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# Chester-le-Street District Council Climate Change Strategy and Action Plan

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## A Short Tale

A normal day in 2037 is unbelievably different to a normal day in 2007. You cannot walk along the street without seeing overflowing recycling boxes. Everybody is mad about recycling now, when my mam and dad were young, nobody was really that bothered about it. They would recycle glass and tins and paper but still some people just put them in the bin.

Mam and Dad used to get the car or the bus to school. When they told me that, I didn't have a clue what a car was! The only way of transport now is by boat, as the flooding is that bad. In our house every single light bulb is an energy efficient light bulb. Mam and Dad used to change their light bulb every few months. Every where you look now all you see is windturbines. There's no such thing as fossil fuels and power stations now. We don't have a outside tap either, we have water butts to collect the rain water and we use that to water the garden. Not that we have to water the garden very often because it rains that much.

We Grow our own vegetables in our own gardens as getting to the shop isn't as easy as it used to be. Everybody has compost bins in their gardens and everybody uses them. We also have solar panels on our roof and we are prosecuted if we don't unplug our phone chargers or if we leave anything on stand-by.

I still cannot believe that my Mam and Dad didn't try and do anything to help. They never thought about us. It didn't matter when they were my age. They never thought about their future. The planet has been ruined. They never realised how lucky they were.

By Lauren Moss.  
Fyndoune Community College.

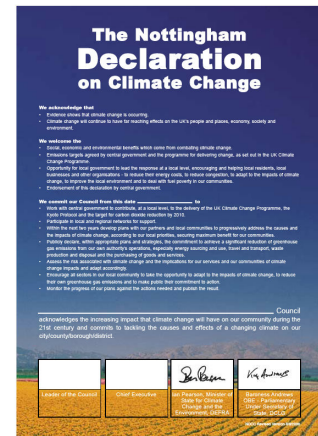
## Executive Summary

**“Our actions over the coming decades could create risks of major disruption to economic and social activity, later in this century, on a scale similar to those associated with the great wars and the economic depression of the first half of the 20th century”**

HM TREASURY (2006), The Stern Review: The Economics of Climate Change, Cambridge University Press

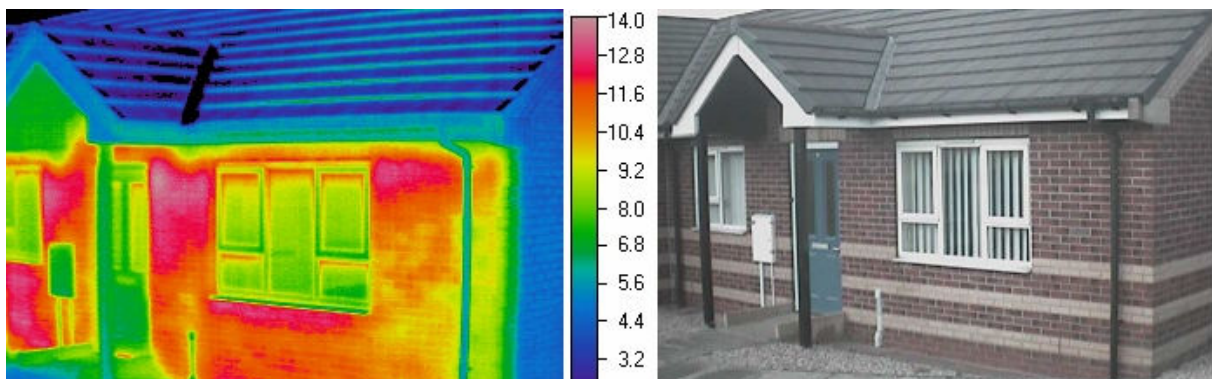
In signing the Nottingham Declaration on Climate Change, Chester-le-Street District Council made a commitment to help tackle the threat of climate change. The aim of this Climate Change Strategy and accompanying Action Plan is to make a significant contribution to reduce the carbon dioxide emissions across the district and develop adaptation plans to counteract the effects that Climate Change will have.

As the District Council, Chester-le-Street District Council is in a position to lead by example in its actions to combat Climate Change. The Council has over the past 12 years shown this by carrying out schemes and awareness raising projects across the District which has led to it having the lowest Carbon Footprint per Capita in the North East. This Figure currently stands at 5.83 tonnes of CO<sub>2</sub> per person, where the National Average is 7.5 Tonnes of CO<sub>2</sub> per person.



