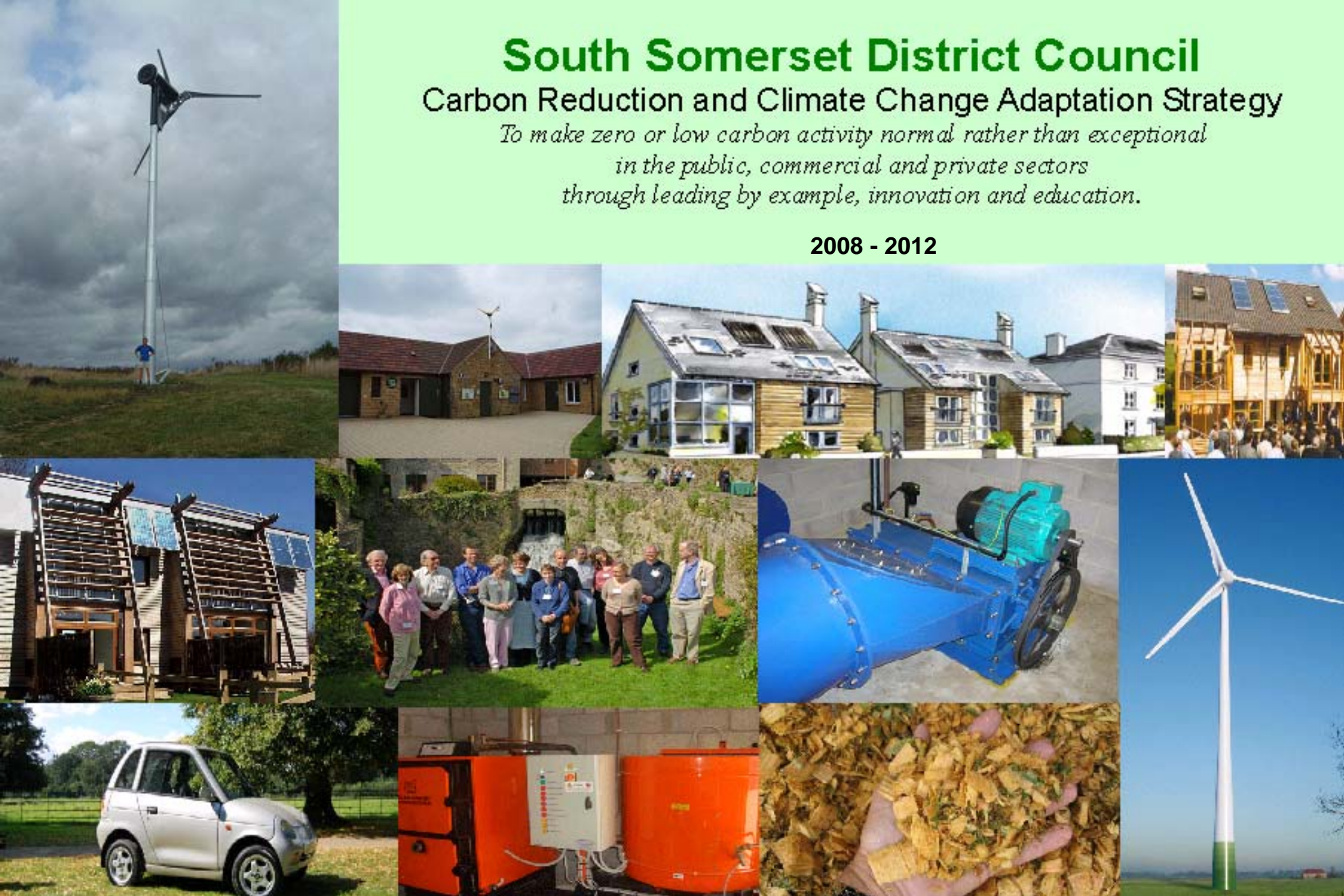


South Somerset District Council

Carbon Reduction and Climate Change Adaptation Strategy

*To make zero or low carbon activity normal rather than exceptional
in the public, commercial and private sectors
through leading by example, innovation and education.*

2008 - 2012



2007-2008
Neighbourhood and
Community Champions:
The Role of Elected Members
2006-2007
Improving Rural Services
Empowering Communities
2005-2006
Getting Closer to Communities



Making a difference where it counts

Our Vision

To make zero or low carbon activity normal rather than exceptional in South Somerset in the public, commercial and private sectors through leading by example, innovation and education.

Making a difference where it counts

A Message from our Portfolio Holder (Environment and Property)

Local government is about so much more than simply delivering statutory services. Councils have a role in advancing local, national and international agendas. South Somerset District Council has had a long tradition of community leadership, working with its communities to shape aspirations and work with them to find ways in which these can be delivered. This strategy sits beneath the Sustainable Community Strategy where environmental issues including climate change are tackled holistically, with partners.

If the Council is to be successful in achieving the aims and objectives set out in this Strategy, an awareness of the need to address climate change, energy reduction and sustainable development must be integrated fully into all areas of its operations. This strategy aims first at getting our own house in order, to work towards being an exemplar authority and then working with our communities in reaching its carbon reduction target as set out in our Sustainable Communities Strategy. Although this is a global problem, unless everyone acts locally, no change will be achieved.

Our focus is how SSDC can 'raise its game' in this field, get as close as possible to becoming a carbon neutral authority, become an exemplar nationally and how it can directly influence actions that can make a difference in reducing energy requirements, reducing carbon emissions and increase public awareness of the issue.

We can't simply put up a wind turbine or cut our business mileage and expect to be considered an exemplar authority. Nor can we get away with replacing a fossil fuel boiler with another fossil fuel boiler due to initial costs. When making the choice between short term financial or carbon savings, we should choose carbon.

Actions contained within this strategy are intended to be realistic, achievable and measurable.

Jo Roundell-Greene
Portfolio Holder – Environment and Property

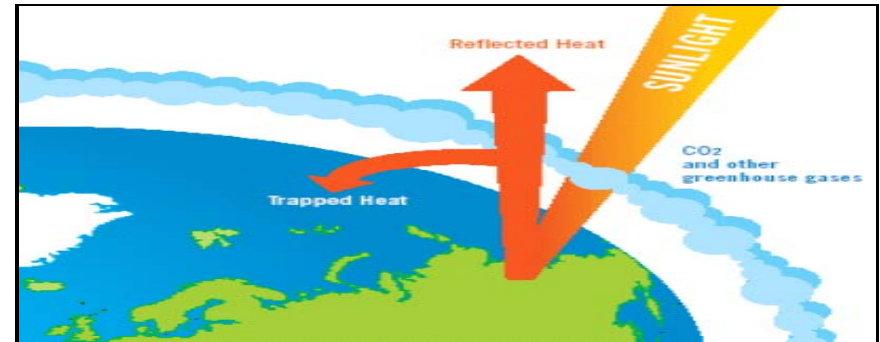
What is Climate Change?

