate change is thought to be chiefly responsible for the spread of the Bluetongue virus.

Countryside, Landscape and Nature Conservation

- Wokingham has a total of 4 Sites of Special Scientific Interest no Special Areas of Conservation, or Special Protection Areas. There are a total of 134 Wildlife Heritage Sites and one regionally important Geological site. Although there are no SPAs in Wokingham Borough, around 30% of the Borough lies within the 5km protection zone for the Thames Basin Heath SPA.
- A new Regionally Important Geological Site (RIGS) has been designated in the Borough. RIGS are sites within the county which are considered worthy of protection for their earth science or landscape importance.

Designated site	Area in hectares (2007)	Area in hectares (2008)	No. of sites	Details of change
Sites of Special Scientific Interest (SSSIs)	27.04	27.04	4	None - stable
Special Areas of Conservation (SACs)	0	0	0	None - stable
Special Protection Areas (SPAs)	0	0	0	None - stable
Wildlife Heritage Sites (WHS)	1337.1	1332.8	134	Negative change in number and area of WHS as two sites were deselected and one new proposed site was selected. A net loss of 1 WHS and 4.3ha
Regionally Important Geological or	1007.1	1002.0	101	Increase as one new site notified
Geomorphological Sites (RIGS)	0	1.4	1	in 2008

Areas of sites designated for their intrinsic environmental value

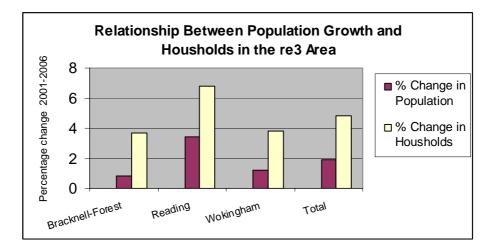
Source: TVERC (Thames Valley Environmental Records Centre)

Waste and Recycling

• The Council has formed a joint waste, disposal and recycling partnership with Bracknell Forest and Reading Borough Councils (re3) and have jointly procured a 25 year Public Finance Initiative waste and recycling contract with the Waste Recycling Group, valued at £615 million.

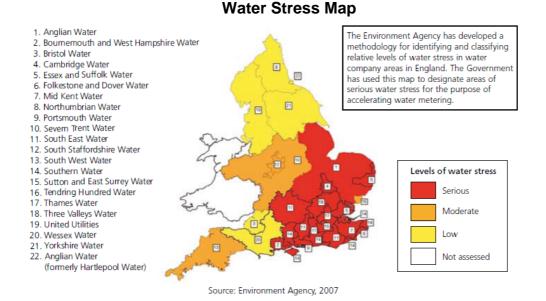
- The Smallmead Waste Management Park in Reading is designed to handle around 200,000 tonnes of waste a year from the Councils in the re3 waste management partnership – Bracknell Forest, Reading and Wokingham. The park has taken just over 2 years to build and is part of an £610 million, 25 year Private Finance Initiative between the three councils and Waste Recycling Group (WRG)
- In 2007/08, nearly 38% of household waste was recycled or composted; which is well above the national average (30.9%), and the kerbside green waste collection scheme has been expanded to cover 53,000 properties (85% of the Borough). The Council is currently set to achieve its NI192 target of 40% recycling or reuse and also its LAA stretch NI 193 target of reducing landfill as a percentage of overall waste down from 60% in 2007/08 to 40% in 2010/11.
 - **Recycling and Composting Rates in the re3** Councils 50 of Waste Recycled 40 Bracknell 30 Reading 20 Wokingham 10 % 0 2005/06 2003/04 2004/05 2006/07 2007/08
- The table below shows the increasing recycling and composting rates for the re3 Councils since 2003.

- Residents living in Wokingham produce on average 12.1 kg/hh/wk of residual waste. This varies by demographic group with Acorn 1 group producing the least residual waste, 6.45 kg/hh/wk and Acorn 4 producing the most, 19.57 kg/hh/wk.
- A combination of higher than average population growth and a national increase in the numbers of smaller households, has implications for waste generation. As numbers of people and households increase, so will the average waste arising in each area and for re3 as a whole.