The actions of this strategy will result in direct benefits to local communities, local businesses and council operations. Communities will benefit from warmer healthier homes, lower energy bills, increased employment opportunities and a more sustainable environment. While reduced operational costs for local business could increase profits encouraging growth which in turn helps to increase local employment with subsequent benefits to the local economy.

This Climate Change Strategy sets out an Action Plan detailing proposals to reduce greenhouse gas emissions across the district. It highlights the opportunities for local actions and the opportunities for local communities and local businesses to save energy.



*Thermal Image of a Bungalow in Chester-le-Street – the Red indicates high heat loss through the walls. This can be cured by installing cavity wall Insulation*

## 1. Introduction

Climate change has the potential to cause human suffering on an unparalleled scale. If left unchecked, climate change is predicted to disrupt food supplies, cause conflict over energy and water and devastate efforts to eradicate world poverty. Recent flooding in parts of the UK (Including Chester-le-Street) and the heat wave in central Europe in 2003, which killed an estimated 27,000 people, demonstrates how vulnerable we are to extreme weather events.



*Flooding at the River Cong in 2000*

Some changes to the climate are now inevitable. This strategy sets out how we can adapt to these changes and details measures to reduce the impacts in our district. The case for action is extremely pressing. The majority of scientists agree that if emissions are not substantially reduced immediately, many more billions of tonnes of greenhouse gasses could be released into the atmosphere from permafrost, rainforests and the world's oceans, greatly accelerating the rate of global warming. Many identify this level as a 2°C rise in average world temperatures.

Tackling Climate Change requires a two-pronged approach to help tackle the issues surrounding climate change by attending to:

*Mitigation* – Action to reduce greenhouse gas emissions from Council services and activities. This is required to help limit the most severe impacts of climate change.

*Adaptation* – Action to minimise the adverse impacts of climate change and to take advantage of the opportunities that it might present.

Chester-le-Street DC will play a fundamental role in Implementing these actions due to its:

- **Direct connections with local communities and businesses;**
- **Opportunities to stimulate and support local communities, organisations and businesses to make the changes necessary to benefit themselves and the local economy;**
- **Ability to make national issues become locally relevant ;**

The Climate Change Action Plan sets out actions and targets to maximise reductions in greenhouse gas emissions.

## 2. Context

In signing the Nottingham Declaration on Climate Change, Chester-le-Street committed itself to developing a Climate Change Strategy to take the agenda forward across the District. This however is not the sole reason for developing the strategy and there are many obligations placed upon Local Authorities and this strategy provides the framework to bring together the Council's aspirations with statutory obligations

To aid local authorities in developing climate change programmes, a number of policies and agreements have been developed at an international, national and local level (Appendix 2). These policies and strategies have one main aim:

- **To reduce emissions of greenhouse gasses.**

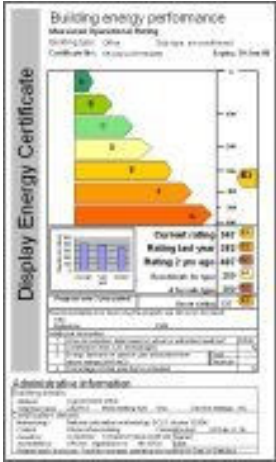
The main context for this is the Government's 'Energy White Paper' published in 2003 and updated in 2007, which states that a cut of 60% in CO2 emissions, by 2050 (using 1990 as the baseline) should be enough to avoid 'catastrophic' climate change (involving a temperature change of above 2°C).

The majority of Council Services are influenced by climate and weather patterns. Planning for change now will avoid unnecessary costs and damage in the future. Local authorities have a responsibility to 'lead the way' in terms of reducing emissions and planning for adaptation. We need to ensure that buildings and infrastructure are sustainable in a changing climate so that services can continue to be provided at reasonable costs and that communities are able to adapt to change.

In 2006, the Local Government White Paper detailed the urgent need for local authorities to act on reducing greenhouse gas emissions and drive local action through strong visible leadership.

The recent changes by Government have led to a large scale push on Carbon Reduction programmes including changes to the Planning System, e.g. the Introduction of the Code for Sustainable Homes to ensure that new developments implement measures so by 2016 all new developments will be Zero carbon.

