



WEST OXFORDSHIRE
DISTRICT COUNCIL

Climate Change Policy

2008 - 2012



Here at West Oxfordshire District Council, we are proud that our district is such a beautiful place to live in, work in and visit. We know how important the environment is to our residents and have emphasised this by making one of our corporate aims to **‘protect and enhance the environment of West Oxfordshire and maintain the district as a clean, beautiful place with low levels of crime and nuisance’**. As part of this corporate aim, we have acknowledged the challenge of climate change to our surroundings and the need to respond to this.

In the past three years we have signed the Nottingham Declaration to publicly show our intention to reduce our carbon emissions. We have further shown our commitment by implementing a Carbon Management Programme which is helping us reduce the carbon footprint of our corporate buildings. This Climate Change Policy takes us to the next step and sets out a number of actions that the Council is taking to reduce local carbon emissions and therefore our impact on global warming, as well as improving our local environment. Having experienced the terrible floods of July 2007, we also take the potential extreme weather effects very seriously. Through looking at the more likely risks of climate change, we can help to protect our district and adapt our services as necessary.

We know from the results of our Environment Survey that you are as keen to make a difference as we are, and to help by working with us to keep West Oxfordshire a safe and beautiful place.



Barry Norton
Leader of the Council



David Harvey
Cabinet member
for Environment



David Neudegg
Chief Executive

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In the 2007 West Oxfordshire District Council environment survey, 79% of respondents agreed that “climate change is a real issue that we need to tackle now” and expressed concern about the impact of climate change on their local environment.

“If we do not work to limit the impacts of climate change now, the financial costs in the future will be much, much greater. The benefits of strong early action far outweigh the costs of not acting”

Sir Nicholas Stern

“The climate change we expect in the next 30 - 40 years will be due to our past greenhouse gas emissions. Climate change later this century will be determined by the emissions we allow now.”

UK Climate Impacts Programme

The Intergovernmental Panel on Climate Change, a leading authority on the issue, has projected a global average temperature increase this century of 2 to 3 °C. Evidence shows that human activity over the last 200 years or so is primarily responsible for this change as we have released unprecedented amounts of greenhouse gases into the atmosphere. Every time we warm our homes, switch on a light, cook a meal, use a car, take a flight, buy or throw something away we contribute to climate change.

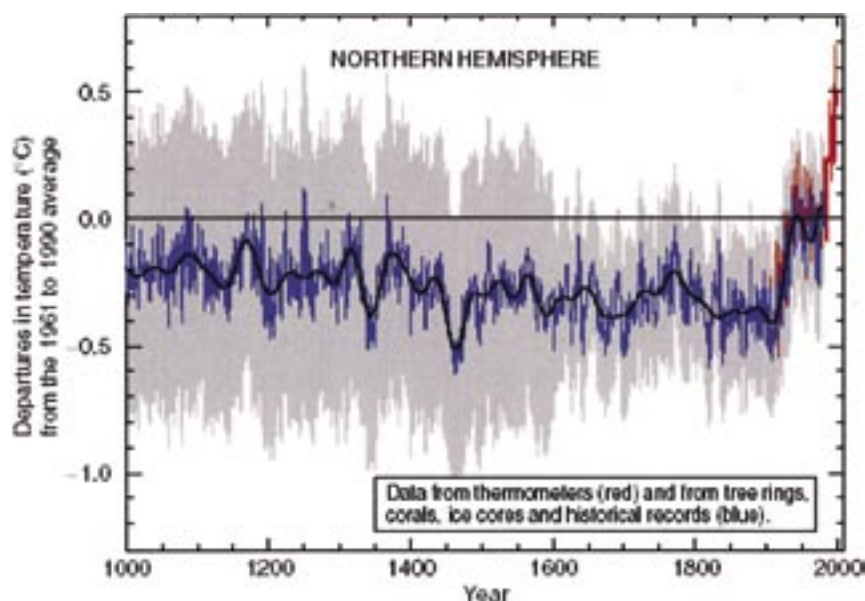
We need to take urgent action to reduce greenhouse gas emissions to slow down global warming (often called ‘mitigation’). This we can do through reducing our energy usage simply by turning things off and not leaving things on standby or potentially installing renewables in our homes and offices. How we travel is also vital – where possible walk or cycle and try to use cars and planes less.

We also need to respond to the impacts of climate change that we have seen and those that experts predict (referred to as ‘adaptation’). The predicted changes in weather that we are beginning to see are hotter, drier summers and milder, wetter winters, with some weather extremes becoming more common and others less so.