Recent climate events now indicate a clear pattern that matches what had been predicted would be the results of human activities that have released more carbon dioxide into the atmosphere than would naturally be the case. The last five year period was the hottest in Britain since records began and April 2007 was the warmest on record. All around the world people are reporting extreme and abnormal weather such as flooding, hurricanes, and drought. The most recent report from the Intergovernmental Panel on Climate Change (IPCC) - a body that represents the authoritative scientific consensus on climate change - leaves us with no doubt that human activity is the main driver of climate change. We are now experiencing what is just the start of a change in climate around the world. No area will remain untouched and adaptation to these changed circumstances will be challenging and in some places impossible. We can limit the extent of climate change and human suffering by acting now to reduce carbon dioxide emissions as quickly as possible.

How do carbon emissions contribute?

Several naturally occurring gases have the effect in the atmosphere of trapping the sun's heat. Without these gases, the world would be cold and uninhabitable, as heat would be instantly radiated back out into space. These gases are carbon dioxide, which we breathe out more of than we breathe in, and which plants need as one of the raw materials for photosynthesis when carbon is fixed into the structure of the plant; also methane, which is produced wherever dead plant and animal material are rotting or fermenting. Collectively,

they are described as greenhouse gases because they have the same effect as the glass on a greenhouse.



Life on earth has been taking carbon out of the atmosphere almost since life began and stashing it away underground as sediments of limestone and layers of dead plant material that have become coal, oil and gas. These fossil fuels – that have been deposited over millennia – are being converted back to atmospheric carbon dioxide through burning in car and jet engines, power stations and domestic boilers, within just a few hundred years. Levels of the gas will soon have doubled from that found at the beginning of the industrial revolution. Carbon dioxide is by far the most significant gas influencing climate change. Although methane is 22 times more potent a greenhouse gas than carbon dioxide and is released from animal guts, landfill sites and paddy fields, the quantities released to the atmosphere are much smaller and are due to natural processes of decay and fermentation. The gas is degraded in the atmosphere after just 8 years. However, there is a concern that methyl hydrates currently trapped within cold sea sediments, and methane currently trapped in the vast permafrost areas straddling the north pole will be released to dramatic detrimental effect as the world warms up. Rapid, runaway, irreversible climate change would be the result.

What might climate change mean for us?

In the South West of the UK we can expect snow to become even rarer, with increasingly milder winters and summer heat waves; wildlife, vegetation and crops moving in from further south; occasionally much stronger winds and heavier rain leading to increased incidence of flooding events; and rising sea levels, which will accentuate coastal erosion and flood low lying areas. The Somerset Levels and Moors are obviously particularly vulnerable and only very substantial engineering works will prevent the formation of a new, large, natural harbour reaching to the edges of Langport, Somerton and Compton Dundon.

Warmer weather might seem a reasonable trade off for occasional unpleasant extremes of heat, wind and floods, especially in a developed country such as the UK, which has the finance, technology, and organisation of civil society to cope; even if extra heat in the system doesn't always lead to blue skies, as we discovered during the wet grey summer of 2007. However, other parts of the world will be much less fortunate. In areas where it just stops raining and the land becomes arid, it can become impossible to make a living or grow food. Migration is the result. The problems in Darfur and boats of surviving migrants arriving on the shores of the Canary Islands and Malta are the beginning of climate change migratory pressures from Africa to Europe.

Flooding of Bangladesh and the dwindling of reliable freshwater supplies from Himalayan melt waters will also reduce the carrying capacity of the land for humankind and cause mass migration. When asked, the majority of

migrants state their preferred destination to be the UK. These migratory pressures will be felt in South Somerset as keenly as any other area of the UK.

As the recent Stern Report pointed out, there is an economic cost to climate change in addition to the cost in human suffering and the more rapid is our response to the need to cut carbon dioxide emissions, the less these costs will eventually be.

Why should South Somerset Act to Reduce Carbon Dioxide Emissions?

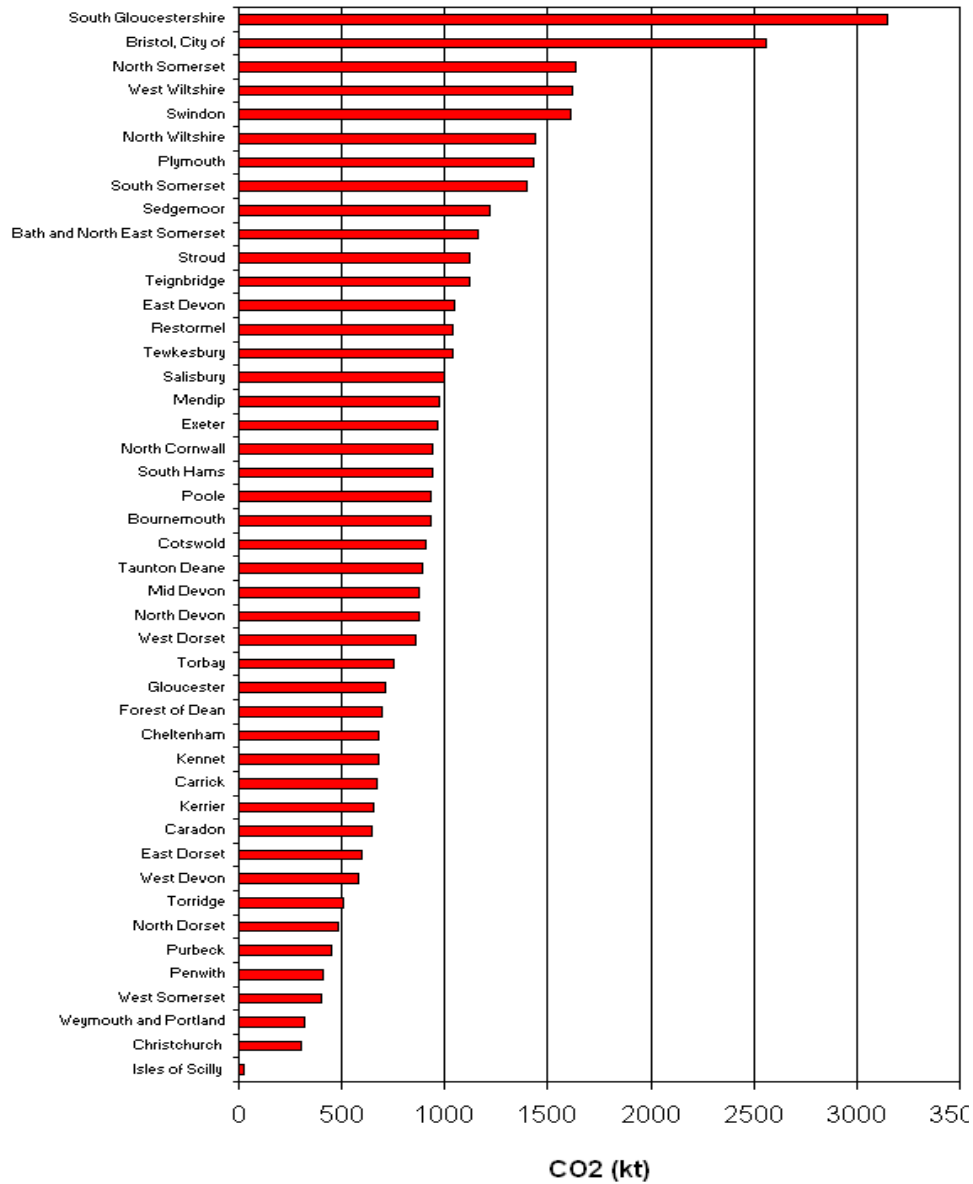
All large organisations have a social responsibility to introduce measures that reduce carbon. Local authorities, as democratically elected bodies have the additional responsibility of assisting their communities in making carbon reductions. These may be initially expensive but are likely to be of financial as well as environmental benefit in the long term. A healthy, secure, vibrant, thriving community is one that has planned for the future and not had its head in the sand focused only on short term needs.