The introduction of Energy Performance Certificates (EPC) as part of the Home Information Pack (HIP), while controversial are designed to encourage home owners to take up energy efficiency measures in helping to raise the value of their property. Social Landlords, which include Cestria Community Housing, have an obligation to carry out an EPC once a property becomes void from October 1<sup>st</sup> 2008 and make it available to any prospective tenants. This is designed to give more choice and an understanding of what the energy bills are likely to be.



Also from 1<sup>st</sup> October 2008, Local Authorities have an obligation on Public buildings over 1000m<sup>2</sup> to produce a Display Energy Certificate which has to be renewed on an annual basis. These Certificates are to demonstrate to the public how energy efficient the building, is the amount of CO2 emitted and what improvements have been made over time. Chester-le-Street DC has four Buildings that require these certificates. These are the Civic Centre, the Leisure Centre, the Riverside Sports pavilion and the Donald Owen Clarke Centre.

A new national set of indicators that local authorities have to report to Government on includes 4 related to Energy and Climate Change. These are:

**National Indicator 185** – The public sector is in a key position to lead on efforts to reduce CO2 emissions by setting a behavioural and strategic example to the private sector and the communities they serve. The way in which the local authority delivers its functions can achieve CO2 emissions reductions. Measurement against this indicator requires each local authority to calculate its CO2 emissions from analysis of the energy and fuel use in their relevant buildings and transport, including where these services have been outsourced.

**National Indicator 186** – Local authorities are uniquely placed to provide vision and leadership to local communities by raising awareness and to influence behaviour change. In addition, through their powers and responsibilities (housing, planning, local transport and powers to promote well-being) and by working with their Local Strategic Partnership, LAs can have significant influence over emissions in their local areas. The indicator relies on centrally produced statistics to measure end user CO2 emissions in the Local Area from:

- Business and Public Sector,
- Domestic housing, and
- Road transport

The percentage reduction in CO2 per capita in each LA will be reported annually. The statistics for 2005, the most recent data available, will be used as the baseline from which performance improvements will be measured.

**National Indicator 187** – NI187 measures progress in tackling fuel poverty through the improved energy efficiency of households inhabited by people claiming income related benefits

**National Indicator 188** – The aim of this indicator is to embed the management of climate risks and opportunities across the all levels of services, plans and estates. It is a process indicator which gauges progress of an LA to:

- Assess the risks and opportunities comprehensively across the area;
- Take action in any identified priority areas;
- Develop an adaptation strategy and action plan setting out the risk assessment, where the priority areas are – where necessary in consultation & exhibiting leadership of local partners - what action is being taken to address these, and how risks will be continually assessed and monitored in the future; and
- Implement, assess and monitor the actions on an ongoing basis.

Chester-le-Street has always been pro-active in its approach to Climate Change. First detailed in the Local Action 21 Plan in 1999 with regard to “*our careless use of energy and the high emissions of CO<sub>2</sub>*”, it was adopted as a key priority by the Sustainable Community Strategy in 2003 and as a partner Chester-le-Street DC played a major part in the development of the County Durham Climate Change Strategy published in 2006. The Leader of Chester-le-Street DC, Linda Ebbatson has also played a leading role in the Association of North East Councils (ANEC) task and finish group report on Climate Change which was published in 2007 and the adoption of the actions that have come from that group. This report proved so successful that every Authority in the North East has now signed up to the Declaration – only the second region to achieve this.

Also on a Regional Basis the development of the Climate Change Adaptation on the Wear strategy in 2006 carried out by the Environment Agency and the Northumbria Regional Flood Defence Committee has given a greater insight into what the future effects are likely to be across the catchment area of the River Wear and its tributaries and what measures need to be put into place to minimise these effects. This study proved to be so effective, it led to the North East Adaptation study covering the whole of the region being published in 2008.

On a local, regional and national basis the issue of Climate Change and Carbon management has become more and more high profile. Government firmly sees Local Authorities as one of the key people in tackling the issues and delivering projects in partnerships to reduce the Carbon emissions across the Country. While Chester-le-Street DC has played a major part already in tackling Climate Change, it has a long way to go to make the significant cuts required to hit the Governments Targets.