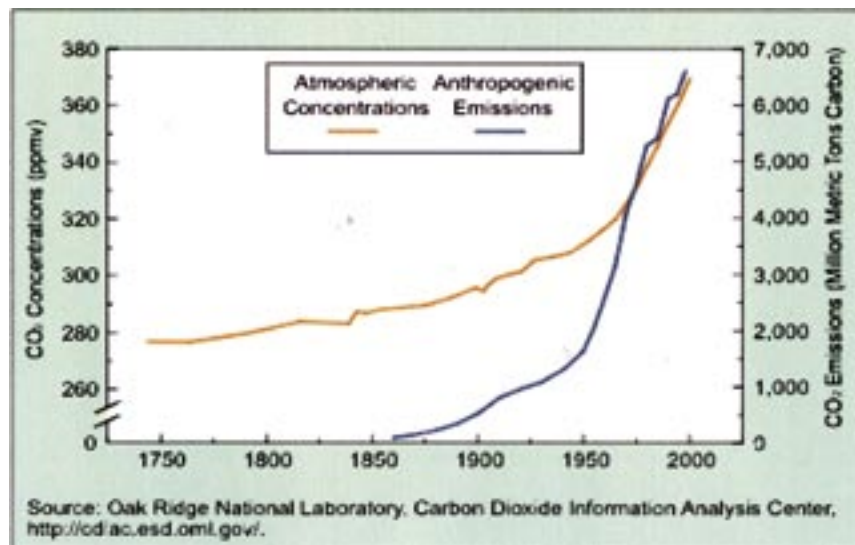
Europe experienced a major heat wave in 2003 with 30,000 deaths, also forest fires and crop damage seriously impacted the economy with losses in excess of £7.5bn. 2091 of the deaths occurred in the UK. We are likely to experience an increased frequency of summer heat waves, and droughts of this magnitude are likely to become the norm in the UK by 2040.

Increased frequency of severe and unseasonable weather events and increased flood risk will be seen more locally too as highlighted by the Oxfordshire extreme flash floods in October 2006. Even closer to home, the July 2007 floods in West Oxfordshire brought Witney and a number of other areas in the district to a standstill and had a terrible impact on 1631 local homes and 72 businesses.

Graph illustrating global warming:



Graph plotting atmospheric CO₂ concentration against human caused CO₂ emissions. This shows that as human caused emissions increase, overall CO₂ drastically increases:



"We welcome the... opportunity for local government to lead the response at a local level, encouraging and helping local residents, local businesses and other organizations – 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."

The Nottingham Declaration on Climate Change

Subsequently the Climate Change Bill is presently progressing through Parliament and is set to commit into law the government's proposed targets to cut UK CO₂ emissions by at least 60% of 1990 levels by 2050. This is the target that West Oxfordshire must meet.

Greenhouse gas emissions are often expressed as a weight of carbon dioxide (CO₂) equivalent or the carbon footprint. According to figures recently published by DEFRA (Department of Environment, Farming and Rural Affairs), West Oxfordshire's district wide CO₂ emissions for 2005 were about 817,000 tonnes of CO₂ equivalent.

Display of volume of CO₂ produced per household in West Oxfordshire

Enough to fill almost 5.5 hot-air balloons, each having a volume of 77,000 cubic feet (2180 cubic metres).



Residents' views

We know that there is support across West Oxfordshire for a Climate Change Policy and for this Council to reduce our own CO₂ emissions as well as those of the district as a whole. In the West Oxfordshire Environment Survey, 79% of residents agreed that "Climate Change is a real issue that we need to tackle now" and 78% were concerned about the impact of climate change on the local environment. Impressively 92% of you turn off appliances when not in use to save energy and 93% use our kerbside recycling service. However, there is much more that we can all do to reduce our carbon footprints.

The Council's indicative carbon footprint calculated from 2006/07 data is 3,466 tonnes of CO₂.

The Council will work in stages to reduce our carbon emissions, committing to an 8% reduction in line with the county-wide commitment but representing a total of 60% reduction by 2050.

Within its Council Plan, the document setting out the Council's Corporate vision, there is a commitment to 'Protect and enhance the environment of West Oxfordshire and maintain the district as a clean, beautiful place with low levels of crime and nuisance'.

As part of this, we recognise that we have an important role to play in leading by example and encouraging action on Climate Change issues at a local level. Specifically we will follow the lead of central government and concentrate on the following climate change goals:

- Reducing CO₂ emissions from our own services and buildings
- Adapting to the effects of climate change
- Reducing CO₂ emissions in the district as a whole

Reducing CO₂ emissions from the Council's services and buildings

The Council finished the Local Authority Carbon Management programme in April 2007 and, as part of this, has been taking action to reduce our own greenhouse gas emissions for a number of years.

Our CO₂ reduction task group will have established a comprehensive carbon footprint of the Council's buildings and services by early 2009. Through this group, the Council is developing robust monitoring and management routines and implementing action plans with annual targets for CO₂ reduction.

Complementing this work, a buildings audit looking at energy usage and carbon emissions reduction was carried out in April 2007 and a number of actions implemented. This year, we have commissioned detailed energy audits in our corporate buildings and leisure centres, and will be working on a new plan of action to further reduce our emissions.