The Benefits of early action

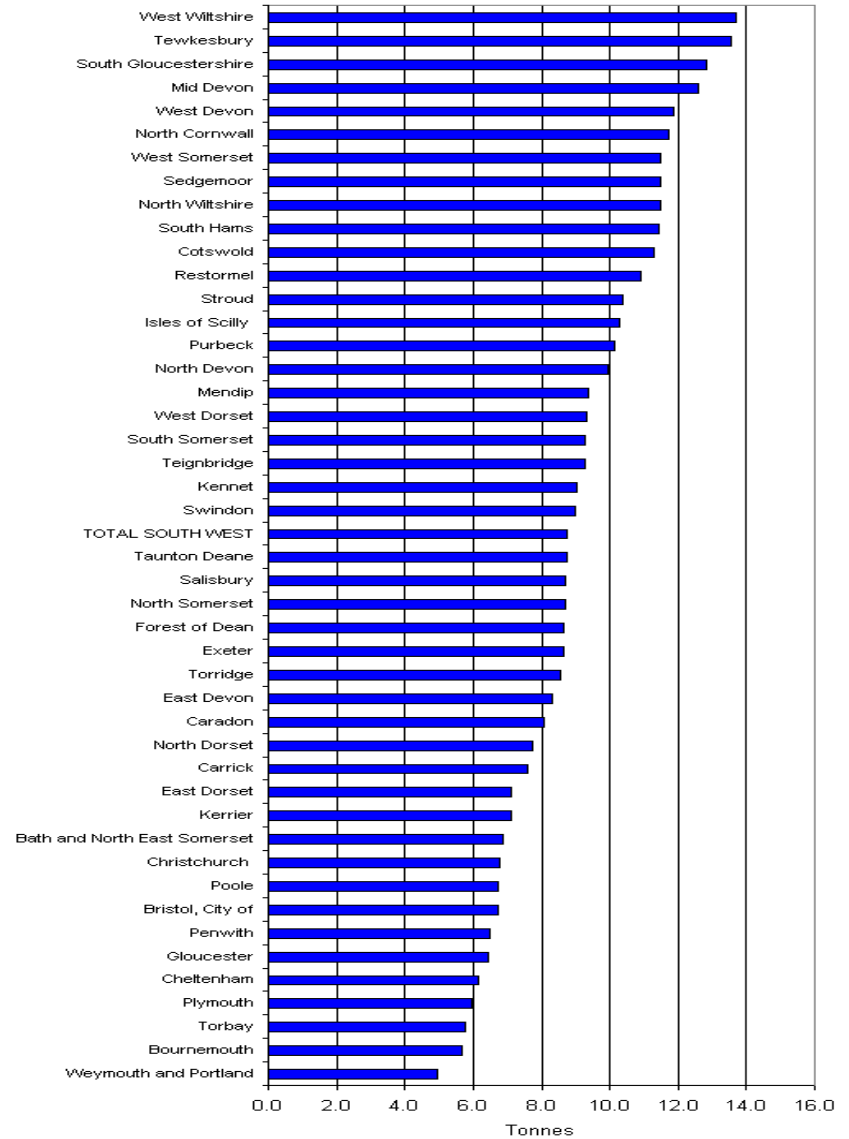
- It slows the rate of climate change, to give our residents and environment time to adapt to the changing situation.
- It preserves dwindling fossil fuel reserves
- It cuts costs by saving energy
- It improves the quality of life for residents by facilitating warmer, more economical homes;
- It encourages local businesses involved in the renewable energy / sustainable technology and construction.

Carbon dioxide emissions are higher than average in South Somerset, as can be seen from the graphs below.

Total CO2 emissions in South West local authorities 2005



Per capita Total CO2 (tonnes) in the South West 2005



How this Strategy supports: a) Government targets

This Strategy focuses on mitigation measures affecting climate change that the council can influence and adaptive changes to future weather events in some of our practices and our responses to emergencies.

Starting with a baseline date of 1990, central Government has set a national target to reduce CO2 emissions by 15% – 18% by 2010, 26% - 32% by 2020 and 60% by 2050

In the March 2008 Budget, the Chancellor announced an intention that all public service buildings be carbon neutral by 2018.

In order to support our aim of becoming an exemplar authority nationally, SSDC aims to reach zero emissions by 2050 and take every viable opportunity to reduce emissions as quickly as possible. Our target for 2012 will be informed by our participation in the Carbon Trust's Local Authority Carbon Management Programme.

b) the Sustainable Community Strategy.

This strategy has a close fit with the goals of the emerging Sustainable Community Strategy which is due to be published in Autumn 2008. Key links can be made to:

Theme: Environmentally Sensitive

Goal 10: Move towards a carbon neutral economy by 2050 with robust intermediate milestones

Strategic Priority 28: Year on year reduction in the district's carbon footprint to 2010 contributing towards a 50% reduction by 2017

Strategic Priority 30: Produce 20% of energy and heat from renewable sources by 2020

What has South Somerset District Council achieved so far?

- In 2001 the council – with Somerset County Council – facilitated the setting up of the Somerset Trust for Sustainable Development whose aim was to make sustainable construction the norm by 2010. They have since reframed as Ecos Trust and have indeed been very influential in achieving their aim.
- Since 2001 the council has lead a partnership with owners of historic mill sites in the district to develop small scale hydropower. To date we have achieved £137,000 of grant funding and seen installation of renewable energy generation at 7 mill sites.
- Our Property Services have taken energy efficiency measures to reduce energy use within our own buildings. These include fitting automatically dimmable, high frequency fluorescent light fittings and installation of building management software control systems for effective environmental control.
- Our Property Services have sourced green electricity for Brympton Way and Goldenstones since 2003 and for our other key sites since Oct 2006.
- Energy audits have been undertaken for our largest buildings in preparation for our involvement in the Carbon Trust's Local Authority Carbon Management Programme beginning in 2008.
- On the 1st September 2006 the council signed the Nottingham Declaration joining a growing number of

councils (currently just over 200) that have committed to taking action on climate change. We have committed to investigate and develop wood heat at Brympton Way, Lufton Depot and Yeovil Museum.