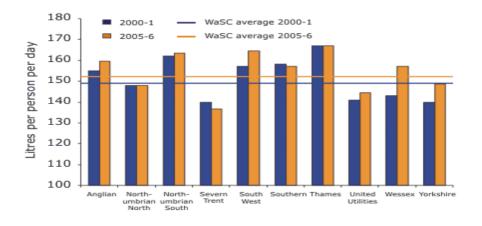
Water

 In southern and eastern regions of England, where rainfall is comparatively low, per capita water consumption tends to be higher than elsewhere. In some areas abstraction is above its sustainable level. Combined with projections for rainfall and demand, this has lead to the classification of all south-eastern areas as seriously water stressed - see water stress map below.



- The average person in England and Wales uses 150 litres of water a day. This is significantly more than comparable European countries such as Germany, Holland, Belgium and Denmark. By 2020, with increasing population and housing growth. The demand for water could increase by 5% - that's 800 million extra litres of water a day.
- Future Water, the Government's water strategy for England, outlines a vision for the average person to reduce the water they use by 20 litres per day to 135 litres a day.

Estimated Water Consumption in the UK by Water Company (OFWAT)



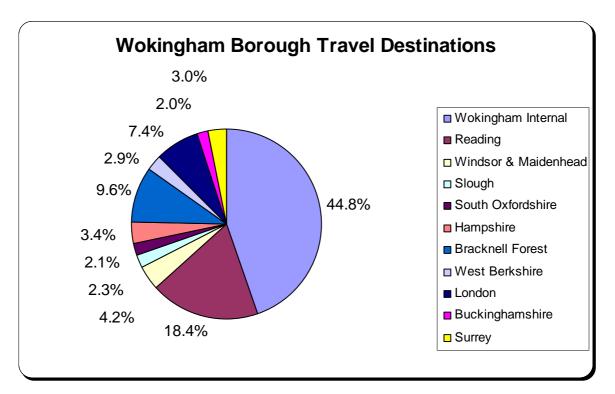
- Those households supplied by Thames Water, which includes Wokingham, consume an average of 167 litres of water per person per day. This is higher than any other water company and higher than the Water and Sewerage Company (WaSC) averages for the UK. To a lesser extent Wokingham is supplied by Southern Water which has an average consumption of 156 litres of water per day. This is still higher than the WaSC averages for the UK of around 150 litres, per person per day.
- Pressures on our water resources are set to increase. Population growth and changes in household size mean more houses are needed in some areas where abstraction in not currently sustainable. Climate change is expected to severely worsen the situation with drier, hotter summers and more intense, sporadic winter rain and some lower river flows even in winter. In addition, rising temperatures and changing precipitation patterns are likely to change the public demand for water.

Green Transport

- 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 CO₂, equivalent by 2012
- Since 2006, emissions from road transport have risen by 1 percent, while emissions from energy supply, business and residential fossil fuel use have fallen by 2, 3 and 5 percent respectively
- The 2001 Census indicated that the Wokingham Borough has over twice the number of households with 3 or more cars than the national average. Within Berkshire 42% of households were surveyed as having 2 or more cars, compared to 53.2% in the Wokingham Borough.
- Wokingham's lowest source of carbon dioxide emissions is from road transport at 213 Kt CO₂. Although, lower than the county average of 218 Kt CO₂, the Borough still has the third highest carbon dioxide emissions from transport in Berkshire. Because the Borough has high levels of car ownership, the semi rural nature of the area and lack of

public transport, Wokingham residents have a propensity to use their cars more frequently than in other areas.

- The Council, in conjunction with local schools, successfully achieved over 6% of school journeys undertaken by bicycle by 2006 and is on course for achieving a 25% increase from the 2000 baseline level by 2016.
- The 2001 Census journey to work data for the Wokingham Borough has been reviewed. The percentage of residents travelling for the purpose of employment from the Wokingham Borough is illustrated in the chart below.



 55.2% of residents travel outside the Borough to work. The diagram above shows that 18.4% of residents travel to Reading with a further 9.6% travelling to Bracknell for the purpose of employment. With the exception of Barkham, Finchampstead and Remenham and Wargrave, the majority of residents in each ward travel to Reading. From Barkham and Finchampstead, the 2001 Census indicates that the majority of residents travel to Bracknell, whilst from Remenham and Wargrave the majority of the residents are shown to travel to Windsor and Maidenhead

Air Quality

 Air pollution levels vary from day to day and area to area. It is worse on busy roads next to high buildings and at busy road junctions. Calm sunny weather and cold foggy weather can also increase pollution levels.