It is also important that as a Council, our Councillors and staff behave in an environmentally friendly way. Our Green Offices group has been promoting positive environmental messages since 2005. We are continuously building on the work of this enthusiastic group of staff with regular initiatives around energy, water, waste, recycling and transport. We have a Green Travel Plan in place to encourage our staff to use more sustainable forms of transport, and will be updating this shortly.

Reducing Emissions resulting indirectly from the Council's operations

The Council also recognises that its operations contribute indirectly to greenhouse gas emissions in other ways, such as through the water we use, the waste we produce and the goods and services we purchase. To try and counteract this, we purchase 100% of our electricity from 'green' or alternative energy sources. We have achieved the first level for the Sustainable Procurement Task Force's Flexible Framework. Our sustainable procurement commitment ensures that, wherever possible, we buy more environmentally friendly products and encourage those that we buy from to make their products sustainable. This can be done in a number of ways including through careful sourcing, reducing packaging and increasing recycling.



At our Elmfield offices, one of the many environmental features of the building is the photo-voltaics panels on its roof and walkway canopy that generate renewable energy from sunlight. So far this has produced 52385 kWh of electricity, saving 2252 kg of CO₂ over five years, a small but important start.

Key Actions:

- Develop and implement a Carbon Management Plan for the Council covering energy, waste production and transport. Emissions to be calculated during 2008 and action plans developed with published annual targets.
- Develop and implement water management plan with targets for reduction in consumption. Seek to increase grey and rainwater recycling for Council buildings where feasible.
- Develop and implement robust sustainable procurement policy to ensure the environmental impact of all goods and services purchased by the Council are considered.
- Lobby the government and other statutory bodies where the Council identifies local issues or actions that fall outside the scope of local government.

South East Plan Policy CC2: Climate Change

Measures to mitigate and adapt to the current and forecast effects of climate change will be implemented through the application of local planning policy and other mechanisms. Behavioural change will be essential in implementing this policy and the measures identified.

In addition, and in respect of carbon dioxide emissions, regional and local authorities, agencies and others shall include policies and proposals in their plans, strategies and investment programmes to help reduce the region's carbon dioxide emissions by at least 20% below 1990 levels by 2010 and by at least 25% below 1990 levels by 2015. A target for 2026 will be developed and incorporated in the first review of the Plan.

Adaptation to risks and opportunities will be achieved through:

- i. Guiding strategic development to locations offering greater protection from impacts such as flooding, erosion, storms, water shortages and subsidence
- ii. Ensuring new and existing building stock is more resilient to climate change impacts
- iii. Incorporating sustainable drainage measures and high standards of water efficiency in new and existing building stock
- iv. Increasing flood storage capacity and developing sustainable new water resources
- v. Ensuring that opportunities and options for sustainable flood management and migration of habitats and species are not foreclosed

Mitigation, through reducing greenhouse gas emissions, will primarily be addressed through greater resource efficiency including:

- i. Improving the energy and carbon efficiency performance of new and existing buildings and influencing behaviour of occupants
- ii. Reducing the need to travel and ensuring good accessibility to public and other sustainable modes of transport
- iii. Promoting land use that acts as carbon sinks
- iv. Encouraging development and use of renewable energy
- v. Reducing the amount of biodegradable waste landfilled

In its Planning role, West Oxfordshire District Council influences development in the district. We are currently reviewing our overall planning strategy and policies, with one of the key priorities being 'Protecting our environment and reducing the impact from climate change'.

The West Oxfordshire Design Guide (adopted Sept 2006) already looks at sustainable building design. Individual guides on Solar Microgeneration and Small Scale Wind Turbines have also been produced to help householders and developers interested in these types of renewable energy. However, more can be done to address the issue of climate change.

A new overarching policy will be established through the South East Plan which should be approved by the Secretary of State in Winter 2008/9 (see left).

With its emphasis on sustainable development, the emerging new planning strategy and policies for the district are looking at:

- Reducing the need to travel and providing good accessibility
- Sustainable design and construction, including improving energy and water efficiency
- Renewable/low-carbon energy generation
- Flooding (this is included as it is considered to be a result of changing weather patterns)

The Council will aim to set high standards for low carbon emissions in new build, using the statutory guidance under the Code for Sustainable Homes. We will also consider identifying the areas most suitable for renewable and low-carbon energy sources, and which renewables are best suited for different locations. We will utilise this local knowledge to encourage the inclusion of a set percentage of onsite renewables and low carbon energy use in all new buildings.

Key Actions:

- Update present guides for householders on micro-generation and create new ones.
- Ensure climate change issues are addressed in the emerging strategy and policies of the Local Development Framework.
- Create new policies and guidance that require developers to address both the mitigation and adaptation issues of climate change.
- Develop and adopt new policies that encourage local generation of energy from renewable and low carbon sources.

(For commercial actions please see page 10).

