



# Energy Change and Opportunity Strategy

2011-2020



# Contents

## Foreword

<b>Executive summary .....</b>	<b>1</b>
<b>1. Introduction .....</b>	<b>5</b>
1.1 Why do we need a strategy? .....	5
1.2 Our approach .....	5
1.3 What is climate change? .....	7
1.4 What will be the effects of climate change? .....	7
1.5 Legal and policy context.....	8
1.6 Benefits of introducing a strategy .....	10
1.7 Who will be responsible? .....	11
1.8 Resources available to deliver the strategy .....	11
1.9 How the strategy is structured.....	11
<b>2. The Wiltshire context.....</b>	<b>13</b>
2.1 Wiltshire's carbon footprint.....	13
2.2 Climate change impacts in Wiltshire .....	16
<b>3. Our strategy .....</b>	<b>19</b>
3.1 Waste .....	19
3.2 Transport.....	21
3.3 Water.....	24
3.4 Purchasing and procurement.....	26
3.5 Biodiversity and natural environment.....	28
3.6 Energy.....	31
3.7 Planning .....	35
3.8 Communicating environmental issues .....	37
<b>4. How we will deliver, monitor and review this strategy .....</b>	<b>41</b>
<b>Appendix 1: Environmental policy .....</b>	<b>47</b>
<b>Appendix 2: The Nottingham Declaration on Climate Change .....</b>	<b>48</b>



## **Foreword**

We are entering a critical period for climate change and energy security at the national and local level. Our reliance on imported fossil fuels is increasing, but at the same time the dangers to our climate from burning fossil fuels become ever more apparent. The need to build a secure, low carbon economy here in Wiltshire becomes even more vital.

This strategy details our approach to meeting the challenge for Wiltshire. It sets out our ambitions for reducing our carbon emissions as a council, leading the county's low carbon transition and preparing for unavoidable climate change. This is a framework strategy which will be underpinned by both new and existing strategies and action plans. These will enable the council to deliver against the key themes of waste, transport, water, purchasing and procurement, biodiversity and natural environment, energy, planning and communicating environmental issues.

This strategy sets out an overview of existing plans and activities and the general approach that will be taken for the action plans. The development of new action plans on the low carbon transition, climate change adaptation, renewable energy and carbon management will allow detailed targets and actions to be developed and also outline a suitable monitoring framework.

It is clear that taking action on the causes and effects of climate change requires a partnership approach. While the council can provide leadership, it cannot deliver on this ambitious agenda without significant co-operation from partners in the private, public and third sectors, as well as from local residents. I hope that this strategy will help catalyse the necessary action in Wiltshire for this county to be at the forefront of low carbon transition.

**Cllr Toby Sturgis**  
**Cabinet Member for Waste, Property and Environment**



## Executive summary

The science is clear that climate change is a reality and it is imperative to act now. Tackling the causes and managing the effects of climate change are two of the greatest challenges that we face as a society. The UK Climate Change Act 2008<sup>1</sup> has taken on board the latest scientific evidence and set an ambitious target of reducing the 1990 level of CO<sub>2</sub> to 34% by 2020, and reducing it even further to 80% by 2050. The environmental, social and economic impacts of climate change are already being felt and they will continue to grow in severity. This strategy sets out how Wiltshire as a council and a community can take action on climate change. Climate change requires everyone to work together to make adjustments to their lives, businesses or communities in order to secure a better future for all.

### The Wiltshire context: carbon emissions

In 2007 the county's total carbon footprint was 4.76 million tonnes, which is about 12% of the South West's carbon emissions and approximately 1% of the total UK emissions. Between 2005 and 2007, emissions reduced by 2% nationally (see Figure 2.2). In the South West, emissions went down by 2.1% and in Wiltshire they went up by 3.1% over the same period.<sup>2</sup> Wiltshire is, therefore, lagging behind the rest of the country in cutting its carbon emissions.

### The Wiltshire context: climate change impacts

Long-term climate change predictions suggest the following changes to Wiltshire's climate:

Long-term/seasonal changes	Extreme events
Increase in annual average temperature  Hotter, drier summers  Milder, wetter winters	More hot days  Fewer frosty days  More dry spells  Increase in temperature of warmest day  Increase in precipitation on wettest day

### Scope of this strategy

The strategy covers eight themes for action:

- Waste
- Transport
- Water
- Purchasing and procurement
- Biodiversity and natural environment
- Energy
- Planning
- Communicating environmental issues

For each theme, we outline where we are now, where we want to get to and our approach for getting there. We also clarify whether this is something that the council

is doing for its own services or for Wiltshire as a whole, and whether actions are entirely within the council's control, or whether it needs to play an influencing role. Where relevant, we reference related strategies or plans which contain more detailed information on each theme.

The table overleaf contains a summary of where we want to get to for each of the eight thematic areas. Details of how we will get there are set out in the relevant section of the strategy.

### **Action plans**

This is a framework document which will be linked to council strategies to ensure our objectives are embedded across the entire organisation. It will be supplemented by detailed action plans to set out more specifically how we are going to deliver our climate change ambitions. As a minimum we will produce the following four action plans during 2011 and 2012:

- Carbon Management Plan for the council's emissions
- Climate Change Adaptation Plan for Wiltshire
- Low Carbon Transition Plan for Wiltshire
- Renewable Energy Action Plan for Wiltshire

This strategy is ambitious, comprehensive and complex in the range of services affected by and responsible for its delivery. Due to the cross-cutting nature of this strategy, much of the work will be resourced and taken forward by the relevant service directorate. The strategy recognises the need to ensure that accountability, responsibility and ownership are embedded throughout the council for the successful development and delivery of the climate change strategy.

### **Accountability and monitoring**

The council's climate change board will have primary accountability for monitoring and reviewing the strategy. The board is chaired by the cabinet member for the environment. Other stakeholders will also be involved in monitoring and review through receiving an annual progress report on the action plans, namely:

- The environment select committee of the council (papers published online)
- The Wiltshire Environmental Alliance (WEA) the thematic partnership of the Wiltshire Assembly (WA), the council's local strategic partnership.

The council's climate change team will be responsible for co-ordinating delivery of the action plans, with assistance from the relevant parts of the council and other stakeholders.

### **Review**

Sections of this strategy will be reviewed as appropriate, and the entire strategy will be reviewed by 2013 at the latest.

**Summary of where we want to get to**

	Within the council's control – the council will:	Within council influence
Waste Section 3.1	<ul style="list-style-type: none"> <li>invest in alternatives to landfill</li> <li>improve its current waste management performance across the sites it operates</li> </ul>	<ul style="list-style-type: none"> <li>Of the waste the council collects, we want to recycle or compost at least 45% and landfill less than 25% by 2014.<sup>3 4</sup></li> <li>The council will support private or public investments in generating energy from waste.</li> </ul>
Transport Section 3.2	<ul style="list-style-type: none"> <li>tackle its own transport emissions</li> </ul>	<ul style="list-style-type: none"> <li>Minimise CO<sub>2</sub> emissions from transport.</li> <li>Work with schools to reduce emissions and congestion from the school run.</li> <li>Improve communication infrastructure in rural parts of Wiltshire.</li> </ul>
Water Section 3.3	<ul style="list-style-type: none"> <li>reduce the amount of water it uses by installing water meters on council properties once funding is identified</li> <li>establish a flood risk management group</li> <li>improve resilience to flooding in vulnerable areas</li> </ul>	<ul style="list-style-type: none"> <li>Reduce the amount of water used in the county.</li> </ul>
Purchasing and procurement Section 3.4	<ul style="list-style-type: none"> <li>use DEFRA's Flexible Framework Matrix<sup>5</sup> to develop improvement targets for procurement</li> <li>require sub-contractors and suppliers to adhere to key sustainable development principles</li> <li>understand the full life cycle costs of products and services</li> </ul>	<ul style="list-style-type: none"> <li>Influence other Public Service Board members to commit to sustainable procurement.</li> <li>Promote the use of local products and materials.</li> </ul>
Biodiversity and natural environment Section 3.5	<ul style="list-style-type: none"> <li>increase its understanding of the likely impacts of predicted climate change on Wiltshire's natural environment</li> <li>increase its environmental intelligence</li> <li>help to mitigate and adapt to climate change.</li> </ul>	

	Within the council's control – the council will:	Within council influence
Energy Section 3.6	<ul style="list-style-type: none"> <li>embed carbon management into the delivery of all services to reduce carbon emissions and set an example to the rest of Wiltshire and use the experience gained to support others to reduce their carbon emissions</li> </ul>	<p>A Low Carbon Transition Plan for Wiltshire will be produced, to focus on:</p> <ul style="list-style-type: none"> <li>a greater understanding of carbon footprinting in Wiltshire</li> <li>influencing policy</li> <li>engagement with community groups and individuals wishing to take action</li> <li>supporting a low carbon economy.</li> </ul>
Planning Section 3.7	<ul style="list-style-type: none"> <li>maximise the positive impacts of new developments on local jobs, shops, biodiversity and the transport network</li> </ul>	<ul style="list-style-type: none"> <li>When meeting future housing and employment needs within the county, ensure that the carbon footprint is minimised.</li> <li>Promote innovative solutions to generating green energy in Wiltshire.</li> <li>Influencing the design of new developments so that they incorporate climate change adaptation principles making communities more sustainable.</li> <li>Work with the health service to assess provision of healthcare facilities to deal with the effects of higher temperatures and the increased risk from the spread of disease.</li> </ul>
Communication Section 3.8	<ul style="list-style-type: none"> <li>show leadership by getting its own house in order.</li> </ul>	<ul style="list-style-type: none"> <li>Improve public understanding of climate change and what they can do to help.</li> <li>Engage more effectively with children and inform their choices as they grow up.</li> </ul>

## **1. Introduction**

### **1.1. Why do we need a strategy?**

Science clearly demonstrates that climate change is a reality and it is imperative to act now. Tackling the causes and managing the effects of climate change are two of the greatest challenges that we face as a society. The environmental, social and economic impacts of climate change are already being felt and they will continue to grow in severity.

This is recognised within Wiltshire; the draft Community Plan 2011-26<sup>6</sup> identifies tackling climate change as one of its top three priorities. The Community Plan<sup>6</sup> is the overarching strategic plan of the Wiltshire Assembly, setting out the long-term vision and priorities for the county to be delivered in partnership.



Wiltshire Council's Corporate Plan 2010-14<sup>3</sup> holds as its core vision 'stronger more resilient communities'. The plan makes the link between resilience, the economy and the environment by setting 'reducing our environmental impact' and 'supporting the local economy' within its priorities and outcomes. Amongst other things, the plan sets an ambitious target for reducing the council's carbon emissions and identifies the potential for growth in environmental technologies in Wiltshire.

In considering climate change, community resilience and economic issues together, we are able to understand how different groups in our community may be more vulnerable than others and therefore we are better able to target resources and action. For example, low-income households may be more vulnerable to fuel poverty; the elderly, the very young and remote rural communities may be more vulnerable to the extreme weather events that will become more frequent in the future; skills gaps in the workforce can be addressed by supporting growth in environmental technologies in Wiltshire.

In this way, the umbrella of climate change brings together issues that affect our community's resilience. These include flood management, energy security, fuel poverty, economic growth and resource efficiency, in particular energy efficiency.

Addressing energy efficiency also enables the council to make savings, helping it to be more financially resilient, which is increasingly important given current pressures on public sector budgets.

### **1.2. Our approach**

This strategy sets out how Wiltshire as a council and a community can act on climate change. Climate change requires everyone to work together to make adjustments to their lives, businesses and communities to secure a better future for all.

The scope of the draft strategy includes services and those aspects of Wiltshire life that the council can influence, for example. planning, transport, flood management and community engagement.

This strategy sets out:

- where we are now
- where we want to get to
- our general approach for how we are going to get there.

This is a framework document that will be linked to related council strategies to ensure our objectives are embedded across the entire organisation. It will be supplemented by detailed action plans to set out more specifically how we are going to deliver our climate change ambitions. These will allow detailed targets to be developed, specific actions to allow the targets to be met and also outline a suitable monitoring framework. As this is the first time that a climate change strategy has been prepared, it is expected that the strategy will be reviewed and refined as further work is carried out on the action plans.

As a minimum we will produce the following four action plans during 2011 and 2012:

- Carbon Management Plan for the council's emissions
- Climate Change Adaptation Plan for Wiltshire
- Low Carbon Transition Plan for Wiltshire
- Renewable Energy Action Plan for Wiltshire.

The timescale for developing each of these action plans differs depending on the resource already allocated to these areas of work. As a general principle, the council is concentrating on getting its own house in order first, but is carrying out some work in parallel to meet the wider carbon reduction and climate change adaptation requirements for Wiltshire.

The council's climate change board will be responsible for monitoring the implementation of the strategy and its action plans. The board comprises service directors from across the organisation and is chaired by the portfolio holder member for the environment and is accountable to cabinet.