- Since December 1997, each local authority in the UK has been carrying out a review and assessment of air quality in their area. The aim of the review is to make sure that the national air quality objectives will be achieved throughout the UK by the relevant deadlines. These objectives have been put in place to protect people's health and the environment. If a local authority finds any places where the objectives are not likely to be achieved, it must declare an Air Quality Management Area (AQMA) there.
- The outcome of a detailed assessment of air quality in Wokingham Borough was that the annual mean objective for nitrogen dioxide would not be met in parts of the Borough. An Air Quality Management Area was declared in the effected areas in 2004. In total, 235 Local Authorities in the UK have declared AQMAs.

APPENDIX 5: GLOSSARY

ACORN is a system of social/demographic classification where group 1 refers to wealthy achievers who tend to live in larger houses in prosperous suburbs.

Active First is a reward scheme for children who walk or cycle to school. Parents are asked to sign up to walking or cycling a certain number of days each week.

Biomass - Energy from biomass is produced from organic matter of recent origin. It does not include fossil fuels. Although there are many different forms of biomass, wood fuel is the most common fuel option for heat production.

Bluetongue virus is a notifiable disease of ruminants but sheep are the most severely affected. Seasonal variations in temperature and weather affect the spread of the Bluetongue Virus.

Carbon Neutral refers to products, services, buildings 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. CO2 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.

CHP - Combined Heat and Power Combined Heat and Power (CHP) is the simultaneous generation of usable heat and power (usually electricity) in a single process. CHP is a highly efficient way to use both fossil and renewable fuels and can make a significant contribution to the UK's sustainable energy goals, bringing environmental, economic, social and energy security benefits.

CO2- Carbon Dioxide

GOSE stands for the Government Office for the South East, who represent central government in the region. Their role is to promote better and more effective integration of Government policies and programmes at a regional and local level.

Gross Domestic Product (GDP) measures a country's overall economic output. It is the market value of all final goods and services made within the borders of a country in a year

Ground Source Heat Pumps - A heat pump is a device which moves heat energy from one place to another while raising it from a lower to a higher temperature. In heating applications, heat is removed from soil or bedrock and delivered to the building where it is needed. In cooling applications, the reverse happens and heat is removed from the building to be discharged to the ambient soil or rock.

Hydro - The energy present in moving water is used to turn a turbine which generates electricity, which, depending on the scale of the system can either be exported to the local grid or used to charge batteries for local use.

Knowledge transfer seeks to organise, create, capture or distribute knowledge and ensure its availability for future users. In particular, knowledge transfer is occurring through increased collaboration between industry and universities.

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.

Local Area Agreements (LAAs) set out the priorities for a local area agreed between central government and a local area (the local authority and Local Strategic Partnership) and other key partners.

Local Strategic Partnership (LSP) brings together at a local level the different parts of the public sector as well as the private, business, community and voluntary sectors so that different initiatives and services support each other and work together and is responsible for developing and driving the implementation of Community Strategies and Local Area Agreements (LAAs).

LoCUS project stands for low carbon advice for small and medium sized companies. Providing advice and information across Berkshire, Oxfordshire and the Medway, the project specialises in working with commercial landlords to improve their carbon footprint.

Nottingham Declaration (2000) - By signing the Declaration, the Council has shown its commitment to actively tackle climate change within the Borough and work with others to reduce emissions country-wide.

NOx - 'nitrogen oxides' (NOx) include two gases - nitric oxide (NO), and nitrogen dioxide (NO2). Nitrogen oxides contribute to acid rain, depletion of the ozone layer and have detrimental effects on health. They are also greenhouse gases. Nitrogen dioxide is one of the eight substances for which the government has established an air quality standard as part of its national Air Quality Strategy.

Ofgem is the Office of the Gas and Electricity Markets. Protecting consumers by promoting competition, wherever appropriate, and regulating the monopoly companies which run the gas and electricity networks.

Photovoltaics - Solar photovoltaics (PV) are a semiconductor-based technology that converts the energy in sunlight into electricity.