West Oxfordshire's Carbon Footprint

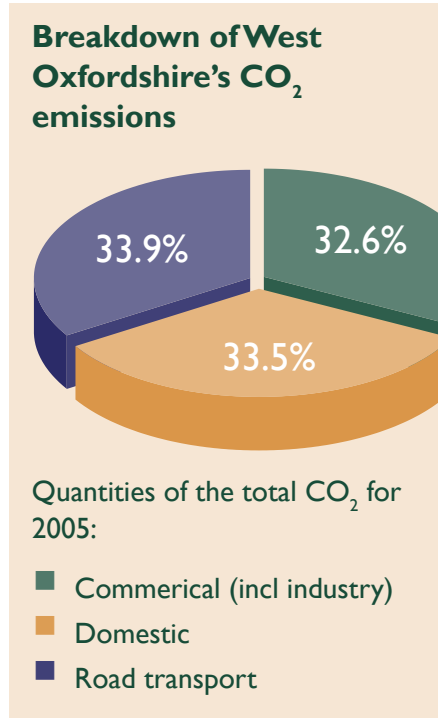
In 2005, West Oxfordshire's CO₂ emissions were 817,000 tonnes, the equivalent to 8.5 tonnes per person per year. This is higher both than the South East regional average of 7.1 tonnes per person and national average of 7.9 tonnes per person. As this DEFRA data only looks at measurable emissions relating to transport and energy use, it cannot be considered to be all inclusive – our carbon footprint will be larger than this shows. As a district, West Oxfordshire's CO₂ emissions are split fairly evenly between industrial and commercial energy use (32.6%), domestic energy use (33.5%) and transport (33.9%).

Rural districts such as West Oxfordshire typically have higher CO₂ emissions than urban districts. Reasons for this include the reduced availability of public transport which causes a greater reliance on travelling by car, and reduced access to the gas network.

Energy

The principal source of climate change emissions is energy used to power our homes, businesses and public services, as the majority of our energy is derived from fossil fuels. In total, 540,000 tonnes (66%), of West Oxfordshire's 2005 CO₂ emissions were due to energy use in either industry or our homes.

However, saving energy is no longer just about positive environmental action. Rapidly rising energy prices mean there is a sound economic argument for reducing energy use and investing in local renewable and low carbon energy generation. The Council will therefore promote energy efficiency and low carbon energy generation across the district, and set a good example in Council buildings.



Our Homes

Energy used in West Oxfordshire's homes contributes 2.85 tonnes of CO₂ per head to climate change. New homes that are being built to the standards of the Code for Sustainable Homes use far less energy and are therefore not only kinder on the environment but cost less to run. The Council supports the government's requirement for all new homes to be Zero Carbon Rated by 2016. We presently work with affordable housing providers to ensure that they meet Level 3 of the Code for Sustainable Homes and are working ultimately towards Level 6 across the board. We have a duty to ensure that all developers and housing providers active in West Oxfordshire build to the highest feasible standards of the Code.

Our homes are responsible for roughly a third of total carbon emissions in the UK. In existing homes, built before higher energy standards were introduced, roughly a third of energy goes to provide space and water heating. There is much that can be done to improve the energy performance of your home. Free behavioural changes such as switching off lights and not leaving appliances on standby are a good start but you can also invest in low cost measures such as installing loft and cavity wall insulation (where possible). As energy prices increase, there are also increasing benefits in investing in generating your own energy such as solar panels to provide hot water. We will work with the local Energy Saving Trust Advice Centre to encourage residents to act on CO₂ reduction in their homes and improve access to grants for energy saving measures.

Commercial & Public Sector

Energy we use in our businesses and public sector buildings such as schools and leisure centres are responsible for roughly another third of West Oxfordshire's CO₂ emissions. Patterns of energy consumption in this sector vary according to the nature of the business. Action to reduce CO₂ therefore needs to be tailored more specifically but the principles remain the same. Good general practice for organisations to use is to follow the energy hierarchy of: reduce energy use, use energy efficiently and where possible use energy from renewable and carbon sources.

Road Transport – getting around

The remaining third of emissions come from travel on West Oxfordshire's roads, almost 3 tonnes of CO₂ per head. This is high mainly because personal car usage is typically much higher in rural areas where a dispersed population has limited access to public transport. With prices at fuel pumps unstable, we have more reason than ever to reduce our car dependency, choose the most fuel efficient vehicles and put eco-driving tips into practice.

Although individuals have to make decisions about how they travel, the Council recognises that it has a role to play in encouraging a change in travel choices throughout West Oxfordshire. We are working with public transport providers to improve access to services. We are also encouraging local employers to implement Green Travel Plans that promote sustainable travel choices and reduce single occupancy car journeys by staff on commuting or business journeys.

Key Actions

- Promote energy efficiency and low carbon energy generation in the district.
- Ensure all developments in the district are built to the higher standards of the Code for Sustainable Homes.
- Work with the local Energy Saving Trust Advice Centre to encourage residents to act on CO₂ reduction and improve access to grants for energy saving measures and to make more sustainable travel choices.
- Work with public transport providers to improve access to services.
- Encourage local employers to implement Green Travel Plans.
- Continue to locate developments in the most sustainable locations in the district to minimise car travel.