Climate change board terms of reference:

- Champion and provide leadership on climate change work
- Set and review strategic direction and targets
- Own the scope of the climate change programme and prioritise carbon reduction projects
- Monitor progress towards objectives and targets
- Remove obstacles to successful completion of climate change projects
- Review and champion plans for financial provision of climate change projects
- Ensure there is a framework to co-ordinate climate change projects.

The board will meet on a quarterly basis or more often if deemed necessary. Minutes and action points from the meeting will be recorded and distributed to councillors.

### 1.3. What is climate change?

The earth's climate is changing predominantly because of an increase in greenhouse gases, in particular methane and carbon dioxide (CO<sub>2</sub>), caused by human activity.

The greenhouse effect is a natural occurrence trapping heat that originates from the sun, and then radiating it back to the earth. Human activity is upsetting this balance causing an 'enhanced' greenhouse effect.



It is predicted that we must stabilise concentrations of atmospheric CO<sub>2</sub> at 450 parts per million (ppm). This is predicted to limit the rise in global temperature to 2°C, above pre-industrial levels. Failure to do so will tip the planet over into catastrophic climate change events. Atmospheric concentrations in 2009 were at 387ppm compared with 315ppm 50 years earlier, rising at 2ppm each year.<sup>7</sup>

However, as greenhouse gas emissions remain in the atmosphere for many decades, current emissions and those over the past few decades have already committed us to future climate change, which cannot now be avoided. This is called unavoidable climate change. This means that the longer reductions in emissions are left unabated, the deeper the cut required in the future.

As a result of cumulative emissions, the climate is predicted to change, although the degree to which it will is uncertain. Consequently, we must make adaptations to counter some of the possible effects outlined below.

#### **Adaptation/Mitigation**

It is now widely accepted that a certain amount of climate change is inevitable even under the most optimistic carbon reduction scenarios. Wiltshire's climate change strategy must therefore incorporate two types of response:

Mitigation: those responses that seek to reduce the impact of our behaviour on the natural systems of our planet; that is, reducing greenhouse gas emissions.

Adaptation: those responses that seek to prepare us better for the challenges likely to arise from climate change.

### 1.4. What will be the effects of climate change?

The direct effects of climate change will vary depending on geographic location. Nonetheless, Wiltshire's emissions will contribute to the effects both locally, nationally and internationally. The impacts of climate change are already being felt in some areas and they are set to become more significant within 20 years, with very significant changes by the middle of the century.

Research undertaken as part of the UK Climate Impacts Programme<sup>8</sup> suggests the following impacts nationally (key impacts for Wiltshire are set out in section 2.2):

- Higher temperatures all year: more heat waves in summer; possible disappearance of snow and freezing weather from all but the highest mountains.
- More extreme weather events including hurricanes, flash floods, droughts and heat waves.
- Less rain overall, especially in the south and east of the UK in summer (where water shortages are already the biggest potential problem), although there may be more in the west and in winter (where excess rain is already a problem).
- More coastal and river flooding. Flood plains and other low-lying areas are at an increased risk.
- More frequent disruption to transport and other infrastructure.
- Increased risk of infrastructure operating beyond the conditions it was designed for, potentially causing it to fail, for example roads melting, rails buckling in extreme high temperatures and drains overwhelmed by the rate of rainfall.
- Fewer winter deaths and illnesses as a result of cold, but more heat-related summer deaths and stresses.
- Invasion of pests and diseases currently prevented by cold weather.
- Loss of wildlife, especially species near the southern end of their ranges.
- Dense urban areas likely to suffer worse extremes of summer heat because unshaded buildings, roads and paved areas absorb and retain solar heat.
- Agriculture will change as we are unlikely to be able to sustain traditional English crops, habitats and landscapes. More irrigation will be required.



These points outline the wide-ranging effects of climate change. Almost every department within the council and every local community will have to respond in some way. Some of the likely effects and resultant direct and indirect impacts on Wiltshire as a result of climate change are discussed further in section 2.2 of the document.

## **1.5. Legal and policy context**

### **1.5.1. National drivers**

Every tier of government has made a commitment to take action on climate change and it is important that this strategy is set in the context of these over-arching policies.

The Climate Change Act 2008<sup>1</sup> has taken on board the latest scientific evidence and set an ambitious target of a 34% reduction in CO<sub>2</sub> on 1990 levels by 2020, and a further reduction to 80% by 2050. These targets are the UK's contribution to the global carbon reduction needed to limit climate change to 2<sup>0</sup>C. The act also requires a UK-wide climate risk assessment to be carried out every five years; a national adaptation programme to be established and reviewed every five years; and it gives government the power

to require public authorities and statutory undertakers (including water and energy companies) to report on how they have assessed and will respond to climate change risks.

The Carbon Reduction Commitment<sup>9</sup> is effectively a tax on carbon which requires the council and other large public and private sector organisations to report on their emissions from stationary sources (ie buildings - including schools - and streetlights). From 2011/12, the council will have to pay £12 per tonne of CO2 emitted and will be assessed in a league table against other organisations in the scheme.

The UK Low Carbon Transition Plan 2009<sup>10</sup> sets an approach to delivering the climate change act targets up to 2020. The document describes a wide range of initiatives which include carbon emission cuts, the increased use of renewable energy, making homes greener and helping vulnerable people. Of particular note are a range of incentives designed to stimulate the uptake of renewable energy.

The government's 2010 Household Energy Management Strategy<sup>11</sup> sets out a plan for meeting the target of a reduction of 29% in carbon emissions from the existing household sector by 2020. The interim target is to install loft and cavity wall insulation in all households where it is practical to do so by 2015. This will not only result in carbon savings, but will assist in tackling fuel poverty and improving household finances.

The UK Renewable Energy Strategy 2009<sup>12</sup> sets out a scenario describing how the UK will meet the legally-binding target to ensure 15% of our energy comes from renewable sources by 2020. The strategy suggests that 30% of electricity should be generated from renewable sources by 2020, (up from approximately 5.5% in 2010), whilst 12% of heat and 10% of transport fuels should be generated from renewable sources.

Changes to the National Building Regulations 2000<sup>13</sup> mean that from 2016 all new-build homes must be 'zero carbon'. This will be achieved in part through energy efficiency, but will also require renewable energy generation to be considered for all developments. Carbon reductions through the building regulations from commercial development will also follow in later years.

Wiltshire will need to meet these targets and determine the most effective approach for its low carbon transition which will be detailed in our low carbon transition action plan.

The Flood and Water Management Act (2010)<sup>14</sup> introduces measures to address the threat of flooding and water scarcity, both of which are predicted to increase with climate change. In particular, it empowers the council to create local flood risk management strategies and carry out flood risk management works with the Environment Agency more easily.



It should be noted that the forthcoming Decentralisation and Localism Bill<sup>15</sup> is expected to be published during the autumn of 2010 which may introduce changes to the UK planning system. Some activities undertaken by the council may need to be reviewed in the light of this development.

#### 1.5.2. Council policy

The council has taken the following actions that are relevant to this strategy:

- signed the Nottingham Declaration<sup>16</sup> on Climate Change (Appendix. 2)
- signed the 10:10 Commitment<sup>17</sup>
- made a commitment to the Wiltshire Council Fairly Traded Products Policy.<sup>18</sup>

#### 1.6. Benefits of introducing a strategy

Climate change must be addressed now. A definite commitment and a clear approach will contribute to this global priority and help Wiltshire take forward the objective in the Community Plan<sup>6</sup>. The Stern Report 2006<sup>19</sup> presented a persuasive case for the economics of tackling climate change, highlighting that action taken now will be more cost effective than action taken later.

The council is already doing a great deal of work to combat climate change and reduce CO<sub>2</sub> emissions. This document collates this activity to provide an overview and present a way forward.

The benefits of the climate change strategy include:

- supporting stronger and resilient communities:
  - Climate change action can, for example, address fuel poverty, and assist in the protection of vulnerable groups against the extreme weather events that are predicted to be more frequent as a result of climate change.
  - Through a low carbon transition plan, for example, the council as strategic planner and facilitator of grassroots action will encourage local communities to deliver their own renewable energy alternatives, so that energy security is improved for buildings, communities and settlements.
- Reducing our environmental impact:
  - Each of the eight themes in Section 3 (waste, transport, water, purchasing and procurement, biodiversity, planning, energy and communications campaigns) identify actions for the council to reduce its impact on the environment.
- Preparing the council for climate change adaptation:
  - Through the council's responsibilities for strategic planning and service delivery, this strategy will ensure the council is well placed to respond to the predicted climate changes in Wiltshire.



- Increased resource efficiency:
  - Through implementing a carbon management plan and the low carbon transition plan, the council has the opportunity to deliver greater resource efficiency and as a result savings, which in turn will make the council more financially resilient.

### **1.7. Who will be responsible?**

Everyone has a responsibility for tackling climate change and it is important to recognise the need for the whole community to work together; everyone should understand the role they can play in addressing this challenge.

As a signatory to the Nottingham Declaration on Climate Change 2000,<sup>16</sup> the council acknowledges it has a key role to play in tackling climate change at a local level as:

- a community leader
- a service provider
- an estate manager



The actions presented in the strategy are not mutually exclusive and will require joint working across council departments, across the local strategic partnership and also regionally and nationally. Section 4 highlights the lead departments and partner organisations in taking the strategy forward, with the council playing a leadership role across all themes. Support from the government and other public sector bodies will be required in order to implement all areas of the strategy fully.

### **1.8. Resources available to deliver the strategy**

Due to the cross-cutting nature of this strategy, much of the work is already resourced and will be taken forward by the relevant lead service directorates, as identified in Section 4.

Co-ordination of the strategy and support for the climate change board is provided by the council's climate change team, supported by a small implementation budget.

A dedicated corporate carbon reduction fund of £0.5 million per year is available for the financial years 2010/11, 2011/12 and 2012/13 to invest in energy efficiency projects across council properties. An interest free loan of £0.7 million has also been received for 2010/11 from Salix finance. More detail on the budgets available for funding the council's carbon reduction programme, including additional revenue investment, and their ability to save the council money in the medium term will be set out in the council's carbon management plan.

### **1.9. How the strategy is structured**

Section 2 sets out the Wiltshire context regarding carbon emissions and climate change impacts.

Section 3 explains the strategy through the eight themes of the council's environmental policy (see Appendix 1):

- Waste
- Transport
- Water
- Purchasing and procurement
- Biodiversity and natural environment
- Energy
- Planning
- Communicating environmental issues

For each theme, there is an outline of where we are now, where we want to get to and the approach for getting there. We also clarify whether this is something that the council is doing for its own services or for Wiltshire as a whole, and whether actions are entirely within the council's control or whether it needs to play an influencing role. Where relevant, we reference related strategies or plans which contain more detailed information on each theme.

Finally, Section 4 sets out how we will deliver, monitor and review the council's climate change strategy.