PM10 is the term used to describe tiny particles in the air, made up of a complex mixture of soot, organic and inorganic materials having a particle size less than or equal to 10 microns in diameter. PM10 is one of the eight substances for which the government has established an air quality standard as part of its national Air Quality Strategy.

re3 is the name given to the partnership between Bracknell Forest, Reading and Wokingham Borough Councils. In October 2006 the re3 councils signed a

£600m, 25 year PFI contract with the Waste Recycling Group. This contract will deliver new waste management infrastructure and manage the waste arising from three councils throughout the life of the contract.

Renewable energy is energy which comes from natural resources, such as, the sun, wind, rain and tides, which can be naturally replenished without a net gain of greenhouses gasses in the atmosphere.

Retrofitting is the term used to describe refurbishment measures of existing properties to improve energy conservation, generate renewable energy and adapt to climate change.

SAP Ratings - The Standard Assessment Procedure (SAP) for energy rating of dwellings is a calculation of a building's energy efficiency. SAP ratings are scored on a scale from 1 to 100 where 1 is the worst and 100 will indicate no heating/hot water cost.

Sites of Special Scientific Interest can be either of biological or geological (or mixed) interest, notified by English Nature under the Wildlife and Countryside Act 1981.

Special Protection Areas (SPAs) are areas which have been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within European Union countries.

Solar Thermal - Solar thermal heating systems (STHS) utilise thermal energy from the sun to supply heat to hot water systems as opposed to generating electricity, which is a separate technology.

Special Areas of Conservation are areas which have been given special protection under the European Union's Habitats Directive. They provide increased protection to a variety of wild animals, plants and habitats and are a vital part of global efforts to conserve the world's biodiversity.

Sustainable 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.

Sustainable Routes Project is a partnership project that assists businesses in reducing the cost of business travel. It helps businesses make travel plans and provides match funded grants of up to £1000 towards the cost of implementing sustainable transport initiatives.

UKCIP- United Kingdom Climate Impacts Programme

Wokingham Sustainable Environment and Climate Change LSP Partnership is the Borough's main consultative and advisory group for environmental issues. This group is made up of partners that represent the environment providing a point of contact for the local community and local business progress policy and environmental projects.

APPENDIX 6: EQUALITY IMPACT ASSESSMENT

1. What is the main purpose of the strategy?

To improve the quality of life, now and for future generations, by respecting our environment and protecting it from the impact of our activities and from growth by:

- **Engaging** Raising awareness, fostering respect for our environment and changing behaviours.
- **Taking action** Minimising waste, pollution and greenhouse gas emissions.
- **Preparing** Planning for the likely impacts of climate change and managing limited resources efficiently

2. List the main activities of the strategy:

- Demonstrate leadership in raising awareness through publicity campaigns, events, educational visits and improved website information
- Promote, to people of all ages, the true benefits of behaving more responsibly towards the environment, including smart meters and home audits
- Champion community groups, older peoples forums, schools and businesses to deliver green projects, including new flagship buildings
- Conserve, value and enjoy the green character and biodiversity of the area
- Initiate behaviour change by promoting community spirit and training "Climate Change Ambassadors" within the council and community
- Lead the way in carbon reduction, by completing the Carbon Trust Local Authority Carbon Management Programme and prioritising the Carbon Reduction Commitment
- Encourage residents to improve the energy efficiency of their homes through advice and support
- Motivate and support local businesses in reducing their carbon footprint through initiatives, such as, the LoCUS partnership and the Sustainable Routes project.
- Enable more sustainable travel through enhancing pedestrian, cycle and bus routes, improving public transport and promoting low carbon vehicles
- Ensure that our planning policies require new developments to be sustainable.
- Strive to improve air quality in the borough
- Increase recycling and reduce the amount of waste sent to landfill
- Identify the risks and opportunities presented by inevitable changes in the climate (characterised by wetter winters and hotter, drier summers) and develop an adaptation action plan to address these
- Minimise our reliance on fossil fuels by increasing the amount of renewable energy produced and enhancing the economic competitiveness of the Borough
- Prepare for high future water stress caused by population growth, high usage rates, and climate change
- Champion and promote procurement of local goods and services

Mobilise and support businesses to invest in green innovation to facilitate growth

3. Who will be the main beneficiaries of the strategy?

- Businesses benefitting from reduced environmental costs, reducing energy costs and development of new markets.
- Residents who will benefit from enhancements to the natural environment, greater energy efficiency and more involvement in local "green" initiatives
- Partner organisations through greater collective working on environmental issues
- Rural and urban communities. This strategy will help to improve communication and involvement in our communities through engendering a spirit of collective care for our natural environment.