What is the Code for Sustainable Homes?

The Code for Sustainable Homes uses a sustainability rating system - indicated by 'stars' - to communicate the overall sustainability performance of a home.

A home can achieve a sustainability rating from one (★) to six (★★★★★★) stars. One star (★) is the entry level - above the level of the Building Regulations; and six stars (★★★★★★) is the highest level - reflecting exemplar development in sustainability terms.

Each level includes requirements for energy performance and water usage, together with tradable requirements for other aspects of sustainability. Homes need to show a % reduction in CO₂ emissions compared with Building Regulations Part L1 in order to meet the levels. The required reductions broken down by level (star rating) are::

★	10 per cent
★★	18 per cent
★★★	25 per cent
★★★★	44 per cent
★★★★★	100 per cent
★★★★★★	Zero carbon

Stewart Milne Group, a Witney based housing developer, construction company and timber frame manufacturer, are leading the UK in environmental design and development.

According to the standards set in the government's Code for Sustainable Homes, they have designed and constructed the first potentially viable, 5★ home in the UK. This means it is carbon neutral, offsetting 100% of all its carbon emissions for space/water heating and lighting, with potential to be upgraded to 6* (zero carbon) in a development context. The Sigma® prototype Home is part of a 2 year research and development programme with Oxford Brookes University and is on display at the BRE Innovation Park in Watford. The home is sustainable in a number of ways including:

- Energy, water and waste systems are all considered in order to enable carbon neutrality
- It uses a number of micro renewable technologies (solar thermal, micro-wind and PV)
- Thermal efficiency and air tightness is excellent, via exemplar fabric design.
- Air quality is controlled through passive and mechanical heat recovery and ventilation systems.

Importantly in terms of learning lessons, they have a family living in one of the Sigma houses to see how it works in everyday life. In this way, they are using the prototype house to refine and produce low-zero carbon homes and build methods. These balance a need for energy efficiency and carbon neutrality, with an eye towards affordability, easy to use modern technologies and a healthy living space with no future comebacks. They emphasise that this is still very much a learning experience but one that should help pave the way for our homes in the future.

Website www.stewartmilne.com



The Sigma home ®



Rainwater harvesting system



Wind turbine on roof



Solar panels

Case study one: Stewart Milne

Local Air Quality

Many of the same transport related emissions that are contributing to climate change are also responsible for reducing air quality. This is a particular problem where there are heavy flows of traffic in built up areas.

Poor air quality has adverse health impacts especially for those susceptible to allergies and respiratory illnesses. Climate change scenarios predict hotter drier summers, and the reaction of sunlight with emissions from the burning of fuels increases concentration of these pollutants and therefore make these health issues worse.

Following monitoring, the Council has declared two Air Quality Management Areas in Chipping Norton and Witney - this is where air quality does not meet required government standards. Air Quality Management Plans for these areas are being developed, with proposals aimed at reducing car use included. The aim is to adopt solutions that reduce adverse impacts on local air quality and climate change.



Water

There is increasing pressure on water resources in the UK. In the last 15 years there have been several periods of drought which have resulted in water restrictions as groundwater and reservoir levels fell to record lows. Climate Change and population growth will place increasing stress on our water supplies.

Shockingly, the South East of England already has less water available per person than the Sudan and Syria and with climate change bringing generally hotter drier summers and a fast growing population the region looks set to become one of the most water stressed regions in the UK. Each person in the UK currently uses about 150 litres of water every day. This high consumption level is not sustainable in the long-term. Our clean water supply also contributes to climate change as electricity is used to power the purification processes and to pump it to our homes and businesses.

The Council has installed a rainwater harvester at its Elmfield offices. This uses rain water for toilets and therefore reduces our general consumption. We are presently improving our monitoring of water useage so we can continue to reduce unnecessary water useage.

Key Actions

- Implement Air Quality Management Plans for the two designated management areas in Witney and Chipping Norton.
- The Council will manage its own water consumption carefully and encourage others to do likewise.

Biodiversity

Biodiversity encompasses the whole variety of life on Earth. It includes all species of plants and animals, but also their genetic variation, and the complex ecosystems of which they are part. All these provide us with many services and resources that are essential to life, including: food, crop pollination, pest control, clothing, shelter, medicines, water and waste processing and play a crucial role in the regulation of the climate through capturing and storing carbon that would otherwise add to atmospheric CO₂.

Interaction with nature also makes people feel good and improves their quality of life. However, ecosystems are under intense pressure faced with the combined challenges of human development and a rapidly changing climate. Here in West Oxfordshire we are privileged to live surrounded by beautiful countryside, rich in biodiversity. If we do not take action to conserve and enhance these assets we shall suffer a loss in our quality of life and economy.