## 2. The Wiltshire context

### 2.1. Wiltshire's carbon footprint

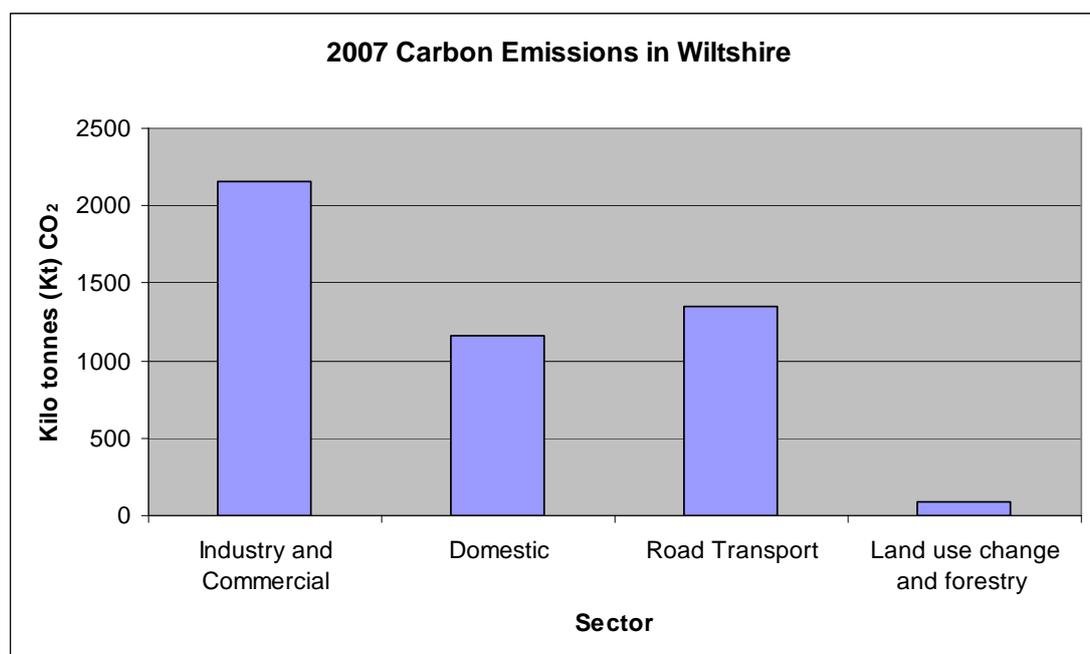
Wiltshire's CO<sub>2</sub> emissions are directly related to the amount of energy consumed by heating, lighting, transport and manufacture. Each fuel type, such as natural gas, coal or oil has a different carbon intensity meaning that it generates a different amount of CO<sub>2</sub> when burned. In 2007 the county's total carbon footprint was 4.76 million tonnes which is about 12% of the South West's carbon emissions and approximately 1% of the total UK emissions.<sup>2</sup>



Industrial and commercial CO<sub>2</sub> emissions accounted for 45% of the Wiltshire total, domestic housing 24%, transport 28% and 2% from land use, land use change and forestry, as illustrated in Figure 2.1.<sup>2</sup>

The term 'land use, land use change and forestry' includes estimates of the carbon impact of forestation, reforestation and deforestation, but does not include cropland management, grazing land management or re-vegetation. This sector differs from other sectors in the UK Greenhouse Gas Inventory National System<sup>20</sup> in that it contains both sources and sinks of greenhouse gases. The sources, or emissions to the atmosphere, are given as positive values; the sinks, or removals from the atmosphere, are given as negative values. Council emissions represent 1.2% of Wiltshire emissions (see section 3.6).<sup>2</sup>

**Figure 2.1: Wiltshire carbon emissions by source<sup>2</sup>**



Local authorities are required to report on per capita emissions for the local authority area (National Indicator 186<sup>21</sup>). This data is calculated annually by

DEFRA and is a subset of the full carbon emissions quoted above, adjusted to exclude elements that the local authority has no control over. Most notable of these is the exclusion of diesel railways, motorway emissions and any operations that fall within the European Emissions Trading Scheme (EU ETS)<sup>22</sup>. Under the EU ETS<sup>22</sup>, large CO<sub>2</sub> emitters must monitor and annually report their emissions. Allowances are issued to cover the emissions at the start of each three year trading period with any surplus or shortfall being traded on the open market. The result of these EU ETS<sup>22</sup> exclusions is that Wiltshire's carbon footprint and per capita emissions appear lower than they actually are when only NI186 data<sup>23</sup> is used. The differences between the emissions captured under NI186<sup>23</sup> and the full data set<sup>2</sup> is illustrated in Figure 2.2. This shows that Wiltshire has a much higher proportion of carbon emissions that are outside the control of the local authority than the regional or national average.

For the purposes of this strategy, we have used the 'full data set'<sup>2</sup> including all CO<sub>2</sub> emissions rather than NI186 data<sup>23</sup> in order to give a complete picture of the current situation.

Emissions of CO<sub>2</sub> (under NI 186) between 2005 and 2007 reduced by 2% nationally (see Figure 2.2). In the South West, emissions went down by 2.1% and in Wiltshire they went up by 3.1% over the same period. Wiltshire is, therefore, lagging behind the rest of the country in cutting its carbon emissions. It is worth noting that a reduction in emission may not necessarily be the result of concerted action to reduce CO<sub>2</sub> emissions, but may come from other external factors. An obvious example is reduced economic output as a result of the recession.



**Figure 2.2: per capita emissions for Wiltshire compared with the regional and national averages 2005/07<sup>2 23</sup>**

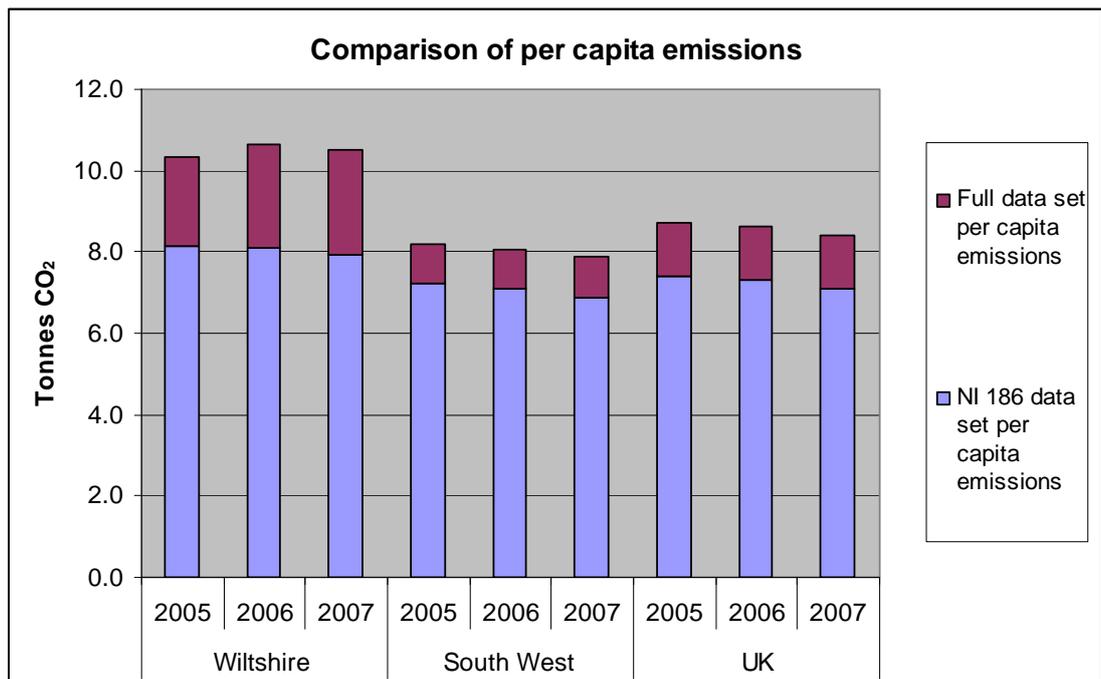


Table 1 shows the comparison between the NI186 and full data set split by former local authority districts. This shows that under the full data set, the per capita emissions of the former North Wiltshire and West Wiltshire District Council areas are much higher than the other districts. It is speculated that this discrepancy is principally due to the inclusion of the M4 in the north of the county and the cement works at Westbury in the west.

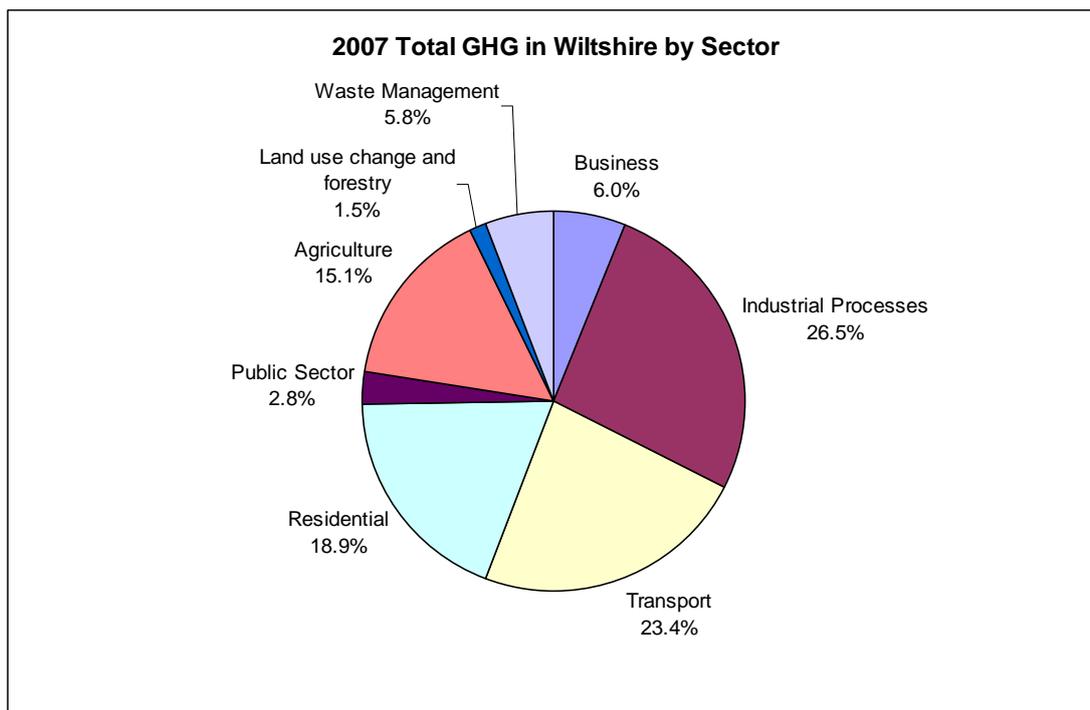
Local Authority Area	Year	Full data set per capita emissions (t)	NI 186 data set per capita emissions (t)
Former Kennet	2005	8.69	7.72
	2006	8.67	7.64
	2007	8.61	7.60
Former North Wiltshire	2005	10.47	7.49
	2006	10.26	7.53
	2007	10.01	7.30
Former Salisbury	2005	8.34	8.16
	2006	8.44	8.18
	2007	8.14	7.86
Former West Wiltshire	2005	13.00	9.14
	2006	14.28	8.92
	2007	14.43	8.83
Wiltshire total	2005	10.32	8.16
	2006	10.63	8.10
	2007	10.51	7.92

**Table 1: Comparison of per capita emissions under different data sets and former districts** <sup>2 23</sup>

CO<sub>2</sub> is just one of a number of greenhouse gases that contribute to the greenhouse effect. Other gases, such as methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) are more powerful greenhouse gases. The principle sources of these gases are not the burning of fossil fuels, but landfill in the case of methane and agricultural fertilisers in the case of nitrous oxide. Experimental data, compiled by the Centre for Energy and Climate Change at the University of Exeter<sup>24</sup>, has combined data for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O at the local authority level. Combined data, expressed as CO<sub>2</sub> equivalents (CO<sub>2</sub>eq) highlight a very different picture of Wiltshire's emissions compared with CO<sub>2</sub> alone. The data also include a breakdown of emissions by sector rather than the standard categories of commercial, transport and domestic. The experimental data set includes emissions from the public sector, agriculture, businesses, larger industrial processes (those under the ETS<sup>22</sup>), waste, domestic, transport and land use change. These data are shown in Figure 2.3.

These experimental data are a useful starting point. However, a better understanding of Wiltshire's emissions and baseline is required in order to target efforts to tackle greenhouse gas emissions in Wiltshire, particularly those from agriculture. It is also worth noting that 1990 is the baseline year for meeting the UK Climate Change Act 2008<sup>1</sup> targets. However, government data on county carbon emissions are currently available only from 2005.

**Figure 2.3: total Greenhouse gas (GHG) emissions in Wiltshire by sector (CO<sub>2</sub> equivalents)<sup>24</sup>**



## 2.2. Climate change impacts in Wiltshire

The UK Climate Impact Programme (UKCP)<sup>8</sup> provides climate information designed to help those needing to plan how they will adapt to a changing climate. UKCP is a government programme providing information on past and projected climate. UKCP 09 is the fifth in a series of projections by UK Climate Impacts Programme. It can provide:



- national and regional data
- average temperature and precipitation (rain, snow, hail)
  - by season and month, over a variety of 30-year periods
  - for low, medium and high emissions scenarios.

Based on projections for a 30 year period between 2040 and 2069, under a medium emissions scenario the following changes are predicted for Wiltshire's climate:

Long-term/seasonal changes	Extreme events
Increase in annual average temperature Hotter, drier summers Milder, wetter winters	More hot days Fewer frost days More dry spells Increase in temperature of warmest day Increase in precipitation on wettest day

**Table 2: UKCP09 Predicted changes in Wiltshire's climate**

Our Local Climate Impacts Profile (LCIP) provides a snapshot of the impact on the council of some of the most significant climate/weather events in the past decade in Wiltshire. The profile identifies the most frequent weather events and those services most affected by recent weather events directly and indirectly. Frequent impacts of these events have been infrastructure disruption which had a direct impact on frontline service delivery, as well as indirectly impacting on all services through access to the workplace.

Specific examples from our LCIP include:

- During high temperatures and heat waves<sup>25</sup> in August 2003 and again in July 2006, heat placed vulnerable groups at significant risk. NHS statistics indicate an increase in seasonal deaths as a result of high temperatures during heat waves. Evidence also shows that heat wave events lead to an increase in noise and air pollution, as well as a possible increase in social disturbance, including opportunistic crime<sup>26</sup>.
- Excess rainfall and flooding in July 2007 resulted in significant highway and infrastructure disruption in all areas across the county.