- During 2007 the council have developed wind turbine projects that will see installation of a 1 kW Windsave at Ham Hill Visitors Centre and a 15 kW Proven wind turbine at the new Yeovil Innovation Centre early in 2008.
- Between June 2007 and February 2008 the council has taken advantage of free feasibility studies to explore the potential for carbon savings using wood heat boilers at our Brympton Way Offices, Lufton Depot and the Yeovil Museum.
- The council has prepared guidance to assist developers to comply with the South West Regional Renewable Energy Policy RE5 that expects a proportion (20%) of the energy required in large new developments to be supplied by on-site renewable micro generation.
- The council performs a number of non statutory functions to alleviate flooding including; carrying out minor works to properties, advising members of the public about possible measures they could take to alleviate and make their properties resilient to flooding (such as raising power sockets and using water resistant building materials), providing 24 hour emergency assistance to those at risk. (normally by provision of sandbags), installation of flood defences and maintenance of strategic watercourses.
- A Strategic Flood Risk Assessment has been prepared for the district to inform the preparation of the Local Development Framework, and ensure that future inappropriate development in areas at risk of flooding is avoided, and development is directed away from areas at highest risk of flooding. Sustainable Drainage Systems are encouraged to reduce flood risk, by being designed to manage surface water drainage in a way that mimics the natural environment when rain falls onto land.
- The council is part of the Somerset Affordable Warmth Partnership of all the authorities in Somerset. We work together to develop policies to tackle fuel poverty and increase home energy efficiency. We encourage householders to take up grants to improve the energy efficiency of their own homes.

Our past and current carbon dioxide emissions (Tonnes CO₂/annum)

These are fully explained in Appendix 1

	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Electricity use from our largest buildings	1116	1157	1308	1343	1337
Gas use from our largest buildings	479	463	510	532	555
Car mileage from our business use			202	199	205
Fuel use by our fleet vehicles			1181	1162	1169
Totals			3200	3236	3265

The council may have the opportunity to engage in carbon trading on a voluntary basis. As we are not directly a generator of energy using fossil fuels, and our emissions from vehicle use are below the threshold, carbon trading is not statutory for the council.

We will record and analyse our progress towards our carbon reduction target on an annual basis using figures from BERR Energy Trends reports and other government data and HECA.

How this Strategy supports other council strategic plans and strategies

This Carbon Reduction Strategy has been influenced by and links with the following key strategies and plans:

Document	Supporting;
SSDC Corporate Plan	<p>Aim 5 - Promote a balanced natural and built environment objective 19 – To have SSDC as one of the top exemplar council’s in the country in reducing CO₂ emissions by 2012</p> <p>The draft corporate plan (2009 –2016) has two relevant objectives:</p> <ul style="list-style-type: none"> • Work to reduce carbon emissions • Work to adapt to climate change
Sustainable Community Strategy	Goals 11, 12 and 13. Environmentally Sensitive section
Housing Strategy	In our role as the strategic housing authority it is our responsibility to secure improvements to the condition of the private sector housing stock, including its thermal efficiency
Local Development Framework	The Core Strategy ‘Issues and Options’ consultation document, which includes options on the degree to which the Code for Sustainable Homes, Building Research Establishment Environmental Assessment Methods (BREEAM), and the proportion of on-site renewable energy that should be required in new development. The possibility of identifying broad locations for large-scale renewable energy schemes is also raised. The current proposed adoption date of the Core Strategy is October 2010.
Asset Management Plan	<p>The efficient use of council owned assets, through the following terms of reference of the Asset Management Strategy Group;</p> <ul style="list-style-type: none"> • That all property held by the Council is required for operational, social or investment purposes and links with the corporate objectives. • That a formal biennial review of the property portfolio will identify any surplus or underused property and recommend appropriate action. • That adequate funding streams are identified to deal with property refurbishments, repair and maintenance, suitability and sustainability issues. • That we promote and support shared use of premises in joint working arrangements with other public and private service providers.
Car Park Strategy	<p>Objectives 4 "Contribute to wider transport strategies relating to congestion, sustainability and the environment"</p> <p>Objective 5 “use tariffs to control use by time, influence modal shift and better balance the</p>

	comparative costs of car and public transport.”
Procurement Strategy	<p>A recommendation to positively procure from companies with creditable, carbon reducing, green policies and from those with local supply chains through the following measures;</p> <ul style="list-style-type: none"> • The Council will adopt and support sustainability appraisal within each procurement. Central procurement will produce a sustainability appraisal document to be used in such instances. Training will be provided on the application of sustainability within procurement. • All suppliers will be encouraged to adopt sustainable production or operating methods. The Council will give greater sustainability marks within the tendering process to those bidders that can demonstrate a more sustainable solution compared to another. • The Council will develop a whole life costing approach to all procurement and purchasing decisions. This will challenge the existing practice of always selecting the lowest price and establishes the connection between price and cost. • The Council will work with suppliers so as to attempt to develop those supply routes or chains and try, where appropriate, to develop best of breed suppliers locally who may then go on to compete for business regionally. The Council is currently working with a number of local suppliers in encouraging them to extend the companies’ offer to the Council into associated services. • The Council will work with their partner organisations to ensure that any inward investment comes to South Somerset where appropriate. Officers will work with collaborative project team’s to ensure that SSDC investment in those projects, return maximum benefit for the district in jobs, infrastructure or tangible resources of any kind. • All of the above will form a part of the total life costing culture that officers will adopt at the Council. The Council will be transparent in the way these elements are considered within any procurement process and will clearly indicate in advance how important individual elements will be in each purchase.
Somerset Biodiversity Strategy and LBAP	Wildlife adaptation in the face of climate change
Somerset Air Quality Strategy	<p>Aim 3 Improve the health and well-being of our citizens, objective 11 - work in partnership with others to improve the health prospects of all</p> <p>Aim 5 objective 19 reduce CO2 emissions</p>
Somerset Municipal Waste Strategy	Reduction of the amount of biodegradable material disposed to landfill