'Global climate change is probably the biggest long-term challenge to UK biodiversity. But in the short-term, habitat fragmentation and development pose the greatest threats to wildlife in Oxfordshire.'

Source BBOWT



The Council will continue to support the following organisations and projects that are working to conserve and enhance the rich biodiversity of West Oxfordshire: Cotswolds AONB Conservation Board, Thames Valley Environmental Records Centre, Oxfordshire Nature Conservation Forum, and the County Wildlife Sites, Oxfordshire Woodlands, Lower Windrush Valley Project and Wychwood Project.

Key Actions:

- Conserve and enhance priority habitats and species by continuing to support the Oxfordshire Biodiversity Action Plan (BAP).
- Continue to support organisations that are actively working to conserve and enhance West Oxfordshire's rich biodiversity.
- Continue to work with partners to implement a 'Conservation Target Area' approach, gaining the greatest benefits by focusing action on areas identified as the most important for local wildlife.
- Encourage more individuals to get actively involved in conservation work through the Green Gyms Project.



From the energy used to extract raw materials in manufacturing processes through to the greenhouse gases released when waste is disposed of to landfill, everything we buy and throw away contributes to climate change.

Currently in West Oxfordshire:

- In 2007/08 32,104.34 tonnes of waste was sent to landfill accounting for some 14,350 tonnes of CO₂ (equivalent)
- Approximately 25.5% of collected household waste is recycled, through a weekly kerbside collection of recyclable material (paper, cardboard, glass, plastic, cans, aluminium, textiles and batteries).
- 6% is taken away and composted using our successful green waste collection scheme (with a nominal charge) which is currently in its third year and is used by almost 3,700 residents. Much more is composted in back gardens.

Waste and its transfer generates considerable quantities of greenhouse gases; carbon dioxide and methane. Our everyday waste contains biodegradable carbon based organic matter such as kitchen waste, garden waste, and paper, which break quickly and other slowly biodegradable organic materials. It also contains waste that takes much longer to break down!

West Oxfordshire is well on the way to establishing itself as one of the county's top performing authorities in terms of recycling. Recycling helps to cut down on the use of raw materials and uses less energy to turn waste into useable products. However, ideally we should look to reduce the waste we produce in the first place, following the waste hierarchy:

Reduce what we buy, **Reuse** what we have, **Recycle** when we throw away.

Waste audits of the Council's buildings have been carried out in order to gauge the level and content of our own waste.

Key Actions

- The Council has set a target of recycling/composting at least 50% of household waste by 2020
- Promote the **reduce : reuse : recycle** message through a communications campaign.
- Action plan for reducing Council's own waste and increasing recycling to be produced with measurable targets.

The Plough Inn public house in Alvescot found that their general waste storage was generally overloaded with waste cardboard and glass. Using West Oxfordshire District Council's card and glass re-cycling service solved this problem.

Traditionally the pub industry uses a large amount of glass containers and when the service enabling these to be returned to the manufacturer was stopped, it meant sending all these empties to landfill as waste. In addition, having glass around the property in the waste containers was a danger to pub and waste collection staff. Kevin Keeling, the Plough's landlord, also describes the 'mountain of cardboard waste' that the pub accrues as a fire risk as well as disposal problem. Clearly the recycling service gives them a safe and environmentally friendly way of dealing with large amounts of glass and cardboard that would otherwise just be rotting in landfill.

Each year, the Plough recycles approximately 1560 kg of cardboard and 12,428 kg of glass.

Other 'green' initiatives that the pub has implemented including selling on their cooking oil, and they are looking into composting and more environmentally friendly ways of disposing of their plastic.



What is the Council's Commercial Recycling Scheme?

West Oxfordshire District Council offer a glass and cardboard collection service for the district's businesses. The benefits are that these products can be reused rather than sent to landfill and the waste management costs of local businesses are reduced. Collections take place on a weekly or fortnightly basis to suit the needs of the business and a number of different bin sizes are offered according to individual requirements.

At present, the Council has a total of 150 commercial customers. By providing our recycling service to them, we have diverted 280 tonnes of rubbish from landfill. However we plan to expand this service further. As costs of waste disposal increase, we anticipate that a wider range of recycling services will become available to businesses because recycling will become more economically viable.

For prices and more information call 01993 861020 or email env.services@westoxon.gov.uk

Case study two: The Plough, Alvescot

"Even if we miraculously cut all emissions today and became a zero carbon society, we would still witness a changed climate due to historical emissions. Whatever we do we are committed to 30 - 40 years of climate change."

UKCIP

The need to prepare to make appropriate adaptations in view of the inevitable consequences of climate change is now as pressing as the need for drastic cuts in greenhouse gas emissions.

The climate here in the South East of England is projected to change significantly over the next 30-40 years and beyond. We can expect to experience:

- Wetter, milder winters: leading to increased flood risk and increases in pest species.
- Hotter, drier summers: leading to water scarcity, drought and strain on wildlife.
- More frequent extreme and unseasonable weather events gales/storms/intense rainfall/heat waves: bringing increased risk of structural damage.