The direct impact of climate change locally has been mentioned, but every direct impact can potentially multiply into a series of indirect impacts. Examples of both direct and indirect impacts are detailed in Table 2.1. Any identified impacts will have wider implications for Wiltshire and need to be considered in any preparation and adaptation strategy.

	Direct impact	Indirect impact
Hotter, drier summers	Increase in tourism	Increased traffic congestion
Milder, wetter winters	Decrease in heating requirements	Decrease in fuel poverty
Excess rainfall and flooding	Low-lying areas flood	Decrease in the number of potential development sites
Heat waves	People more vulnerable to heat stress	Short term strain on the NHS
Droughts	Reduction in crop yields	Reduction in revenue and employment. Increase in food price
Snow and ice	Disruption to highways	Disruption to stock deliveries
High winds	Damage to buildings	School or public building closure

**Table 2.1: Potential direct and indirect impacts of climate projections**

There are also wider implications for Wiltshire:

- From a global perspective, the most vulnerable regions are in the developing world, which has the lowest capacity to adapt. Impacts in these regions are likely to have spill-over effects for Europe, for example through the inter-linkages of economic systems and migration.
- From a UK and regional perspective, effects on food supply chains, especially international, possible market/employment opportunities, northward migration of fish stocks, and changing seasons, impacting on species, habitats and biodiversity.

How will we adapt to the unavoidable effects of climate change?

The council is currently developing an action plan to respond to the unavoidable consequences of climate change. This action plan will set out detailed adaptation measures that the council will take. Adaptation issues have also been flagged up in the relevant section of this strategy. The advantages for the council in completing a comprehensive climate change adaptation plan include:

- allowing the council to prioritise decisions that have long-term benefits, for example investment in new transport, water, energy and communications infrastructure that will have a long life span
- identifying any benefits to the council from climate change, for example milder winters could reduce gritting costs
- taking action early where the benefits clearly outweigh the costs, for example, designing new buildings or refurbishing old ones to make them more resilient to climate change is likely to be more cost-effective than making changes later
- ensuring that service delivery has as little adverse impact on climate change as possible so that any negative effect on vulnerable people in particular is reduced.



The council expects to complete a comprehensive risk assessment of its vulnerabilities to climate change by November 2010 and to have drafted an adaptation action plan for council services by the end of March 2011.

The council is engaging with other public service organisations to ensure that adaptation approaches and responses are co-ordinated across the public sector.

### 3. Our strategy

#### 3.1. Waste

To combat climate change it is essential that the amount of waste we produce decreases and that sustainable disposal and transport methods are used to minimise environmental impacts.

Land is currently being lost through landfill provision and so we need to mitigate this by reducing, reusing, recycling and recovering more waste. Also, as landfill sites are still a main source for the potent greenhouse gas, methane, alternative disposal methods need to be found. Currently methane is captured at large sites in Westbury, Calne and Swindon to generate renewable energy.



#### Where we are now

Most of the waste collected by the council is household waste (216,542 tonnes in 2009/10). Although the council does collect waste from a large number of commercial premises (15,000 tonnes in 2009/10), private contractors service the rest and so an accurate total picture of waste production in the county is not currently available. Estimates suggest that it could be as much as 600,000 tonnes. Table 3.1 below sets out what happens to the waste that the council collects.

A key objective for the authority is to reduce the amount of waste sent to landfill and maximise recycling rates. Alongside a 7.4% reduction in the amount of waste collected since its peak in 2004/05, there has been a drive to increase recycling services and establish alternatives to disposing of waste in landfills.

	2005/06	2009/10
Landfill	66%	47%
Energy from waste	0%	14%
Recycling and composting	34%	39%*

**Table 3.1: Wiltshire Council's waste performance**  
(total municipal solid waste)

\* = the proportion of all municipal solid waste recycled was 39%. The proportion of household waste recycled (NI 192<sup>27</sup>) was 40.5%

National Indicator 191<sup>27</sup> measures the level of residual waste produced per household and can be used to compare local authorities throughout the country. The latest comparative figures refer to 2009/10 and Wiltshire's figure was 647.6kg per household, which is almost exactly the median level for comparable authorities. The Wiltshire figure has been decreasing in recent years; a figure of 663.6kg was recorded in 2008/09.

Wiltshire's Municipal Waste Strategy 2006<sup>28</sup> sets out our current performance and future projections. Wiltshire has a largely effective kerbside-recycling scheme in place which it plans to expand further.

The council funds an education programme which is delivered by the Wiltshire Wildlife Trust. This joint venture works to a business plan covering key priorities relating to waste prevention, the promotion of waste facilities, schools education, research and evidence-based action.

The council is taking the following specific steps to reduce waste to landfill:

- The Lakeside energy from waste incineration contract, which commenced in June 2009, diverts 50,000 tonnes per annum from landfill.
- The proposed Mechanical Biological Treatment (MBT) plant (contract under negotiation) is forecast to treat up to 60,000 tonnes of non recycled waste a year and produce a refuse-derived fuel (RDF).
- Changes to waste and recycling collections to date have increased recycling to 40% and proposed further changes are forecast to increase recycling to about 50%, thereby reducing waste to landfill.



The effects of these measures to date have been to reduce the proportion of municipal solid waste sent to landfill from about 80% in 2002/03 to 47% in 2009/10. The further changes outlined above are forecast to reduce landfill to less than 25% by 2014. This is the target in the current Corporate Plan<sup>3</sup>.

The adopted Wiltshire and Swindon Waste Core Strategy (2009)<sup>29</sup> has a flexible policy framework for the long-term management of all types of waste. The document sets out clear guidance in terms of where new facilities should be promoted and strategy to promote more sustainable methods for dealing with waste.

Wiltshire Council generates waste at the majority of the 600 sites it operates when delivering services. The council is a newly formed organisation and a number of different waste systems that were operated by the previous district councils and county council are still in place, including collections made by the local authority as well as external contractors. The resulting disparity in the services provided from site to site means that some have more recycling opportunities than others, and some have only a waste collection service with no recycling at all.

### **Where we want to get to and how**

Within the council's control:

The council will invest in alternatives to landfill (see above).

The council will improve its current waste management performance across the sites it operates by:

- improving the understanding of waste management issues with officers in departments or at individual sites who hold commercial waste collection budgets
- developing a uniform waste collection service that enables increased levels of recycling, and investigating opportunities for external organisations to provide a consistent waste and recycling collection service for the commercial waste that the council produces
- using the green champions network to promote behavioural change amongst staff with the aim of reducing the quantity of waste produced
- working to reduce waste associated with products that the council buys through sustainable procurement.

Within council influence:

Of the waste the council collects, we want to recycle or compost at least 45% and landfill less than 25% by 2014<sup>3</sup> <sup>4</sup>. This will be achieved by:

- new and improving recycling facilities throughout the county
- promoting the waste hierarchy of reduce, reuse and recycle in homes, schools and businesses
- working with the Chambers of Commerce to increase levels of commercial recycling

The council will support private or public investments in generating energy from waste, in particular through anaerobic digestion, by providing positive planning responses and working with neighbouring communities to highlight the opportunities it brings (see section 3.7).



### 3.2. Transport

It is estimated that 40% of an average UK citizen's contribution to CO<sub>2</sub> comes from transport. Almost three quarters of this can be attributed to car use, with almost a quarter coming from flying. Consequently, changes that will do most to reduce individuals' transport emissions include cycling, walking, using public transport, buying cars that emit less carbon, and driving more efficiently, for example by braking more gently: 'eco-driving'.

Although Wiltshire is predominantly a rural county, there are a number of large towns including Chippenham, Trowbridge and Salisbury. Western Wiltshire has become increasingly urbanised and has strong links with Bath and Frome.

As a rural county, one of the key ways to reduce reliance on the car is through ensuring that new development is located in the right place. This may mean a town centre location, or a site further away, but with good public transport provision and cycling and walking links. The integration of sustainable transport modes in these will help to reduce carbon emissions and at the same time makes places more accessible for those without cars.

The provision of good broadband connections is another aspect of low carbon communication. Reliable broadband enables more people to work from home and benefits smaller businesses in rural locations, reducing the overall need to travel.

Reducing emissions associated with transport offers many benefits to residents of Wiltshire, other than just reduced carbon emissions. These include better air quality, improved health arising from residents taking more physical exercise and improved road safety.

### **Where we are now**

Transport is a key element in the fight against climate change and the council has already taken action as both a provider and facilitator. Through its role as the planning authority, the council is seeking to ensure that new developments are located in the right place to improve accessibility and reduce the need to travel (see section 3.7).

There are many deterrants to sustainable transport which can be actual, such as a lack of comprehensive services and facilities, as well as perceived, which could include views such as public transport being slow and unreliable or cycling being dangerous..The council is already undertaking a wide range of road safety initiatives and network enhancements to encourage people to walk or cycle. Additionally, the council spends £5.4 million subsidising bus routes in Wiltshire and also provides free bus passes for the over 60s.

To date 86% of schools have prepared and implemented travel plans, and all children are encouraged to travel to school using safe, sustainable methods<sup>30</sup>.

The Local Transport Plan<sup>31</sup> is a document which sets out how each local authority will deliver transport in its area. Constrained finances will be a key barrier to delivering our local transport plan in future as the coalition government is likely to reduce funding for transport. To mitigate the financial position, other sources of funding need to be sought, for example from developer contributions, or bidding for alternative sources of external funding.

Internally the council has made a good start and is changing travel behaviour by reviewing its own travel policies. It has already developed an ongoing travel awareness campaign to promote walking, cycling, through interest free loans to purchase a bicycle, public transport season ticket loans and car sharing.

Improving broadband connectivity is one way of reducing the need to travel. Following the Digital Britain report (July 2009)<sup>32</sup>, intelligence, consultation and discussion with government and industry on public and private investments in telecommunications infrastructure indicates that a strategic business case should be made to ensure that all communities and businesses have good access to goods, services and digital content on-line. To this end, a mapping project to identify the areas most in need of investment and a high-level Digital Inclusion Group (DIG) has started.



DIG has a remit to oversee all aspects of broadband infrastructure investment, digital inclusion through e-learning and getting on-line, and on-line services from the council and public sector.

A connectivity project undertaken by this group is required to ensure the county has next generation access into all but the very most isolated premises. To date, a route-map for investment has been set out in draft form.

### **Where we want to get to and how**

Within the council's control:

The council will tackle its own transport emissions by:

- trialling the use of alternative fuels for council vehicles
- reducing business mileage through a number of measures, including providing more opportunities for home working
- improving cycle storage and installing changing facilities in all main council buildings to encourage running and cycling to work
- identifying and securing sources of funding to implement sustainable procurement projects.



Within council influence:

Minimise CO<sub>2</sub> emissions from transport by:

- looking at ways to promote car clubs and alternative fuelled vehicles such as electric cars and hybrids
- promoting 'smarter driving' in partnership with the Energy Saving Trust to save fuel
- promoting developments in highly accessible locations, some car-free, and opportunities to reduce car use such as car-pooling
- promoting the delivery of integrated public transport, for example through the development of public transport interchanges in town centres
- increasing the amount of secure cycle storage at major shopping areas and transport hubs.

Work with schools to reduce emissions and congestion from the school run by:

- introducing and promoting more "walking buses" for school children
- working with schools to ensure that every one has a SMART travel plan<sup>30</sup>
- considering whether to review criteria for home to school transport.

Improve communication infrastructure in rural parts of Wiltshire by:

- working with the Digital Inclusion Group (DIG) to ensure maximum environmental and sustainable benefits are realised from communication infrastructure
- highlighting the environmental and sustainability benefits of extending the broadband network to all communities and businesses in the strategic business case for investment within the county to encourage the government and industry bodies to improve provision.

### 3.3. Water

Scientific evidence shows that global warming is likely to intensify the water cycle, reinforcing existing patterns of water scarcity and abundance. In the South West, we are set for wetter winters and drier summers, which will have significant implications for our water infrastructure.

Historically the water industry is energy intensive with an associated carbon footprint. To address this, water companies in Wiltshire such as Wessex Water need to decarbonise operations including construction impacts and increase investment in more sustainable and renewable energy sources.

#### Where we are now

The council understands that water is a precious resource that must be managed sustainably. As such, we have undertaken detailed work to identify opportunities to manage water sustainably across the county. We have effective emergency planning procedures in place to ensure services continue if there are floods and we have started to quantify the consumption of all council services to prioritise savings from the most water intensive services.

A requirement of the Flood and Water Management Act 2010<sup>14</sup> is that Wiltshire Council prepares a Preliminary Flood Risk Assessment identifying areas at risk from surface and groundwater flooding. As an adjunct to this, the council will also be preparing flood hazard maps to highlight areas of risk from flooding and direct involvement in alleviation schemes. The council has already prepared a county-wide Strategic Flood Risk Assessment<sup>33</sup> and this is being used as a tool to inform strategic and local planning decisions when allocating land for development or determining applications. Further detailed work will need to be undertaken to support decision making and used to develop sustainable mitigation and water management schemes.