How we will reduce our carbon emissions and adapt to climate change

Our three Aims

One	Two	Three
<p data-bbox="184 602 705 704">To become an exemplar council in our reduction of carbon dioxide emissions</p> <p data-bbox="390 857 499 893">Green</p>	<p data-bbox="823 602 1268 704">To ensure more sustainable communities and adapt to the changing climate</p> <p data-bbox="940 857 1150 893">Sustainable</p>	<p data-bbox="1369 602 1927 704">To encourage, educate and work with partners to reduce carbon dioxide emissions</p> <p data-bbox="1562 857 1738 893">Intelligent</p>
<p data-bbox="298 954 592 984">From our own estate</p> <p data-bbox="289 1026 600 1055">From our vehicle fleet</p> <p data-bbox="252 1097 638 1127">From our business mileage</p> <p data-bbox="163 1169 726 1198">Through green and ethical procurement</p>	<p data-bbox="831 954 1260 984">Through our land use planning</p> <p data-bbox="793 1026 1297 1055">By adaptive change in our practices</p>	<p data-bbox="1411 954 1894 1016">Through working with our staff and members</p> <p data-bbox="1419 1058 1885 1120">Through working with community partners</p>

Action Plan

Please note that actions in grey require funding and will only be pursued if funding bids are successful

Aim one; To become an exemplar council in our reduction of carbon dioxide emissions

Objective one: To reduce the carbon footprint of our own estate by 20% from 2008/09 to 2012/13

Action	Costs	Responsibility	Milestones	Delivered by
To establish whether current resource of climate change staff is adequate to fulfill rising government expectations of local authority	Nil	Head of Service, Engineering and Property and Corporate Director, Environment	Scoping work complete and report to Management Board	Dec 08
Measure and report annual carbon emissions arising directly from the activities of the council	£5000 (2008), from existing resources and supported by the Carbon Trust	Property Management Officer and Climate Change Officer Head of Service, Economic Development, Planning and Transport	Establish a baseline assessment of SSDC carbon footprint of our estate via the Local Authority Carbon Management Programme.	March 2009
			Carbon Implementation Plan produced	Oct 2009
			Carbon reduction strategy revised to incorporate CIP	Mar 2010
Develop a policy for carbon emissions of new council buildings.	Nil	Head of Engineering and Property Services	Aim for BREEAM excellent rating for all new council buildings, giving costings that also include options for very good and good ratings.	As opportunities arise
Make improvements to our existing buildings to increase energy efficiency	Within existing resources	Head of Engineering and Property Services	Priority list produced of improvements to buildings once Carbon Implementation	Jan 2010

	£3,000 from existing resources Nil		Plan complete Complete feasibility pilot for Solar shading to Brympton Way offices Prepare capital bid if business case proven Potential installation	Feb 2009 Aug 2010 April 2012
	Within existing resources	Design Officer	Investigate feasibility of solar power and rainwater harvesting in Peter St toilets. Installation.	June 2008 Feb 2009
Develop an carbon policy for council buildings and staff outlining recommendations for working temperatures and carbon efficient use of equipment and styles of working	Within existing resources	Head of Engineering and Property Services	Completed policy	Sept 2008
Increase the percentage of green electricity procured, if available and feasible	Business case prepared at each re-tendering	Head of Engineering and Property Services	75% 90% 100% (if available)	March 2010 March 2011 March 2012
Install wood heat boilers if appropriate as traditional boilers fall due for replacement, subject to successful business case and carbon reductions.	Lufton Depot c£45,000 Brympton Way c£114,000	Property Management Officer and Climate Change Officer	Report to members outlining sustainability issues as well as financial case. Potential installation. Preparation of capital bid Potential installation.	Dec 2009 Dec 2010 Aug 2009 March 2011
Install 5 – 15 kW pole mounted wind turbines at SSDC sites where there is a wind resource	£40,000, already approved through capital process	Head of Engineering and Property Services supported by Climate Change Officer	15 kW Proven wind turbine installed at Yeovil Innovation Centre	Sept 2008
Investigate feasibility of installing 2 MW wind turbine to offset SSDC electricity use	Within existing resources	Climate Change Officer	Feasibility study complete	Dec 2008

Establish carbon sinks by tree planting programme for land we manage, ensuring revenue implications are considered.	£5000 from existing resources	Street scene, Countryside and Conservation	Increase tree cover on public land by 5%	Dec 2012
Investigate feasibility of purchase or long-lease brown or green field sites to plant trees for dual benefit of carbon sink and community woodland increasing district-wide tree cover by 1% (approx 2018 ha.)	Within existing resources	SSDC	Business plan completed	Dec 2012
Maximise wood chip production from woodland and verges the council manages by additional planting and ongoing tree and shrub management, taking into account the issue of sensitive management of woodland	Within existing resources – potential saving	Tree Officer	Audit amount of woodchip processed per year Sourcing of wood chip for boilers if required	April 2009 Sept 2012

Objective two: To reduce CO₂ emissions from our fleet vehicle by 5% each year from 2008/09 to 2012/13

Action	Costs	Responsibility	Milestones	Delivered by
Develop a low carbon fleet policy to guide procurement of future lease vehicles, using a hierarchy of electric, LPG and the latest technology (Euro 4&5) diesel engines	Cost neutral	Head of ICT & Procurement/ Head of Streetscene/ N Atkins	Policy complete Implemented	March 09 As leases finish
Install LPG tank at Lufton Depot	Nil	Head of ICT & Procurement/ Head of Streetscene/N Atkins	Tank installed	June 2009
Evaluate the potential of three pilot alternative fuel vehicles for possible use in own fleet	Capital bid to be prepared	Head of ICT & Procurement/ Head of Streetscene/N Atkins	Capital bid decision Pilot period Evaluation	April 2009 2009-10 2010
Implement methods of reducing streetscene and countryside operational mileage and fuel consumption by 10% by 2012	Potential saving	Head of Service for Street scene	Mileage reductions recorded	April 2009

Objective three: To reduce our CO₂ emissions from our business mileage by 5% each year from 2008/09 to 2012/13

Action	Costs	Responsibility	Milestone	Delivered by
Set criteria of maximum CO2 emissions for lease cars and loans for essential users on the basis of Euro emissions	Nil	HR and Performance Manager/Head of ICT and Procurement	Draft Dec 08 for discussion	Mar 09
Review current policy around business mileage	Within existing resources	Human Resources and Performance Manager	Draft to SSCF Jan 09	Mar 09

Objective four: To reduce our CO₂ emissions from office equipment through green procurement

Action	Costs	Responsibility	Milestones	Delivered by
Ensure Procurement Policy includes the requirement for a green/carbon emissions assessment.	Within existing resources	Head of ICT and Procurement/ Heads of Service	Inclusion in Procurement Strategy	Complete
Positively procure from companies with credible, carbon reducing, green policies and from those with local supply chains.	Within existing resources	Head of ICT and Procurement/ Heads of Service	Inclusion in Procurement Strategy PC hardware contract	Complete May/June 08

Aim two; To ensure more sustainable communities and adapt to the changing climate

Objective 5: Ensure through our spatial planning that every planning application includes sustainable construction, microgeneration and water saving measures by 2012