The floods last summer, the heat wave of 2003 and the drought 2004 - 2006 have demonstrated how climatic changes can have a major impact on our health, our homes, businesses and essential infrastructure such as roads, water and power supplies.

West Oxfordshire District Council has committed to a Local Area Agreement (LAA) with Oxfordshire County Council, the other City & District Councils of Oxfordshire and other partners. Through this agreement we will be working together to progress plans to adapt to climate change across the County. We will all be working to:

- Look at the implications of the likely weather scenarios as a result of climate change, and incorporate these into its decision making processes across all our service areas.
- We will be working with Local Strategic Partners and other appropriate partners towards raising awareness and managing risks identified throughout West Oxfordshire.



Building on knowledge of the likely impact of Climate Change, the Council will work with partners to build up a Local Climate Impacts Profile for West Oxfordshire. This will give us a clearer understanding of the risks and opportunities locally and help us develop and prioritise actions to protect our local environment and residents.

Some of the topics we will need to consider and plan for are:

- The built environment - our homes, businesses, public buildings, hospitals & schools. An understanding of the future weather and climate is essential for those involved in planning, constructing and managing the built environment.
- Transport infrastructure is vulnerable to extreme weather events. Disruption to travel has already been experienced, with flooding and with road surfaces melting and railway lines buckling in the heat.
- Agriculture - Farmers and food producers will feel the impact of climate change in a number of ways. Rising temperatures and longer growing seasons will give the opportunity to grow a greater range of crops, while changing rainfall patterns might require irrigation or water storage facilities to ensure summer water supplies. New pests and diseases may affect crops and livestock.

Key Actions:

- Produce a Local Climate Impacts Profile to gain clearer understanding of the risks and opportunities locally.
- Undertake a climate risk assessment for Council operations to identify risks to continuity of Council services and prioritise actions.
- Work with partners to promote awareness and encourage action throughout the district to enable the community to become resilient to climatic changes and recognise opportunities.

Our changing climate brings challenges and opportunities for the whole community of West Oxfordshire and we need to respond to those challenges together.



Community

Often the most effective projects start in the community, and there are some excellent examples of such groups that are working on climate change issues in West Oxfordshire. It can be frustrating getting projects up and running and the Council aims to support community groups with this work:

- The Council is investigating how it can best help such initiatives get access to advice and identify funding opportunities;
- We will work with partners to help communities network, share ideas and knowledge through events and ongoing support.
- The Council is commencing a Sustainable Wood Fuel Network in West Oxfordshire. This network seeks to utilise local wood resources as an alternative low carbon, low cost fuel source for the local community, bringing benefits to the local landscape, biodiversity and the local rural economy.

Partnerships

The Council clearly can't tackle climate change alone, and values working in partnership with a diverse range of organisations and statutory bodies. One of these bodies is the West Oxfordshire Strategic Partnership which brings together a number of local organisations. This partnership is currently developing the West Oxfordshire Sustainable Community Strategy, the environment section of which will work in tandem with this policy.

Communication

To help residents, businesses and community groups to reduce their carbon emissions and become more environmentally aware, communication is very important. Therefore:

- West Oxfordshire District Council will work with partners to develop and deliver a climate change communications campaign until at least 2012. The campaign will raise awareness and facilitate action on all the issues discussed in this document.

Challenge North Leigh (CNL) grew out of the North Leigh Energy Efficiency Group, started in July 2005. Recently it became a larger project with a wider remit when Scottish and Southern Electric (SSE) offered to work with them to reduce energy consumption by 10% over two years. This is a community based project, with volunteers working to encourage residents of East End, New Yatt and North Leigh to make behavioural changes in order to reduce their electricity consumption.



CNL has been active, using a number of means to get their message to local residents. Innovative ideas included a competition for local school children to devise a logo for the project, and CNL produced an environmental village calendar which was delivered to every house. This had bi-monthly energy and environmental themes, along with appropriate images as reminders of what the project would be focusing on. Other energy saving promotions include:

- Enabling some residents to use thermal imaging to identify sources of heat loss in their home
- An insulation offer for discounted wall and loft-space insulation
- A swap shop (where people bring in goods they don't want and swap with those they do)



They hold regular events including a Green Fair in June 2008 which provided information stalls and stands as well as stalls selling and promoting local, recycled and FairTrade products. At their 'Green Picnic' in August, a meter reader with enhanced training from SSE, was available to answer questions about anything to do with electricity and energy saving. He supported this by remaining based in the village for two months to help with the setting up of Current Cost meters, energy saving light bulbs, and discuss any issues around billing, tariffs etc.