Most of Wiltshire is served by Wessex Water for water supply and sewerage. The north east of the county (Marlborough, Wootton Bassett and Cricklade areas) is served by Thames

Water for both water supply and sewerage while the far north western tip of the county is supplied by Bristol water. The south east of the county is served by either Southern Water (water and sewerage) or Bournemouth and West Hampshire water (water supply only). A small water company called Cholderton and District Water supplies water to the area east of Amesbury. All of these companies have Water Resources Management Plans in place which contain similar objectives relating to water efficiency, network improvements and a commitment to reduce carbon emissions.

As Wessex Water covers the vast majority of the county for both water supply and sewerage, this strategy refers to their Water Resources Management Plan<sup>34</sup> specifically. Using comparisons between supply and demand forecasts, Wessex Water has identified that there is the potential for deficits to

occur in Wiltshire as a result of decreases in abstractions (to protect sensitive watercourses such as the Hampshire Avon) and population growth. The management plan identifies several options that can overcome this problem, including leakage reduction, water efficiency and new infrastructure. Development of an integrated water supply grid is now in the initial stages of development (requiring work over the next 10 years) and will both affect and benefit Wiltshire and is expected to provide part of a long-term solution to the challenge of climate change, in combination with other measures such as metering and leakage reduction.

However, the impacts of climate change will extend beyond water supply and are likely to significantly affect waste water treatment infrastructure as well. Wessex Water expects to see more frequent damage to pipework as soils dry out and shrink. The sewerage network is also likely to come under greater pressure from more intense rainfall which could lead to sewer flooding and spills from combined sewer overflows. In addition, more prolonged periods of dry weather could mean that the treated effluent from sewage treatment works that is returned to rivers constitutes a higher proportion of the flow in these rivers and streams, whilst hotter weather could lead to an increase in complaints from residents concerning odour from our sewage works. To start meeting such challenges, Wessex Water has already changed the specifications of some new sewers to a larger size and invested in more storm tanks on sewage treatment works, providing capacity for more frequent storms.

Wessex Water developed a Carbon Management Strategy in 2010<sup>35</sup>. It is based on the hierarchy of emissions avoidance, energy efficiency and the implementation of renewable technology. They have taken the following concerted action:

- focused increasingly on energy efficiency particularly where aeration and disinfection are part of the sewage treatment
- increased renewable energy generation from the biogas produced by sludge digesters and securing planning permission for four large wind turbines at an appropriate site
- generated 15% of total electricity use – of which 5GWh was exported.
- developed tools for calculating the carbon footprint of capital investment, including construction impacts as well as the operational use of assets
- made a commitment to become carbon neutral by 2020.

### **Where we want to get to and how**

Within the council's control:

Reduce the amount of water the council uses by installing water meters on council properties once funding is identified.

Establish a flood risk management group that:

- agrees, communicates and monitors the Wiltshire flood and drainage strategy
- oversees readiness for a flood emergency response
- identifies flood risks, proposing how they can be mitigated.

The flood risk management group will work to improve resilience to flooding in vulnerable areas by:

- ensuring new developments address flood mitigation appropriately, by including sustainable urban drainage systems<sup>1</sup>
- linking information received from parish and town councils and highways engineer records to map flood affected areas
- mapping water usage and drainage so as to understand better how to deal with flood and drought.

Within council influence:

Reduce the amount of water used in the county by:

- supporting water companies in their promotion of water saving equipment
- raising environmental standards, for instance by requiring water saving equipment in new building developments and renovation work
- encouraging the installation of water meters in homes.

Improve resilience to flooding in vulnerable areas by:

- working in partnership with the Environment Agency to enhance the capability of the flood warden network and flood working groups
- promoting self help within the community
- using porous hard surfaces to aid natural drainage and alleviate urban flash flooding.



Through positive planning responses, support the water companies in developing:

- an integrated water supply grid
- an improved sewage treatment infrastructure capable of meeting the demands of future development and population whilst safeguarding the environment
- carbon neutrality by 2020 where agreed.

### **3.4. Purchasing and procurement**

#### **Where we are now**

The council has recently adopted a Fairly Traded Products Policy<sup>18</sup> that aims to ensure suppliers receive a fair price for their goods and that the local environment is managed in a sustainable way.

To ensure sustainability issues are considered during the procurement of goods and services, a project team has been established to provide service managers with technical advice.

---

<sup>1</sup> Sustainable Drainage Systems (SUDS) are a sequence of control structures designed to drain surface water in a more sustainable fashion than conventional techniques. SUDS mimic natural drainage and reduce the amount and rate of water flow by infiltration into the ground with permeable paving; holding water in storage areas such as ponds and rainwater harvesting; and slowing the flow of water with green roofs and swales.

The council requires companies which successfully win tenders with the authority for goods or services that could impact on the environment to operate an environmental management system. We also require contractors to report annually on their CO<sub>2</sub> emissions from delivering services on our behalf.

Financial efficiencies obtained through procurement will be a key way for the authority to reduce expenditure in the coming years. Work to achieve these savings should include sustainable procurement measures, looking at the whole life cycle costs.

### **Where we want to get to and how**

Within the council's control:

The council's sustainable procurement project team will use DEFRA's Flexible Framework Matrix<sup>5</sup> to develop improvement targets.

The council wants its contractors and suppliers to take sustainability seriously and will do this by:

- requiring sub-contractors and suppliers to adhere to key sustainable development principles
- understanding the full life cycle costs of products and services
- integrating options within tender documents to conclude whether there is a business case for procuring services or products with higher environmental standards

Within council influence:

Influence other public service board councillors to commit to sustainable procurement.

Promote the use of local products and materials through:

- a range of activity to support Wiltshire's food and drink sector, as set out in the council's Economic Development Strategy (EDS)
- exploring with the Local Economic Partnerships (LEPs) ways in which the capabilities of local businesses can be promoted to encourage local purchasing
- working with parish and town councils to encourage the use of allotments for food production
- working with the Ministry of Defence (MOD) on developing sustainable food chains for the public sector
- promoting the Buy Wiltshire Scheme<sup>36</sup> that aims to increase the opportunity for local companies to tender for council contracts.



### 3.5. Biodiversity and natural environment

Wiltshire's natural environment is diverse and uniquely special with sites and species of European, national and regional importance that are found throughout the county, all of which are susceptible to the impacts of climate change

The Lawton Review<sup>37</sup> states: "Having carefully examined the evidence, we have concluded that England's collection of wildlife sites, diverse as it is, does not comprise a coherent and resilient ecological network even today, let alone one that is capable of coping with the challenge of climate change and other pressures." Furthermore, the review states:

"Climate change, particularly in the longer term, may have the biggest impact of all. We are already seeing a number of changes as a result of climate: shifts in species ranges; changes in the timing of seasonal events (with emerging mismatches in the timing of events for currently inter-dependent species); and habitat preferences altering. Not all changes will be harmful, for example, many of England's southern species may be able to increase their range by expanding northwards. In the longer term, however, species may struggle to survive, and other impacts such as sea-level rise, an increase in extreme weather events, and other changes to ecosystem processes (e.g. caused by summer droughts) are likely to have further profound and largely negative effects. Establishing a coherent and resilient ecological network will help wildlife to cope with these changes. It will also improve the ability of our natural environment to provide a range of high quality ecosystem services today and in the future. It can help us both mitigate and adapt to climate change by, for example, storing carbon or improving the security of water supplies."

An example of the threats posed by hotter drier summers in Wiltshire will be serious impacts on key watercourses and waterways such as the River Avon, and the canal network which currently provide significant economic and recreational benefits for Wiltshire communities.

There is a vital need to make Wiltshire's natural environment more resilient in order to combat the threats that climate change poses. Habitat loss in Wiltshire is impacting negatively on biodiversity and the natural environment's ability to survive. What is needed is action at a landscape scale, directing conservation and enhancement activity and achieving tangible benefits across large areas, which the Lawton Review<sup>37</sup> refers to as 'Ecological Restoration Zones'.



The UK's natural environment and its networks of accessible green spaces and corridors (green infrastructure) are also vital in the fight against climate change. Vegetation, particularly trees, will become increasingly important as climate change progresses, converting CO<sub>2</sub> to oxygen and having the potential to replace some of our fossil fuel consumption as a source of energy. Land management practices will also have their part to play. For instance, considerable carbon is stored / locked up in permanent pasture.

Encouraging farming systems that protect Wiltshire's ancient pasture is key to reducing CO<sub>2</sub> emissions.

Species-rich green infrastructure can provide a range of social, economic and environmental benefits forming an integral part of an effective climate change strategy. From building biodiversity-rich habitats to providing accessible outdoor areas for community use, these can help climate change adaptation and mitigation by providing designated areas for species as well as providing opportunities for people to learn about climate change and how changing behaviours can reduce impacts.

Well planned green infrastructure can also provide a number of specific climate change mitigation and adaptation benefits:

- Reducing carbon emissions by encouraging more people to travel by foot or bicycle more frequently by providing footpaths and cycle ways
- Reducing 'heat island effect' (when temperatures are higher in cities than surrounding rural areas) and heat stress during the summer months by providing direct shade and cooling, particularly from trees
- Alleviating flood surge events by providing sustainable drainage
- Providing additional habitats for key species
- Providing ecological connectivity, enabling greater species movement.

The provision of a network of high quality biodiversity-rich green spaces and corridors in and around urban areas, an increase in the number of street trees, the expansion of woodland, together with habitat and biodiversity enhancement on a landscape scale, will significantly contribute to efforts to mitigate and adapt to climate change in Wiltshire.

### **Where we are now**

The Wiltshire Green Infrastructure Strategy<sup>38</sup>, currently in preparation, and an important component of Wiltshire's emerging Development Plan<sup>39</sup> (DP) (see section 3.7), will provide a long-term vision and strategic framework for the delivery of a planned, multifunctional network of green infrastructure across Wiltshire.



The Wiltshire Biodiversity Action Plan 2008<sup>40</sup> (BAP) sets out a strategic framework for the maintenance and enhancement of Wiltshire's key habitats and species.

Our understanding of the ecology of Wiltshire is limited, due to a fragmented biological record and an incomplete coverage of habitat survey (inadequate environmental intelligence).

The Wiltshire Landscape Character Assessments<sup>41</sup> provide a useful description of Wiltshire's landscape and an indication of its sensitivities and vulnerabilities to change, but lack a strategic vision for landscape enhancement.

We need to improve our understanding of the specific effects that changing climatic conditions and more extreme weather events will have on Wiltshire's

natural environment and the pressures that habitats, species and landscape character will face.

### **Where we want to get to and how**

Within the council's control:

Increase our understanding of the likely impacts of predicted climate change on Wiltshire's natural environment by undertaking work on:

- biodiversity vulnerability
- landscape vulnerability.

Increase our environmental intelligence by:

- completing green infrastructure asset and opportunities auditing and mapping as part of the preparation of the Green Infrastructure Strategy<sup>38</sup>;
- establishing baseline environmental data and regular reporting.

Help to mitigate and adapt to climate change through the preparation and implementation of a:

- Wiltshire Green Infrastructure Strategy<sup>38</sup>
- biodiversity adaptation strategy (to cover parts not addressed through Green Infrastructure Strategy<sup>38</sup>)
- Wiltshire-wide landscape strategy
- invasive species strategy.



Raise awareness of the links between climate change and the natural environment through provision of information in Wiltshire Council publications and on the council's web site.

Maximise the gains for biodiversity and landscape through the planning system by:

- assessing the impact of proposed development schemes on the natural environment, particularly in relation to climate change
- seeking biodiversity and landscape enhancement through sustainable development, mitigation and compensation
- formulating best practice natural environment and green infrastructure policies for the council's Development Plan<sup>39</sup>
- developing the understanding of those making planning decisions.

Within council influence:

Raise awareness of the links between climate change and the natural environment through:

- input to primary and tertiary level education in Wiltshire
- working with Wiltshire community partnerships.

Review the Biodiversity Action Plan<sup>40</sup> for Wiltshire to reflect the new landscape scale approach of biodiversity delivery areas.

Increase our environmental intelligence by supporting:

- the Wiltshire and Swindon Biological Records Centre

- the Wiltshire Wildlife sites project to undertake a programme of habitat and species survey and monitoring.

### 3.6. Energy

In 2009 approximately three quarters of the UK's energy needs were met from fossil fuels (coal, oil, gas) which emit high levels of CO<sub>2</sub>, a fifth from medium CO<sub>2</sub> emitting nuclear power, and only 3% from low and zero carbon sustainable sources<sup>42</sup>. This is unsustainable, not only due to high CO<sub>2</sub> emissions, but also because fossil fuels are being depleted and therefore increasing in price.