Action	Costs	Responsibility	Milestones	Delivered by
Apply relevant planning policy to seek to ensure renewable energy equipment is installed in all new large developments (10 or more dwellings, sites more than 0.5 ha or 1000 m ² or more) the subject of planning applications.	Within existing resources	Development Control Service Manager supported by Climate Change Officer	<p>Work with a small number of developers to establish easy to use guidance on installation of renewable energy requirement in new developments</p> <p>Hold a conference in our council chambers to explain our renewable energy requirement guidance to development control users</p> <p>Implement and develop Policy RE5 of the SW Regional Spatial Strategy to extend to all new developments Send out renewable energy requirement guidance with all new planning applications and post to our website</p> <p>Train and support development and building control officers to effectively implement the council's renewable energy requirement for new developments</p>	<p>Dec 2007</p> <p>April 28th 2008</p> <p>From 29th April 2009</p> <p>From 29th April 2008</p> <p>Ongoing</p>
Seek to ensure whenever possible that new development is orientated and constructed to maximize solar energy	Within existing resources	Development Control Manager	Include solar orientation within LDF design policy.	From Oct 2010

Encourage additional insulation in existing buildings during building works	Within existing resources	Building Control Manager	Building control officers advise when insulation can be improved	Ongoing
Seek and support the implementation of the Code for Sustainable Homes, in line with the Government timetable for doing so	Within existing resources	ED,PP & T Service Manager Building Control Service Manager	Easily usable guidance and forms produced by Climate Change Officer Integration of Code for Sustainable Homes as core policy within our Local Development Framework	Code Level 3 2010 Code Level 4 2013 Code Level 6 2016
Actively promote development of medium sizes (50 kW – 10 MW) strategic renewable energy resources including wind power, anaerobic digestion, district wood heat, combined heat and power and energy from waste to meet South Somerset contribution to the SW RSS renewable electricity target of 61 – 81 MWe for Somerset by 2010	Within existing resources	ED,PP & T Service Manager	Spatial policies detailing development of strategic renewable resources as core policy within our Local Development Framework. Partnerships established to develop sites	Oct 2010 Ongoing
Encourage installation of rainwater harvesting equipment for all new larger developments	Within existing resources	Development Control Service Manager supported by Climate Change Officer	Large developments with rainwater harvesting installed	From May 2008
Encourage developers to enter existing award schemes for exemplar sustainably constructed buildings within the district	Within existing resources	Development Control Service Manager supported by Climate Change Officer	Development Control Officers made aware of suitable award schemes South Somerset District perceived as a centre of excellence in sustainable construction	From May 2008
Seek to ensure development proposals allow for wildlife adaptation consistent with the Local Biodiversity Action Plan and climate change objectives.	Within existing resources	DC Manager and Ecologist	Increase in wildlife corridors linking sustainable habitats	Ongoing
Encourage developers to offer incentives to promote transport alternatives to the car	Within existing	Development Control Manager	Provision to house purchaser by developer of travel pack with information	

from the outset for new developments.	resources		on public transport /cycle maps/footpaths and a voucher scheme enabling free travel on local bus routes for the first year.	
			Planning Obligation Guidance note	April 2009

Objective 6: Ensure through adaptive changes in our practices that we respond effectively to the changing climate

Action	Costs	Responsibility	Milestones	Delivered by
Implement the statutory recommendations of the Pitt Review	Unknown – full costs of statutory recommendations will be added to the MTFP when known.	Head of service for Environmental Health	Implementation plan produced and costed and reported to members	August 2009
Work with 3 communities per year to enable a local response to flash flooding and extreme weather events	Cost neutral	Engineers, Civil Contingencies. Streetscene	Workshop held in October 08 to identify communities willing to produce flood emergency plan and have local arrangements for sandbags etc	Ongoing
Produce and implement a climate change adaptation plan that assesses the risk climate change poses to the local areas and sets out the actions to deal with these risks (LAA, NI 188)	Within existing resources	Climate Change Officer	Plan produced Cost the implications and report to members	March 09 July 09
Purchase more effective temporary flood protection barriers for emergency use.	Cost neutral	Emergency Planning Manager	Flooding avoided during heavy rainfall event	April 2010
Review whether the installation of rainwater harvesting to supply toilets at Brympton Way is feasible and prepare business case and install if successful	£45,000	Property Services Team Leader	Feasibility assessment. Capital bid prepared. Potential Installation.	August 2008 February 2009 Dec 2009
Include reference to carbon reduction and climate change adaptation in all new	Within existing resources	Corporate Director,	New corporate plan with rigorous, SMART, climate change objectives	2009

plans and policies		Environment		
Continue to provide advice - to those that request it -on management of habitat, trees and wildlife that takes climate change into account, in accordance with the LBAP (Local Biodiversity Action Plan).	Within existing resources	District Ecologist	Contribution towards LBAP targets Trees suitable for late 21 st century climate planted on new developments and council managed land	Ongoing
Incorporate drought resistant plants into new amenity shrub and herbaceous plantings in urban areas.	Potential savings	Streetscene	10% reduction in planting scheme irrigation	Dec 2012
Ensure extension of dedicated cycle routes	Within existing resources	Planning Policy Team Leader	Incorporation in Local Development Framework	Ongoing
Seek to ensure provision for bicycles in all new developments; to include cycle storage and dedicated cycle ways	Within existing resources	Head of Economic Development, Planning Policy and Transport Development Control Service Manager	Incorporation in Local Development Framework	Ongoing
Plant shade trees in appropriate urban areas, on land we manage, and encourage developers to do the same	Within existing resources	Streetscene Service Manager, DC Planning	Increase tree cover on public land by 5%	Dec 2018

**Aim three;
To encourage, educate and work with partners to reduce carbon dioxide emissions**

Objective 7: To reduce carbon emissions arising from personal choices both at home and at work through working with our staff and members

Action	Costs	Responsibility	Milestones	Delivered by
Hold carbon reduction awareness event for all staff and members	Existing staff resources	Climate Change Officer	100 + staff attending	Nov 2007
Configure PCs to automatically power save in non-activity periods	Should result in saving	Head of ICT and Procurement	Measurable reduction in electricity use	April 09
Set up a team of energy champions to carry out occasional co-coordinated spot checks throughout offices to monitor unattended electrical devices switched on.	Existing staff resources	Climate Change Officer	Measurable reduction in electricity use	Every 6 months to 2010
Include carbon emission awareness training with induction course	Existing staff resources	Human Resources Service Manager	All new staff trained	July 08
Establish a steering group to oversee implementation of this Strategy	Existing staff resources	Corporate Director, Environment/ Green Team	First meeting of steering group, Annual review	Dec 2008
Install a 1 kW building mounted wind turbine at a site visited by the public to demonstrate its value	Within existing resources	Climate Change Officer	1 kW Wind turbine at Ham Hill Centre installed	June 2008
Produce an updated Green Travel Plan for council staff and members, (and work in partnership through the LSP to achieve green	Existing staff resources	Transport Strategy Officer	Staff member group set up to prepare	Dec 2008

travel plan objectives of mutual interest, with other public and private sector partners)			Completed Plan	Dec 2009
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Objective 8: To reduce carbon emissions through working with community partners