	Detail	Positive impact	Negative impact	Nil impact	Reason
		It could benefit	it could disadvantage		
Gender	Latest population estimates show that the 50.3% of Wokingham's population are female.	By increasing the use of sustainable transport facilities (walking, cycling), this mode of transport is likely to feel safer to women travelling alone.	Women tend to avoid sustainable transport options (such as walking) when they feel that their safety is compromised.	The Strategy does not seek to penalise less sustainable travel choices but encourages the use of sustainable transport modes.	The Strategy is flexible and non-prescriptive ensuring choice of transport mode.
Ethnicity	Since the 1991 census, the Borough's Black and Minority Ethnic population has almost doubled from 3.3% to 6.1% in 2001. The largest minority ethnic group is Indian with a population of 2,937 (2%). The BME population has increased further since the 2001 Census.	By increasing the use of sustainable transport facilities (walking, cycling), this mode of transport is likely to feel safer to people from minority ethnic group.	Some ethnic minority groups may avoid sustainable transport options when they feel that their safety is compromised.	It does not seek to penalise unsustainable travel choices but encourage the use of sustainable transport modes.	The strategy is flexible and non-prescriptive ensuring choice of transport mode.
	People in ethnic groups are more likely to be on lower incomes and benefit support. Data from NOMIS (October 2009) shows that there is a greater incidence of economic inactivity	Ethnic groups could be more likely to suffer from fuel poverty due to lower income and benefit dependence. The Strategy aims to improve energy efficiency thereby reducing the likelihood of fuel poverty.	Not Applicable	Not Applicable	Not Applicable

	amongst ethnic minority groups (20.5% of working age people) in Wokingham compared to the overall figures of 18%.				
	Wokingham has a rapidly increasing BME population. The Census 2001 showed that 9% of the population were born outside the UK and English may not be a first language	The Environmental Ambassadors programme is a partnership project that seeks to disseminate information and advice on environmental matters to all groups in the community in a clear and understandable manner. The Programme will be targeted at BME community groups.	Technical terminology can be confusing to those whose first language is not English. Therefore, some people may be discouraged from behaving in a more sustainable way, conserving energy and recycling, because they are unable to access the information.	Not Applicable	Advice and information should be accessible and available in a wide range of languages and clear symbols used where possible.
Disability	The 2001 census identified that 1.9% of the economically inactive people ages 16-74 are permanently sick or disabled. Wokingham has the lowest incidence of long- term illness in England and Wales with only 10.9% of its population reporting a long- term illness.	Where the disability allows, sustainable modes of transport can improve levels of health and reduce obesity.	Disability may mean that it is physically impossible to enjoy the benefits of sustainable transport choices.	Not Applicable	Travel planning in the strategy is not prescriptive but makes allowances for different circumstances.
	11% of households In Wokingham contain someone who suffers from a long-term illness, health problem, mental health problem or disability that limits housing requirements.	The furniture reuse project is a recycling project that aims to make furniture and white goods available to deprived people at affordable costs. It also seeks to provide employment for people with	Mobility or physical problems can restrict people from participating fully in recycling activities, especially if doorstep recycling is not offered at their residence.	Waste recycling is not prescriptive and seeks to encourage rather than penalise participation in recycling programmes	Consulting directly with disabled people will happen through the Environmental Ambassadors programme.