Since 2004, the UK's domestic energy production has been unable to keep up with demand and it continues to be a net importer of fuel. The security of the UK's energy supply is therefore vulnerable to geopolitical issues beyond its borders. Further, if we continue to use energy produced by fossil fuels at the present rate, we will reach a point at which our demand for oil will outstrip supply. Once this point is reached the price of oil will escalate and become increasingly volatile. As such we must find new ways at a local level to reduce our consumption and look for alternative sources to prevent a future energy crisis and to reduce carbon emissions.

#### Where we are now: Wiltshire

In 2007, Wiltshire used approximately 14,419 Gigawatt hours<sup>2</sup> (GWh) of energy. This represents approximately 11% of the South West's total energy consumption and 0.6% of the UK's energy consumption<sup>43</sup>.



Around 37% of the energy in Wiltshire was consumed by the industrial and commercial sector, while the domestic sector consumed 28% and the transport sector 35% (see figure 3.6)<sup>43</sup>.

The council's Private Sector House Condition Survey (2009)<sup>44</sup> showed that mains gas was present in just 68% of privately owned dwellings compared with 83% nationally. If we assume that these figures are representative of all housing, it means that Wiltshire has almost twice the number of dwellings without access to mains gas (32%) compared with the national average (17%). This is significant because emissions from oil are much higher than the equivalent emissions from gas.

Various actions have been undertaken by the council to improve domestic energy efficiency across the county including:

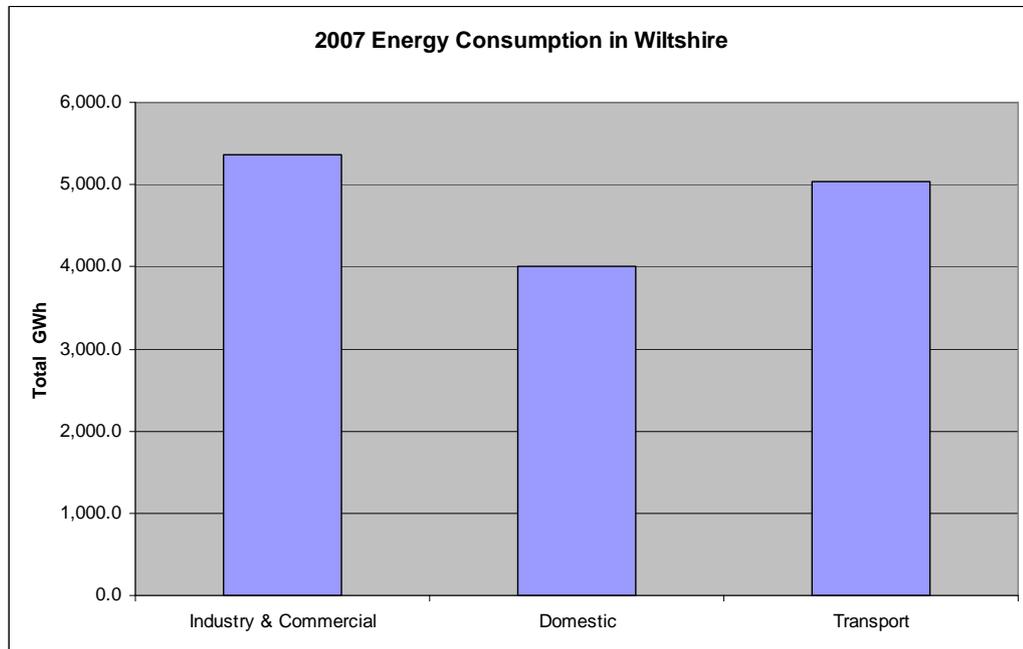
- promoting loft and wall insulation schemes for private rented and owner occupied houses, flats and mobile homes
- piloting the retrofit of energy efficiency measures including renewable technologies to 'hard to treat' homes
- the provision of energy cost monitors in the county libraries.

---

<sup>2</sup> One Gigawatt hour is equivalent to one million Kilowatt hours (kWh).

The council subsidises public transport routes, as well as providing cycling and walking facilities to reduce individual car use (see section 3.2).

**Figure 3.6: 2007 energy consumption by sector in Wiltshire<sup>43</sup>.**



Wiltshire has one of the lowest installed renewable energy capacities in the South West Region. In 2010, Wiltshire had just 10.4 MW of installed renewable electricity and 2.3 MW of installed renewable heat<sup>45</sup>. Most of the renewable electricity potential comes from the utilisation of landfill gas while most of the heat comes from biomass. It is difficult to assess how much energy these renewable sources generate as a proportion of Wiltshire's total consumption as this depends on the individual performance of the technology at any given time. For example, in the case of solar or wind turbines, this variability depends on how sunny or windy it is. If it is assumed that the installed renewable systems in Wiltshire operate at 100% capacity for half of the year they would generate just 0.3% of Wiltshire's energy needs (using 2007 data)<sup>45</sup>. This is compared to the national target of 15% of energy to come from renewable sources by 2020 as described in the Renewable Energy Strategy: see section 1.5.<sup>12</sup>



The council recently commissioned a study to identify the potential for a range of renewable energy technologies in Wiltshire. This assessment included scenarios for how projected energy demand in Wiltshire in 2020 could be delivered by renewable energy. A conservative scenario would deliver 29% of Wiltshire's projected energy demand utilising technologies such as wind, hydro, biomass and solar opportunities. This would be almost enough to meet

the UK Renewable Energy Strategy<sup>12</sup> targets set for 2020. However, the actual potential for renewable energy in Wiltshire is much greater.

### **Where we are now: The council**

In delivering its services and through its day-to-day operations, Wiltshire Council consumes a large amount of energy, for example through heating and energy use in buildings, and through transport and street lighting. As a consequence, the council is responsible for a large quantity of carbon emissions. In 2009/10 the carbon emissions from Wiltshire Council's operations, were just over 66,000 tonnes of CO<sub>2</sub> associated with an annual expenditure on energy and transport of £14 million. Overall, Wiltshire Council contributes just over 1.2% of the carbon emissions in the county<sup>3 2</sup>

The council has improved the energy efficiency of its own housing stock which it operates in the south of the county, the energy efficiency of these homes being assessed using the Standard Assessment Procedure (SAP)<sup>46</sup>

The council is currently in the second quartile of local authorities nationally for SAP ratings, and aims to be in the top quartile by March 2012. Council housing has already been double glazed and fitted with loft insulation wherever appropriate.



Future improvements will now concentrate on the scope for using renewable energy such as solar panels or heat pumps.

### **Where we want to get to and how**

Action to tackle carbon emissions, whether Wiltshire Council's or the county's as a whole, will be centred on three common actions:

1. Behaviour change
2. Energy efficiency
3. Renewable energy.

### **Council carbon emissions**

The council's carbon management plan constitutes the action plan setting out how the council is going to reduce its carbon emissions. It sets out the following vision:

"Wiltshire Council will embed carbon management into the delivery of all services to reduce our carbon emissions and set an example to the business sector and communities of Wiltshire. We will use the experience gained to influence and support others to reduce their carbon emissions, thereby mitigating the effects of climate change".

---

<sup>3</sup> Based on estimates of council emissions in 2007 as the council was not in existence at this time.

Our corporate plan 2010-14<sup>3</sup> contains the following target:  
Wiltshire Council will cut CO<sub>2</sub> emissions by 20% off our 2008/09 baseline by the end of 2013/14. (This equates to 11,823 tonnes CO<sub>2</sub>).

Delivery of these targets will follow a hierarchical approach:

- 1) Raising awareness and encouraging behavioural change to ensure that wasteful practices are stopped.
- 2) Implementing energy efficiency measures – this will range from installing energy efficiency technology in buildings and ICT, to implementing policies that will result in greater energy efficiency. For example, there are several building portfolio transformation work programmes underway currently that have the potential to deliver considerable energy savings:
  - Office and workplace transformation
  - Service operational campuses
  - Leisure review
  - Libraries review
  - Low carbon standards for new council buildings
  - Depot review.
- 3) Investing in alternatives to fossil fuel. As well as reducing the council's carbon emissions this offers the opportunity to generate revenue for the authority. Currently there is work underway to identify opportunities for some significant pilot projects in this area.

#### **All other carbon emissions**

Within the council's corporate plan<sup>3</sup> there is a target to pilot energy efficiency and renewable energy projects by 2014 in each of our community areas.

To ensure that the target is met, a low carbon transition plan for Wiltshire will be produced as one of the action plans to deliver this strategy (see section 1.2). This will be accompanied by a renewable energy action plan which will highlight the opportunity for renewable energy in Wiltshire.

The low carbon transition plan will focus on the following:

- Carbon reduction scenarios: a greater understanding of the county's carbon footprint and the sources of emissions is needed. Once a baseline has been established, carbon reduction scenarios and a carbon budget for the county can be generated. The carbon budget and carbon reduction scenarios will be identified through the use of modelling software called Vantage Point.
- Influencing policy: many of the plans and policies, such as planning and transport, that are developed by the council and other public sector partners, for example the Ministry of Defence, have a direct influence on people's lives and carbon emissions. Ensuring that these policies are fit to deliver the low carbon transition in Wiltshire is essential.



The plan will provide an evidence-based approach to ensure policy adequately takes account of carbon reduction and energy and does not hinder this.

- Engagement with community groups and individuals wishing to take action: there are a number of community-based action groups in Wiltshire that have an interest in climate change. These groups range in size from a few individuals to larger groups that cover entire community areas and are best placed to take local action at the grass roots level (see section 10). The council establishes and publicises grant schemes, including future loan schemes in partnership with Wessex Reinvestment Trust. The government's proposed new Green Deal Scheme<sup>47</sup> to incentivise and assist householders to improve the energy efficiency of their homes will also be promoted.
- The low carbon economy: low carbon transition can benefit the economy in Wiltshire in two ways. The council will support businesses in Wiltshire to improve their energy efficiency and promote the uptake of renewable energy. The council will also promote 'green jobs' by establishing a network of installers and suppliers of energy efficiency and renewable energy technology within the county and look at opportunities for the green knowledge economy in Wiltshire. The council and its partners will work with businesses through the Wiltshire 100 programme to identify opportunities for businesses to improve their energy efficiency and act as ambassadors for the rest of the business community.

### **3.7. Planning**

The planning system offers significant opportunities to help build sustainable communities that are resilient to the anticipated consequences of climate change and to reduce greenhouse gas emissions. The council's planning powers currently include setting policy through spatial planning (how, where and when buildings or land are used) and through the development management process (assessing planning applications).

It should be noted that the forthcoming Decentralisation and Localism Bill<sup>15</sup> is expected to be published during the autumn of 2010 which may introduce changes to the UK planning system. Some activities undertaken by the council may need to be reviewed in the light of this development.

#### **Where we are now**

Work is under way to prepare a new development plan for Wiltshire, to be referred to as the Wiltshire Core Strategy<sup>48</sup>. This document will set out a strategic policy framework to guide growth in Wiltshire up to 2026. Detailed evidence is being prepared to ensure new policies help to deliver sustainable and resilient communities and maximise opportunities to deliver low-carbon and decentralised energy.

In October 2009, a consultation document 'Wiltshire 2026 – Planning for Wiltshire's Future'<sup>49</sup> was published. This document identified climate change as a key priority for policy. The first ten strategic objectives drafted relate to climate change as summarised below:

“A sustainable pattern of development, including the self-containment of settlements and a reduction in the need to travel, will have contributed towards meeting the council’s climate change obligations.”

Key outcomes:

- The supply of energy and heat from renewable sources will have met national and regional targets.
- New development will have incorporated sustainable building practices and, where possible, will have contributed to improving the existing building stock
- High energy efficiency will have been incorporated into new buildings and developments.
- New developments will have incorporated appropriate adaptation and mitigation for climate change.
- New development will support sustainable waste management.
- The sourcing and use of local food will have helped to reduce Wiltshire’s ecological footprint.

Other planning policy documents are in preparation and these include a draft Waste Site Allocations Development Plan<sup>50</sup>. This document identifies specific sites in the county and aims to reduce the distances that waste needs to be transported. Opportunities for waste to contribute towards renewable energy targets are also being explored.

### **Where we want to get to and how**

Within the council’s control:

Establish mechanisms for achieving sustainable patterns of development as set out in the strategic objective above through planning policy.

Maximise the positive impacts of new developments by:

- agreeing planning policies that strongly promote a wide range of sustainability issues
- requiring new developments to be well located and highly accessible, with good transport infrastructure; this could, for example, include charging points for alternative fuelled vehicles
- providing a mixed range of uses on key sites, such as housing, places to work and shops
- defining and implementing a set of biodiversity criteria that must be met by all new developments.