Action	Costs	Responsibility	Milestones	Delivered by
Provide advice to householders about home insulation and other energy efficiency measures including grants available	Existing staff resources	HECA Officer Building Control Development Control	Annual report detailing reductions in household energy use in the district	Annually
Complete installation of hydropower at first tranche of 10 sites	Met by grants already achieved and site owners	Climate Change Officer, South Somerset Hydropower Group	300 MWh/yr renewably generated electricity	Dec 2009
Develop a clear program of schemes for a second tranche of site owners.	External grant funding to be applied for	Climate Change Officer, South Somerset Hydropower Group	Second tranche of site owners engaged with site development	
Provide discretionary small grants of up to £1000 to householders and businesses installing innovative and effective carbon reduction initiatives that can be used as practical examples to others	£1000 per turbine (£4000/yr) from existing resources	Climate Change Officer	4 installations a year	April 2010
Increase tree cover throughout the District by encouraging planting on privately owned land	External funding to be applied for	Tree planting officer, Tree Wardens, landowners, Somerset County Council, Forestry Commission	Tree cover in the district increased by 1%	Dec 2012
Develop partnerships to establish multi-functional community woodlands.	External funding to	Tree planting officer, Somerset County	A minimum of 2 Community woodlands	Dec 2010

	be applied for	Council, Local communities		
Encourage good practice management of privately owned woodland to maximise working coppice and wood chip production	Within existing resources	Tree Planting Officer, Countryside and Streetscene staff	Advice given to 10 landowners per year	
Examine ways in which this strategy might be supported via the SSDC grant programme	Existing staff resources	Voluntary Sector Development Officer	£ of grants given that are to carbon reduction projects.	Dec 2011
Investigate feasibility of introducing business rate rebates for excellent practice in business energy efficiency	Within existing resources	Head of Revenues and Benefits	Report written	Dec 2009
Encourage and support others in South Somerset to produce own travel plans in consultation with bus companies, car clubs and the community	Existing staff resources	Transport Strategy Officer	Scope Sept 2008	Dec 2009
Regularly update our website and InSite to include carbon reduction news	Existing staff resources	Climate Change Officer, Communications Officer	New material on website and InSite	Continually
Work with partners such as Ecos Trust and others to ensure "best practice" in all endeavours associated with sustainable construction	Existing staff resources	Climate Change Officer	Jointly arranged conference	May 2008
Increase recycling rates through Waste Partnership working	Existing staff resources	Recycling Officer	Household recycling rate increased to 50%	April 2010
Work with Somerset Waste Partnership and other partners to encourage installation of CHP anaerobic digestion plant at locations close to the consumer	Existing staff resources	Climate Change Officer	New plant installed	Unknown
Support the creation of 3 transition towns by 2012, committing to relocating food, energy, transport and their economies	Existing staff resources	Climate Change Officer, Area Development Teams	Groups established	2012

Appendix 1

Our past and current carbon dioxide emissions

Electricity use from our largest buildings (carbon emissions not taking into account purchase of green electricity)								
Site	Analysis	Period						
		1999-2000	2000-2001	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Churchfield	kWh/Annum	61,745	41,941	74,646	63,482	49,583	48,678	48,194
Brympton Way		686,212	684,293	582,875	629,400	648,845	695,202	771,118
Lace Mill		108,801	107,138	68,383	23,622	96,098	40,014	34,396
Petters House		135,854	136,147	122,467	107,095	121,180	136,037	131,557
Kelways		77,183	70,651	73,205	59,267	62,995	58,689	55,024
Goldenstones				697,862	753,660	788,832	738,964	794,725
Octagon				207,509	233,567	244,303	346,392	266,519
Lufton				138,388	166,105	292,555	301,304	253,760
Totals				1,965,335	2,036,198	2,304,391	2,365,280	2,355,293
Totals		Tonnes CO ₂ /annum ¹			1116	1156	1308	1343

Gas use from our largest buildings								
Site	Analysis	Period						
				2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Churchfield	kWh/Annum			171,964	116,195	92,573	108,907	102,891
Brympton Way				227,442	153,445	177,311	325,158	317,408
Lace Mill				185,315	119,259	117,242	138,345	95,829
Kelways				135,541	197,997	131,798	167,636	143,544
Goldenstones				1,540,498	1,549,431	1,815,727	1,751,400	1,977,516

Octagon				208,438	251,453	294,839	253,075	224,508
Totals				2,469,198	2,387,780	2,629,490	2,744,521	2,861,696
Totals	Tonnes CO ₂ /annum ²			479	463	510	532	555

Car mileage from our business use					2004-2005	2005-2006	2006-2007
	Miles				764,033	754,179	776,532
	Tonnes CO ₂ /annum ³				201	199	204

Fuel use by our fleet vehicles					2004-2005	2005-2006	2006-2007
diesel	litres/annum				397,568	387,790	387,085
gas oil	litres/annum				43,398	45,849	49,224
	Tonnes CO ₂ /annum ⁴				1181	1162	1169

All emissions Tonnes CO₂/annum	3200	3236	3265
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Based on 0.568 kg CO₂/kWhr ¹

Based on 0.194 kg CO₂/kWhr ²

Based on average 1600 cc, 40 mpg and petrol 2.315 kg CO₂ / litre petrol ³

Based on 2.68 kg CO₂/litre diesel ⁴

1 gallon = 4.55 litres

Appendix 2

Reducing our carbon emissions – Heating our Buildings

Case Study – Maximising wood chip production to supply wood chip boilers

Background

The tree team currently removes or prunes trees only where they are dangerous or present a nuisance. Three materials are produced. Logs, brown chips and green chipped or shredded material containing leaves. Usually these materials arise on site but some of the smaller branches are sometimes transported to Lufton depot for chipping where it is used by horticulture for mulch. Basically the wood materials are considered as waste and left on site whenever possible to minimise workload. The trees treated are located at the many properties and small areas of council maintained ground.

An example of such work is the north facing escarpment of Council leased Ash Copse and Sampson's Wood where maturing sycamore and ash trees adjacent residential properties need to be coppiced to prevent nuisance. There is the opportunity to coppice most of the tree within the copse and bring it back into woodland management to maximise future wood production. This could not be achieved with current staffing levels of the tree team.

Philip Poulton – tree team supervisor – estimates that up to 12 tonnes of chip can be produced in a day. Investigation through record keeping is underway to establish more accurately the annual tonnage of chip currently produced.

The tree team is currently contracted by Somerset County Council for £4,000 to manage highway verges – including tree removal - in Yeovil only. This contract could be expanded to include the whole of the district if the tree team were expanded.