CNL emphasise that involving and engaging a local community in discussion, debate and actions to mitigate the effects of climate change is challenging, rewarding and, at times, frustrating. Changing hearts and minds and getting permanent and lasting changes in behaviour, habits and attitudes is not easy. Part of the benefits of this project is their understanding of the difficulties and the knowledge that, despite their excellent work so far, this is an ongoing challenge and they are only just beginning.

www.challenge-northleigh.co.uk

Case study three: Challenge North Leigh

Adaptation to global warming consists of initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects

Biodiversity is the variation of life forms within a given ecosystem, biome or for the entire Earth.

Carbon dioxide (CO₂) emissions - CO₂ is the most abundant of the greenhouse gases which is released by burning fossil fuels.

Through the Local Authority **Carbon Management Programme** (LACM), the Carbon Trust provides Councils with technical and change management support and guidance to help them realise carbon emissions savings. The primary focus of the work is to reduce emissions under the control of the local authority such as buildings, vehicle fleets, street lighting and landfill sites.

Carbon offsetting is calculating your emissions and purchasing 'credits' from emission reduction programmes; these prevent or remove CO₂ emissions elsewhere.

Climate change is any long-term significant change in the 'average weather' that a given region experiences. Average weather may include average temperature, precipitation and wind patterns. It involves changes in the variability or average state of the atmosphere over durations ranging from decades to millions of years.

The draft **Climate Change Bill** was published for consultation in March 2007 and the Bill itself aims to reach Royal Assent in Autumn 2008. It provides a framework for addressing climate change based on a long-term target to reduce carbon emissions by at least 26 per cent by 2020, and 60 per cent by 2050 against a 1990 baseline..

The **Code for Sustainable Homes** is an environmental impact rating system for housing in England, setting new standards for energy efficiency (above those in current building regulations) and sustainability which are not mandatory under current building regulations but represent important developments towards limiting the environmental impact of housing.

DEFRA - The Department of Environment, Food and Rural Affairs, the government department that deals with environmental issues

Eco-driving or Fuel economy - maximizing behaviors describe techniques that drivers can use to optimize their automobile fuel economy.

An **ecosystem** is a natural unit consisting of all plants, animals and micro-organisms in an area functioning together with all of the non-living physical factors of the environment.

Energy efficiency, is using less energy to provide the same level of energy service. An example would be insulating a home to use less heating and cooling energy to achieve the same temperature.

The **Energy Saving Trust** is a non-profit organisation jointly funded by the British Government and the private sector in order to help fight climate change by promoting the sustainable use of energy, energy conservation and to cut carbon dioxide emissions in the United Kingdom.

Fossil fuels or mineral fuels are fossil source fuels, that is, hydrocarbons found within the top layer of the Earth's crust. They range from volatile materials with low carbon:hydrogen ratios like methane, to liquid petroleum to nonvolatile materials composed of almost pure carbon, like anthracite coal.

Greenhouse gases (GHGs) are the gases present in the earth's atmosphere which warm near-surface global temperatures through the greenhouse effect. These are water vapour, Carbon dioxide, methane, nitrous oxide, ozone and CFCs.

A **Green Travel Plan** is a plan put together by an organisation in order to reduce the environmental impact of its staff's travel and transport

Global Warming - Greenhouse gases are essential to maintaining the temperature of the Earth; without them the planet would be so cold as to be uninhabitable. However, an excess of greenhouse gases can raise the temperature of a planet to lethal levels.

A **Local Climate Impacts Profile** is a resource that Local Authorities can compile so that they better understand their exposure to weather and climate. It is based on evidence of a locality's vulnerability to severe weather events and in particular how these events affected a local community as well as the authority's assets and capacity to deliver services.

Low carbon energy - these energy generators include renewables but also other low carbon emitters including biomass boilers, CHP and ground source heat pumps.

Mitigation of global warming involves taking actions to reduce greenhouse gas emissions and to enhance sinks aimed at reducing the extent of global warming.

Oxfordshire Biodiversity Action Plan - a Biodiversity Action Plan (BAP) is an internationally recognised program addressing threatened species and habitats in a region, and is designed to protect and restore biological systems.

A **solar cell or photovoltaic cell** is a device that converts solar energy into electricity by the photovoltaic effect.

Rainwater harvester - a large (usually under ground) tank used to gather, or accumulate and store rainwater

Renewable energy is energy generated from natural resources - such as sunlight, wind, rain, tides and geothermal heat - which are renewable (naturally replenished). Renewable energy technologies include solar power, wind power, hydroelectricity, micro hydro, biomass and biofuels.

Sustainable design (also referred to as 'green design', 'eco-design', or 'design for environment') is the art of designing physical objects and the built environment to comply with the principles of economic, social, and ecological sustainability.

Sustainable procurement ensures that environmental impact of products and services is considered as part of the procurement evaluation process. Presently led by the public sector, the aim is to transform markets so that the private sector can join forces in pursuing sustainable purchasing policies.



West Oxfordshire District Council
Elmfield
New Yatt Road
Witney
Oxon OX28 1PB
Tel: 01993 861000
Email: enquiries@westoxon.gov.uk