Within council influence:

When meeting future housing and employment needs within the county, ensure that the carbon footprint is minimised by:

- maximising the opportunities for delivering decentralised and low carbon energy on large scale development
- developing positive policies that support large scale renewable energy installations where appropriate, that will be informed by the current exercise to map potential opportunities for renewable technologies within Wiltshire (see section 3.6)

- ensuring that new developments achieve carbon neutral standards by 2016 (for residential property) and by 2019 (for commercial buildings)
- using the Building for Life Checklist<sup>51</sup> as a tool for designing sustainable settlements.

Promote innovative solutions to generating green energy in Wiltshire by:

- working with the Centre for Sustainable Energy to pilot a resource pack for community groups on community-based renewable energy
- using the Salisbury, Trowbridge and Chippenham vision programmes as opportunities to identify urban renewable and low carbon solutions
- ensuring that the planning process enables renewable technologies to be retrofitted to existing housing, including those in conservation areas, and listed properties where possible.

Influencing the design of new developments so that they incorporate climate change adaptation principles making communities more sustainable by:

- encouraging the use of passive design to reduce energy demand or soft landscaping to provide shading during the summer
- retaining existing green spaces and encouraging provision within new developments; vegetation and biodiversity can help address climate change by providing natural shading and cooling.

Work with the health service to assess provision of healthcare facilities to deal with the effects of higher temperatures and the increased risk from the spread of disease.

### **3.8. Communicating environmental issues**

More than ever before people are concerned about the future of the planet and the well-being of people in all countries. The effects of climate change are motivating people to change their lifestyles and there is pressure on all tiers of government to respond and facilitate a shift in awareness. Wiltshire Council understands that it cannot fix things for people - we can only try to fix things with



people. The council can facilitate and sometimes provide the means for action, but residents must help their local environment by supporting new initiatives, championing 'green-activity' within their communities, and ensuring they reduce their impact by adapting their lifestyles to use less energy. This involves effective partnership working across a wide range of organisations including government agencies, voluntary sector and businesses and the community. Only together can effective action be taken.

#### **Where we are now**

Communicating climate change issues is vital. The council has developed a strong relationship with the local press, which understands these issues and is committed to running regular 'green' stories and competitions. It is important for the private sector to play its part, and we work with partners such as the Chamber of Commerce to help companies 'green' their businesses.

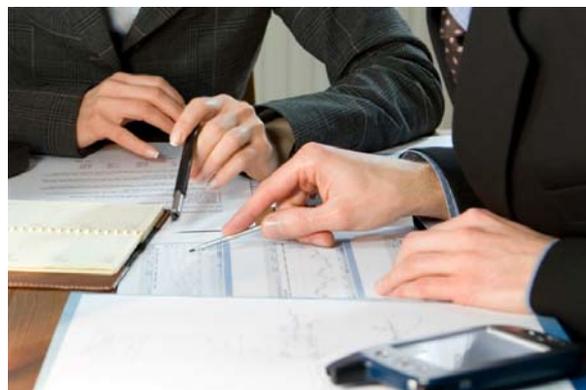
Internally, there is already a strong message promoting sustainability at work; recycling facilities are provided throughout council offices. The council signed the Nottingham Declaration<sup>16</sup> in 2009, underlining the commitment to tackling climate change.

### **Getting our own house in order: green champions**

Climate change champions are being identified within teams across the council and given a day-to-day responsibility to promote sustainability in the areas in which they work. Commitments include being a link to disseminate climate change initiatives, sharing best practice with other teams, attending a forum meeting every three months and, importantly, implementing practical climate change initiatives such as encouraging people to switch off lights and computer monitors and ensuring recycling takes place.

Using Wiltshire's area boards to engage the community on climate change issues:

Wiltshire Council has divided the county into community areas with a total of 18 area boards serving each area. The role of the area board is to act as a local arm of the council, a direct link so that local people know what happens in their community area and have influence over decisions and can hold decision makers accountable.



Within each area the area board consists of local unitary elected councillors, elected representatives from each town and parish council and a member of the council's cabinet.

By using the area boards we can inform and educate the local community on climate change issues, promote positive community action and provide the opportunity to influence change towards a more resilient and greener future.

### **Making Wiltshire businesses greener**

The existing economic partnerships, chambers of commerce and the Wiltshire Strategic Economic Partnership are well connected to the Wiltshire business community. The Wiltshire Environmental Business Network (WEBN) is a key organisation which currently promotes environmental issues to the business community.

### **Engaging with community groups and individuals**

Many Wiltshire community areas have well established and active environmental groups, such as Climate Friendly Bradford on Avon, Chippenham and Villages Environmentalists, and Transition Community Corsham. These groups can work with residents to undertake practical actions and promote environmental issues throughout the county and play an active role in helping us fight climate change. The principle mechanism for

directly supporting, assisting and facilitating community engagement on environmental issues is the Wiltshire World Changers' Network - a knowledge and information-sharing resource supported by the council. Membership is made up of community groups and interested individuals. The council also funds a home energy efficiency officer who attends community events to promote the energy efficiency message and provides dedicated home energy efficiency advice on the council website.

### **Engaging with schools**

The council is corporately responsible for the carbon emissions from schools which represent around 45% of emissions from council buildings. Yet schools are also independent from the council in terms of their own governance and create around them a 'school community' of children, teachers, staff and parents.

Proactive engagement with schools provides an opportunity to:

- reduce carbon emissions in Wiltshire
- educate children as our future generation into the reasons behind and the solutions to climate change
- engage with the wider community, as schools are a key focal point in the community and act as an interface with residents.

### **Where we want to get to and how**

Within the Wiltshire Council Corporate Plan<sup>3</sup> there is a target to pilot energy efficiency and renewable energy projects by 2014 in each of our community areas. We will achieve this and communicate climate change issues by working with partners and communities.

Within the council's control:

The council needs to show leadership by getting its own house in order and communicating this through:

- area boards owning the issues outlined in this strategy for their local area and leading on taking positive action, including screening local funding applications against their ability to deliver against this agenda
- an annual update report on climate change strategy actions and progress against CO<sub>2</sub> reduction targets
- incorporating sustainability actions into departmental and planning processes
- ensuring that appropriate council staff have the ability to enforce sustainability measures across the organisation
- working on projects with partners in other counties and parts of the European Union and trying to create replicable ideas and projects.



The council needs to show leadership by improving public understanding of climate change and what people can do to help by:

- working closely with each area board to provide general and local information on climate change issues, consequences and practical action
- developing the Wiltshire World Changers' network website to include networking opportunities to bring together groups and interested individuals together to inspire and swap ideas
- developing the climate change section on the council's website ([www.wiltshire.gov.uk/climatechange](http://www.wiltshire.gov.uk/climatechange))
- supporting existing environmental groups within Wiltshire, continuing to engage with local groups to establish collaborative projects and encouraging new groups to form in all the community areas
- attending community and area board events with home energy saving information and advice on grants and loan schemes.

Within council influence:

Improving public understanding of climate change and what they can do to help by:

- increasing the membership and impact of the Wiltshire World Changers' Network to widen the reach of climate change information, resources and practical advice
- continuing to work with partner agencies through the Wiltshire World Changers' Network to develop and promote support, training and funding opportunities to increase the capacity of community groups
- working closely with the local and national newspapers to convey the climate change message.

The council needs to engage more effectively with children and inform their choices as they grow up by:

- expanding the eco-schools programme and other environmental education programmes and working with the Wiltshire Wildlife Trust which has been active in this area for many years
- supporting the Wiltshire Assembly of Youth with their waste reduction campaign called GreENGuAGE and their carbon reduction competition
- developing projects to engage with schools and beyond. not just with children, but with their parents and the wider community.

#### 4. How we will deliver, monitor and review this strategy

This strategy is ambitious in the complex range of services affected by and responsible for its delivery. It is, therefore, important to set out how this strategy will be delivered, monitored and reviewed from the outset. Climate change is a cross-cutting issue: it is not the responsibility of a single team or section of the council to implement the council's strategy.

This section of the strategy recognises the need to ensure that accountability, responsibility and ownership are embedded throughout the council for the successful development and delivery of the climate change strategy.

The council's climate change board will have primary accountability for monitoring and reviewing this strategy. The board is chaired by the cabinet member for the environment. Other stakeholders will also be involved in monitoring and reviewing progress through receiving an annual progress report on the action plans, namely:

- the environment select committee of the council (papers published online).
- the Wiltshire Environmental Alliance, thematic partnership of the Wiltshire Assembly, our local strategic partnership.

The council's climate change team will be responsible for co-ordinating delivery of the action plans, with assistance from the relevant parts of the council and other stakeholders. The table below identifies the lead service areas of the council responsible for delivering relevant parts of the strategy as well as external partners where appropriate.

Strategy objective	Delivered through:	
	Council function	External partners
Waste	<ul style="list-style-type: none"> <li>• Waste management services</li> <li>• Strategic property services</li> </ul>	<ul style="list-style-type: none"> <li>• Chambers of Commerce</li> <li>• Wiltshire Wildlife Trust</li> </ul>
Transport	<ul style="list-style-type: none"> <li>• Transport planning</li> <li>• Passenger Transport</li> <li>• Transport Planning</li> <li>• Development services</li> <li>• Fleet management</li> <li>• Highways</li> </ul>	<ul style="list-style-type: none"> <li>• Council contractors, as appropriate</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Emergency planning</li> <li>• Flood risk management group</li> <li>• Strategic property services</li> <li>• Spatial planning</li> </ul>	<ul style="list-style-type: none"> <li>• Environment Agency</li> <li>• Wessex Water</li> </ul>
Purchasing and procurement	<ul style="list-style-type: none"> <li>• Corporate procurement unit</li> <li>• All sections of the council, through following corporate procurement policy</li> </ul>	<ul style="list-style-type: none"> <li>• Chambers of Commerce</li> <li>• Wiltshire 100 businesses</li> <li>• Local Economic Partnerships (LEPs)</li> </ul>

Strategy objective	Delivered through:	
	Council function	External partners
	<ul style="list-style-type: none"> <li>Economic development</li> </ul>	
Biodiversity and natural environment	<ul style="list-style-type: none"> <li>Spatial planning</li> <li>Strategic property services (especially rural estates)</li> <li>Amenity and countryside group</li> </ul>	<ul style="list-style-type: none"> <li>Countryside and land-based group</li> <li>Landowners</li> <li>Owners of Wiltshire's nature reserves (Wiltshire Wildlife Trust, Natural England, RSPB)</li> </ul>
Energy	<ul style="list-style-type: none"> <li>Strategic property services</li> <li>Workplace transformation programme</li> <li>ICT</li> <li>Climate change team</li> <li>Schools</li> <li>Waste management service</li> <li>Streetlighting</li> <li>Private sector housing</li> </ul>	<ul style="list-style-type: none"> <li>Public Service Board</li> </ul>
Planning	<ul style="list-style-type: none"> <li>Spatial planning</li> <li>Development control</li> </ul>	<ul style="list-style-type: none"> <li>Housing associations</li> <li>Developers</li> </ul>
Communicating environmental issues	<ul style="list-style-type: none"> <li>Relevant sections, together with corporate communications team</li> <li>Area boards</li> </ul>	<ul style="list-style-type: none"> <li>Wiltshire World Changers' network</li> <li>Wiltshire Wildlife Trust</li> <li>Wiltshire Assembly of Youth</li> <li>Schools</li> </ul>

The climate change board will have ownership for the following action plans that sit under this strategy:

- Carbon management plan for the council's emissions
- Climate change adaptation plan for Wiltshire
- Low carbon transition plan for Wiltshire
- Renewable energy action plan for Wiltshire.

The climate change board will also monitor the development and implementation of the following key strategies and plans as they contribute to the board's objectives:

- Municipal Waste Strategy<sup>28</sup> (waste management service lead)
- Wiltshire and Swindon Waste Core Strategy<sup>29</sup> (spatial planning lead)
- Local Transport Plan 3<sup>52</sup> (sustainable transport lead)
- Strategic Flood Risk Assessment .<sup>33</sup> (spatial planning lead)



- Procurement Strategy<sup>53</sup> (procurement lead)
- Green Infrastructure Strategy<sup>38</sup> (spatial planning lead)
- Biodiversity Action Plan<sup>40</sup> (spatial planning lead)
- Economic Development Strategy (economic development lead)
- Wiltshire Core Strategy<sup>48</sup> and topic papers on climate change and related topics (spatial planning lead)
- Water Resources Management Plans<sup>34</sup> (various water companies)
- Infrastructure Delivery Plan (spatial planning lead)
- Local Investment Plan (regeneration lead)

#### Review

Rarely does a day go by without a new initiative or technology to combat climate change becoming available. Consequently, this document must be a living document in order to react and respond accordingly. Sections of this strategy will be reviewed as appropriate, and the entire strategy will be reviewed by 2013 at the latest.

The success of this strategy will be measured in the short term of two to three years by the degree to which it has influenced other policies, strategies and work programmes taken forward by the council and other partners. Success in the longer term will be measured by whether the council and Wiltshire as a whole is moving in the right direction in terms of reducing its carbon footprint and adapting to climate change.