The council commissioned a wood heat feasibility study for Lufton Depot from the Bristol and Somerset Energy Advice Service. To feed a boiler heating the Offices and workshops at Lufton Depot would require 34.4 tonnes or 202 m³ a year

We have also commissioned REGEN SW to conduct a wood heat feasibility study for our Brympton Way offices where the annual requirement for wood chip would be 96 tonnes.

These quantities of chip can be sourced from Longleat or the supplier at Rimpton for about £50 a tonne (£6,500 / year)

The council owns, leases or manages 92.6 hectares of copse and woodland at Chard Reservoir, Ham Hill Country Park and Yeovil Country Park (including Ash Copse and Sampson's Wood). The BTCV woodland handbook states a productivity of 3 tonnes of air dried wood per hectare per year productivity from a well managed coppice. This suggests a potential 278 tonnes a year from this land although the actual potential is less as some of the woodland is not coppiced but consists of mature trees. However, it is an indication that production of wood chip could be increased very substantially from council managed land.

Maximising Production of Wood Chip

- The contract for highways verge maintenance for the whole of the district could be taken on and the council benefit from the additional income as well as the additional wood chip produced.
- Areas of Ash Copse, Yeovil Country Park, Ham Hill Country Park and Chard Reservoir could be brought into active coppice management.
- All chipped wood (apart from some of the leafier batches) could be brought back to Lufton Depot and stored in a new covered area or covered with a purpose made breathable cloth to keep them dry

Philip Poulton – tree team supervisor – estimates four additional staff, a new log splitter and Unilog vehicle would be required to achieve this.

Assuming current productivity of 12 tonnes x 20 days = 240 tonnes, it seems likely that the council could supply wood chip for several key buildings.

Appendix 3

Local offsetting of our carbon emissions (Comparison of methods of addressing carbon)

All vegetation is composed of long chain hydrocarbon molecules that were derived via photosynthesis from atmospheric carbon dioxide. As trees have the greatest bulk and occupy the greatest three dimensional space, woodland can absorb greater quantities of carbon than grassland, fields of crops or scrub.

Tree planting to absorb carbon dioxide isn't counted as part of NI185 or the base line data required for the Local Authority Carbon Management Programme. However, it would result in offsetting some of the emissions arising from council activities.

A trees Carbon absorption is dependent on size, age and species. A standard mature tree typically weighs about 3 tonnes. Just over 2 tonnes of that comes from carbon dioxide. If it takes 50 years to reach maturity then it has absorbed 40kg per year (a little over 100 grams per day).

Although not yet complete, our baseline carbon emission data for all SSDC activities looks likely to be around 4,000,000 kg / yr. A 5% saving per year is therefore 200,000 kg. Based on 40 kg per tree per year this would require planting of 5000 trees

Recommended planting density for all species is 400 per hectare, so the council would need to plant up 12.5 hectares a year to offset 5% of the council's carbon.

South Somerset has an area of 370 sq miles or 95,829 hectares, Therefore 12.5 hectares represents 0.013 % of South Somerset.

The council also needs to consider the need for wood for chipping for our future wood heat boilers and the opportunity to supply others. Although this means releasing some of the carbon captured back to the atmosphere, the coppiced trees will then grow faster and claim the carbon back again within 5 - 8 years.

Appendix 4

Preparation for this Strategy

Energy Trust led Climate Change Strategy Workshop , Council Chambers 8th November 2007

Attendees – Key Members and Officers of the district council

Aim – To assist in the writing of a Climate Change Strategy for the Council through discussion and agreement of key objectives for the following areas;

Planning Transport Council's own estate Staff motivation Community

Attendees suggested the vision statement

“To effect a culture change to encourage sustainable, cost effective carbon reduction in the commercial, public and private sectors. To support this initiative through education, innovation and leading by example.

Attendees agreed the following council objectives

Transport

- 25% CO2 reduction due to council business travel including commuting from today by 2012.
- Full travel plan and coordinator.
- Fleet management (including procurement).
- Incentives (avoid perverse incentives).
- Loan schemes for bicycles & gas conversions on vehicles (de-risking investment).
- Work with workforce.
- Create a smarter choices ethos.

- Homeworking, mobile working, nomadic working (BT model).
- A routing system plan to make journeys efficient.
- Influencing other organisations including our own departments to increase cycle/pedestrian routes.
- Influencing partner organisations to support green transport.

Planning

- All planning applications for residential and business use should have an element of renewable energy.
- Educate and inform those involved in development about the issues surrounding carbon reduction.
- Written planning policy – give greater weight to the benefits of renewable energy generation.
- Insulation of existing housing stock.

Own estate

- Reduce energy costs and consumption by 1 per cent per year for each of next five years.
- Local procurement of goods and services.
- Intelligent, cost effective green purchasing strategy.
- Marketing strategy of green incentives not initiatives.
- Have a vehicle routing system operational by 2009.
- Energy efficient culture across SSDC staff and members.
- Promote quality goods from recycled materials.

Community: Staff motivation, businesses and schools

- To address 'holistic approach':
- Incentives in grant programmes.
- Having energy efficiency priority for 1 year.
- Lever in Viridor (and other sustainable funding).
- Penalties (eg in setting of business rates) to those who are not energy efficient.
- Link the discretionary 80% top up for those businesses who can demonstrate good record.
- Should have training as part of staff induction.

- Extend Somerset Waste Action Programme into more holistic climate change action programme.
- Make more use of key staff: countryside, planners, Agricultural development officers, councilors, engineers, tree planting officer, service/building champions, climate change officer, community, regeneration, development officers, procurement.
- Work targets into all service planning.
- Help businesses practically and dispose of water more effectively (and recycling).
- Communicate ISO 14001 to businesses.

Community Actions

- LAA targets: make sure we add in those that are most useful in measuring our progress.
- Media strategy with EST – to spread the message with community. Celebrate success (eg individual who has put in ground source heat pump).
- Have a LSP/SSDC/EST Climate change awards: individual, school, business (with Somerset Chamber), community group.
- Coordinate with all retail business, regeneration support.
- Use parish plan groups to encourage community projects.
- Also move on to supporting a carbon neutral action plan.

Group 5: Community: housing and energy advice

Short term:

- Promote via council tax bill: are you keeping track of energy bills.
- Your Somerset' paper.
- Parish councils.
- Parish newspapers.
- Orchard FM/Ivel FM.
- Housing Association tenants.
- Events promotion.
- Exemplar houses/individuals.
- Home information packs – estate agents; grading for houses – A, B, C etc.
- Funding – output reading meters for householders?

Longer term:

- CO2 reduction (objective 19).
- Reduction in energy use.
- Overall insulation – factors to be increased.
- Rainwater harvesting.
- Exemplar projects.
- Major solar/thermal power.
- Long term return on investment.
- Green energy.
- Energy from waste.

These aims have informed the Carbon Reduction Strategy