		disabilities.			
	Disabled people tend to suffer disproportionately from respiratory illnesses (such as asthma).	The Strategy aims to reduce air pollutants (produced mainly from motor vehicles), which have a generally negative effect on health. The development of the Air Quality Action Plan will help to improve the air quality in the Borough. Reducing the use of the car will also help to improve the air quality in the borough.	Not Applicable	People with poorer health will be more vulnerable to the effects of climate change. The Strategy looks at ways to adapt to climate change – undertaking a study of the kinds of issues already affecting vulnerable groups in the Borough and making recommendations of how to plan more efficiently to mitigate some of these effects.	Not Applicable
	Disabled people are more likely to have lower or fixed incomes or be on benefits and are therefore at greater risk of experiencing fuel poverty.	Disabled people could be more likely to suffer from fuel poverty due to lower income and benefit dependence. The Strategy aims to improve energy efficiency thereby reducing the likelihood of fuel poverty.	People with disabilities may be more vulnerable to increasing energy costs.	Not Applicable	Not Applicable
	Some disabilities, such as visual impairment or learning difficulties, make it difficult to access information.	The Environmental Ambassadors seeks to disseminate information and advice on environmental matters to all groups in the community, including disabled groups. This will ensure that information is disseminated in the most accessible way.	The Technical terminology of energy efficiency can potentially be confusing to those who have learning difficulties or are blind or partially sighted.	Advice and information should be accessible and available in a range of formats, including Braille, and use clear symbols where possible	Not Applicable
Faith	Wokingham has a higher proportion of people than average who are	The Environmental Ambassadors programme will be targeted at different faith	Not Applicable	Not Applicable	Not Applicable

Sexual	Sikh (0.97%). However, there is little information available on faith in relation to sustainable environment issues. There is little	groups. Furthermore, local faith groups will be encouraged to invest in renewable technologies (such as, solar panels) on their buildings. By increasing the	Gay, lesbian and	Not Applicable	The strategy is
Orientation	information available on sexual orientation in relation to sustainable environment issues.	use of sustainable transport facilities (walking, cycling), this mode of transport is likely to feel safer to gay, lesbian and transgender residents	transgender residents may have a perceived threat to personal safety when choosing sustainable travel choices.		flexible and non-prescriptive ensuring choice of transport mode. It does not seek to penalise unsustainable travel choices but encourages the use of sustainable transport modes
Age	The 2001 census found that Wokingham had a higher than average % of school age children.	Sustainable transport modes help to support healthy living objectives, such as fighting childhood obesity, thereby having a positive impact of children's lives. School travel plans can be beneficial for young people as they can give more freedom of choice.	Young people may be unable to fully enjoy the benefits of pedestrian travel, due to a perceived threat to personal safety.	Not Applicable	Travel planning should not be prescriptive but make allowance for different circumstances.
	The 2001 Census showed less than the average number of people aged 65 to 79. 16.6% of the population were over 60. However, there is an aging population in Wokingham with numbers over people over 80 expected to grow rapidly.	The strategy aims to reduce fuel poverty, which will positively impact on the elderly, who have to face increasing energy costs coupled with fixed incomes.	Older people may be unable to fully enjoy the benefits of pedestrian travel, due to a perceived threat to personal safety.	Not Applicable	Older People are more susceptible to the effects of cold weather and are also likely to be on fixed incomes.

o to d fr il	The very young or very old tend o suffer disproportionately from respiratory llnesses (such as asthma).	The Strategy aims to reduce air pollutants (produced mainly from motor vehicles), which have a generally negative effect on health. The development of the Air Quality Action Plan will help to improve the air quality in the Borough. Reducing the use of the car will also help to improve the air quality in the Borough.	Young people will be the generation to confront the negative environmental consequences if we fail to take action now and plan for future climate change.	Young and older people will be more vulnerable to the effects of climate change. The Strategy looks at ways to adapt to climate change – undertaking a study of the issues already affecting vulnerable groups in the Borough and making recommendations on how to plan more efficiently to mitigate some of these effects.	Not Applicable
o s tt te c ir T d fr ir S E	Both younger and older people can sometimes find he technical erminology confusing or naccessible. This will discourage them from participating n the Sustainable Environment agenda.	The Environmental Ambassadors programme is a partnership project that seeks to disseminate information and advice on environmental matters to all groups in the community, including older people forums and through schools.	Not Applicable	Not Applicable	Environmental issues have proved to be extremely positive for community cohesion.

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سپاشاعت دوکتکهم بارد کا نونسل کی طرف ے شائع کی گئی ہے،اگرآ پ اس کو پیچنے میں مدد حاصل کرنا چاہتے ہیں تو برائے مہر پانی اس نمبر پر دايط كرير - 01753 (01753)

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