## 5. References

Reference hyperlinks correct on 14 October 2010.

---

<sup>1</sup> The National Archives; UK Climate Change Act 2008.

<http://tiny.cc/o6nbi>

<sup>2</sup> Government Department for Energy and Climate Change (DECC);  
2007 Local Authority Carbon Dioxide Emissions

<http://tiny.cc/9eohu1v9z0>

<sup>3</sup> Wiltshire Council; Corporate Plan 2010 – 2014.

<http://www.wiltshire.gov.uk/corporate-plan-2010-2014-wiltshire.pdf>.

<sup>4</sup> Government Department for Environment Food and Rural Affairs (DEFRA);  
Waste Strategy for England 2007.

<http://tiny.cc/nagg0>

<sup>5</sup> DEFRA; Flexible Framework Matrix.

<http://tiny.cc/o8fcs>

<sup>6</sup> Wiltshire Council; Community Plan 2011 – 2026.

<http://www.wiltshire.gov.uk/communityplan.htm>

<sup>7</sup> Intergovernmental Panel on Climate Change (IPCC);  
Climate Change 2007 Synthesis Report.

<http://tiny.cc/rzb2e>

<sup>8</sup> UK Climate Impacts Programme;  
South West Region Climate Change Impacts Scoping Study 2003.

<http://tiny.cc/2q4ft>

<sup>9</sup> DECC; Carbon Reduction Commitment Energy Efficiency Scheme.

<http://tiny.cc/5qlm5>

<sup>10</sup> DECC; The UK Low Carbon Transition Plan 2009.

<http://tiny.cc/avp6h>

<sup>11</sup> DECC; UK Household Energy Management Strategy.

<http://tiny.cc/rhbe9>

<sup>12</sup> DECC; UK Renewable Energy Strategy 2009.

<http://tiny.cc/p38qt>

<sup>13</sup> National Archives; National Building Regulations 2000.

<http://tiny.cc/v9ai6>

<sup>14</sup> Office of Public Sector Information; Flood and Water Management Act 2010.

<http://tiny.cc/1h2e5>

<sup>15</sup> Communities and Local Government; Decentralisation and Localism Bill.

<http://tiny.cc/ktnav>

<sup>16</sup> Energy Saving Trust; Nottingham Declaration on Climate Change 2000.

<http://tiny.cc/kvmex>

<sup>17</sup> 10:10 Commitment.

<http://www.1010global.org/uk>

<sup>18</sup> Wiltshire Council; Fairly Traded Products Policy.

[http://cms.wiltshire.gov.uk/Data/Council/20090915/Agenda/\\$item%20no.%2025%20-%20notices%20of%20motions.doc.pdf](http://cms.wiltshire.gov.uk/Data/Council/20090915/Agenda/$item%20no.%2025%20-%20notices%20of%20motions.doc.pdf)

- <sup>19</sup> HM Treasury; Stern Report 2006.  
<http://tiny.cc/1b83p>
- <sup>20</sup> UK Greenhouse Gas Inventory National System.  
<http://www.ghgi.org.uk>
- <sup>21</sup> DECC; National Indicator 186 Per capita reduction in CO<sub>2</sub> emissions in the Local Authority area.  
<http://tiny.cc/70l86>
- <sup>22</sup> European Commission; European Emissions Trading Scheme (ETS)  
[http://ec.europa.eu/environment/climat/emission/index\\_en.htm](http://ec.europa.eu/environment/climat/emission/index_en.htm)
- <sup>23</sup> DECC; National Indicator 186 Data set (2005 – 2008) Per capita reduction in CO<sub>2</sub> emissions in the Local Authority area.  
<http://tiny.cc/hpcpe>
- <sup>24</sup> University of Exeter; Final Report on the impact of national policy measures on local carbon emissions 2010.  
<http://tiny.cc/kqn2s>
- <sup>25</sup> Department of Health; Report on the Health Effects of Climate Change in the UK 2008.  
<http://tiny.cc/1nejg>
- <sup>26</sup> Environment Agency; Report on the Social Impacts of Heat Waves.  
<http://tiny.cc/g4gwb>
- <sup>27</sup> DEFRA; National indicators 191, 192 and 193: Residual household waste per household.  
<http://tiny.cc/68o38>
- <sup>28</sup> Wiltshire Council; Municipal Waste Strategy 2006.  
<http://www.recycleforwiltshire.com/documents/Strategy2006.pdf>
- <sup>29</sup> Wiltshire Council; Wiltshire and Swindon Waste Core Strategy 2006 – 2026.  
[http://www.wiltshire.gov.uk/waste\\_core\\_strategy\\_july\\_2009.pdf](http://www.wiltshire.gov.uk/waste_core_strategy_july_2009.pdf)
- <sup>30</sup> Wiltshire Council; School travel plans.  
<http://www.wiltshire.gov.uk/schooltravelplans.htm>
- <sup>31</sup> Wiltshire Council; Local Transport Plan (LTP2).  
<http://www.wiltshire.gov.uk/localtransportplan2.htm>
- <sup>32</sup> Government Department for Business Innovation and Skills (BIS); Digital Britain report 2009.  
<http://tiny.cc/7rred>
- <sup>33</sup> Wiltshire Council; Strategic Flood Risk Assessment 2009.  
<http://www.wiltshire.gov.uk/strategicfloodriskassessment.htm>
- <sup>34</sup> Wessex Water; Water Resources Management Plan 2010.  
<http://tiny.cc/g3bsr>
- <sup>35</sup> Wessex Water; Carbon Management Strategy 2010.  
<http://tiny.cc/k0lfk>
- <sup>36</sup> Wiltshire Council; Buy Wiltshire Scheme.  
<http://www.buywiltshire.co.uk/>
- <sup>37</sup> DEFRA; Making Space for Nature, A Review of England's Wildlife Sites and Ecological Network.  
<http://tiny.cc/ap20y>
- <sup>38</sup> Wiltshire Council; Green Infrastructure Strategy.  
<http://www.wiltshire.gov.uk/greenspaces.htm>
- <sup>39</sup> Wiltshire Council; Development Plan.  
<http://www.wiltshire.gov.uk/localplans.htm>

<sup>40</sup> Wiltshire Wildlife Trust; Biodiversity Action Plan 2008.

<http://tiny.cc/a554s>

<sup>41</sup> Wiltshire Council; Wiltshire Landscape Character Assessments.

<http://www.wiltshire.gov.uk/wiltshireslandscape.htm>

<sup>42</sup> DECC; UK Energy in Brief 2009.

<http://tiny.cc/8leej>

<sup>43</sup> Government Department for Energy and Climate Change (DECC); Total sub-national final energy consumption data at regional and local authority level: 2005, 2006 and 2007 (Revised June 2010).

<http://tiny.cc/e947u>

<sup>44</sup> Intelligence Network; Private Sector House Condition Survey.

<http://tiny.cc/47ils>

<sup>45</sup> REGEN SW; 2010 Annual Survey on Renewable electricity and heat projects in South West England.

<http://tiny.cc/mvpex>

<sup>46</sup> BRE; Standard Assessment Procedure (SAP).

<http://tiny.cc/i4fnc>

<sup>47</sup> DECC; Green Deal Scheme.

<http://tiny.cc/7wp85>

<sup>48</sup> Wiltshire Council; Core Strategy.

<http://www.wiltshire.gov.uk/wiltshirecorestrategy.htm>

<sup>49</sup> Wiltshire Council; 2026 Planning for Wiltshire's Future.

[http://www.wiltshire.gov.uk/wiltshire\\_2026\\_-\\_planning\\_for\\_wiltshires\\_future\\_october\\_2009.pdf](http://www.wiltshire.gov.uk/wiltshire_2026_-_planning_for_wiltshires_future_october_2009.pdf)

<sup>50</sup> Wiltshire Council; Waste Site Allocations Development Plan.

<http://www.wiltshire.gov.uk/wastesiteallocations.htm>

<sup>51</sup> CABE; Building for Life Checklist.

<http://tiny.cc/6fi7g>

<sup>52</sup> Wiltshire Council; Local Transport Plan 3.

<http://www.wiltshire.gov.uk/transportplans.htm>

<sup>53</sup> Wiltshire Council; Procurement Strategy 2010/11 – 2012/13.

<http://cms.wiltshire.gov.uk/mgConvert2PDF.aspx?ID=3152>

## Appendix 1: Environmental Policy

Wiltshire Council is a unitary authority located in the South West of England and is responsible for many activities which have an environmental impact on the land, water, air, wildlife and residents of the county. The authority is responsible for a wide range of activities including spatial planning, waste management, highways, social care and policies on mineral extraction. In addition, Wiltshire Council is a landowner and a major purchaser of local goods and services.

The council seeks to mitigate the environmental impacts associated with its services, ensuring that, as a minimum, it conforms to all applicable laws, regulations, codes of practice and corporate standards.

The authority is also committed to reducing its carbon footprint, preparing residents for the unavoidable consequences of climate change, pollution prevention and demonstrating continuous improvement. To achieve this, it will focus on the key environmental objectives outlined below.

1. Waste – Promote and implement sustainable management practices for waste generated by residents and by the council.
2. Transport – Reduce the impact of fleet and staff travel on the environment by developing and promoting a range of sustainable transport options and flexible working practices.
3. Water – Ensure that effective monitoring regimes and sustainable practices are put in place to manage water usage across all council sites whilst simultaneously striving to reduce consumption.
4. Purchasing and procurement - Ensure that the principles of sustainable development are integrated into the purchasing and procurement of goods and services.
5. Biodiversity and natural environment – Work with key stakeholders on countryside, ecological and environmental issues to support biodiversity and the natural environment.
6. Energy – Work to reduce the energy consumption and carbon emissions associated with council services and to expand renewable energy capacity in Wiltshire.
7. Spatial and transport planning – Ensure that the planning system helps deliver a reduction in average carbon emissions per resident, whilst establishing communities that are resilient to the future impacts of climate change.
8. Communicating environmental issues – Raise awareness of environmental issues amongst staff, elected councillors and the public through the provision of information and training.

Performance against these will be monitored through internal audit, corporate and service delivery plans, National Indicator (NI) datasets and the use of resources assessment.

In order to achieve these environmental objectives, the council will operate an externally audited environmental management system that will:

- set targets and objectives in order to minimise potentially negative environmental effects, whilst increasing the positive effects of the council's activities
- produce a statement of the council's environmental performance at regular intervals, at least annually.

## Appendix 2: The Nottingham Declaration on Climate Change

We acknowledge that

- evidence shows that climate change is occurring
- climate change will continue to have far-reaching effects on the UK's people and places, economy, society and environment.

We welcome the

- social, economic and environmental benefits which come from combating climate change
- emissions targets agreed by central government and the programme for delivering change, as set out in the UK Climate Change Programme<sup>54</sup>
- opportunity for local government to lead the response at a local level, encouraging and helping local residents, local businesses and other organisations - to reduce their energy costs, to reduce congestion, to adapt to the impacts of climate change, to improve the local environment and to deal with fuel poverty in our communities
- endorsement of this declaration by central government.

We commit our council from this date 5 May 2009 to

- work with central government to contribute, at a local level, to the delivery of the UK Climate Change Programme<sup>54</sup>, the Kyoto Protocol<sup>55</sup> and the target for carbon dioxide reduction by 2010
- participate in local and regional networks for support
- within the next two years develop plans with our partners and local communities to address the causes and the impacts of climate change progressively, according to our local priorities, securing maximum benefit for our communities
- publicly declare, within appropriate plans and strategies, the commitment to achieve a significant reduction of greenhouse gas emissions from our own authority's operations, especially energy sourcing and use, travel and transport, waste production and disposal and the purchasing of goods and services
- assess the risk associated with climate change and the implications for our services and our communities of climate change impacts and adapt accordingly
- encourage all sectors in our local community to take the opportunity to adapt to the impacts of climate change, to reduce their own greenhouse gas emissions and to make public their commitment to action
- monitor the progress of our plans against the actions needed and publish the result.

**Wiltshire Council** acknowledges the increasing impact that climate change will have on our community during the 21<sup>st</sup> century and commits to tackling the causes and effects of a changing climate on our county.

---

<sup>54</sup> DECC; UK Climate Change Programme.  
<http://tiny.cc/npym4>

<sup>55</sup> United Nations Framework Convention on Climate Change (UNFCCC); Kyoto Protocol.  
<http://tiny.cc/lx6j>

This document was published by Wiltshire Council.

You are welcome to contact us at:

**ECO Team**

Economy and Enterprise

County Hall

Bythesea Road

Trowbridge

Wiltshire

BA14 8JN

Tel: 01225 756153

Email: [climate.change@wiltshire.gov.uk](mailto:climate.change@wiltshire.gov.uk)