### 3. Local effects of Climate Change

The Climate Change Adaptation Strategy for the Wear highlighted that the predicted climate changes by the 2050s will not necessarily lead to any single catastrophic impact, risk or disaster in the area. However, when assessing the risks posed by the predicted changes, the two greatest impacts appear likely to be:

- 1) The effects of extreme hot temperatures and increasing number of heatwaves on vulnerable populations, such as babies and the elderly; and
- 2) The impacts of increased sea levels and winter rainfall on flood risk from rivers, streams, and the sea and drainage systems.

Of these, the risks from flooding are presently being addressed in a pro-active manner by the Environment Agency, Local Authorities and Northumbrian Water, involving:

- Flood warnings;
- Land use planning and development control;
- Long term and strategic planning;
- Capital investment in schemes;
- Maintenance of existing structures;
- Research and development into the effects of climate change.

Consideration of both climate changes and management approaches, such as flood storage areas and sustainable drainage systems (Suds), is now common-place and therefore future risks are being identified and planned for

The effect of heatwaves on vulnerable populations is of greater concern. This primarily is because not only are extreme temperatures and the number of heatwaves set to increase notably by the 2050s but predicted demographic changes mean that there will be more people within vulnerable age classes by this time.

During the heatwave in August 2003, the number of deaths in the population over the age of 75 years increased by 22% overall in the UK, During times of high temperatures, increased demand is placed on cooling and refrigeration systems in turn demanding more energy and thereby increasing the very greenhouse gas emissions that are largely causing man-made climate change

There will be also be a number of others impacts experienced across the district by the 2050s. Whilst many of these appear at the present time small in magnitude, they should not be underestimated. This principally is because such impacts will lead to increased maintenance commitments for infrastructure and buildings and, unless these maintenance needs are adequately met, there will be progressive deterioration in engineering condition. When combined with an increase in a particular weather aspect, the full impact could become manifest through a gradual deterioration over time, rather than a single sudden event, but nonetheless may ultimately be equally damaging.

These impacts will affect the ability of the Local Authority to deliver its services. Key impacts on Service Delivery include:

- Higher risk of flooding / erosion of developments in floodplains;
- Increased risk of severe weather events causing disruption;
- Higher risk of subsidence as soils shrink in hotter drier summers;
- Changing design parameters, in response to new climatic conditions.

- Temperature increases will affect thermal comfort of buildings;
  - Increase in air conditioning costs;
  - Extreme weather events causing damage to building infrastructure;
  - Wetter winters causing damp, condensation and mould problems;
  - Higher average temperatures will reduce the need for space heating.
- 
- Increase in excess summer deaths, decrease in excess winter deaths, but sudden cold spells have greater impact;
  - Higher risk of skin cancer / sun burn;
  - Increase in heat stress cases, especially amongst vulnerable people;
  - Higher levels of dust in the air leading to an increase in respiratory problems;
  - Greater potential for outdoor activities may improve the health and fitness of residents.

Other potential issues locally include

- Higher temperatures could increase the cases of food poisoning;
- More frequent flooding from foul and surface water drainage systems.
- Increase in grass growth rate leading to year round maintenance;
- Loss of native plant and animal species;
- Increased rainfall intensity causing local flooding;
- Increased risk of grassland and forest fires.
- Rubbish will decay more rapidly in higher summer temperatures.
- Increased potential for tourism as the region warms;
- Greater potential for businesses to relocate from the south of the country as water resources become scarce;
- Increase in insurance claims and premiums due to extreme weather events.

## 4. Actions already taken

Over the past 12 years Chester-le-Street has primarily focussed its efforts in tackling Climate Change on measures in the domestic sector with energy conservation and fuel poverty programmes. The Warm and Healthy Homes scheme launched in 2003 and the COSY grant provided energy saving advice and grants to householders across Chester-le-Street District.



**Warm and  
Healthy Homes**

This period of time has seen over £6million invested in Social and Private sector housing through the Council, Utility Companies and support agencies. It has resulted in Insulation measures and new high efficiency boilers being installed to over 16,000 homes – approximately 65% of all housing across the District. The Big Successes include Sacriston where 99% of dwellings have had measures fitted and 95% all dwellings in Grange Villa.



People attending a Warm and Healthy Homes roadshow at Bullion Hall

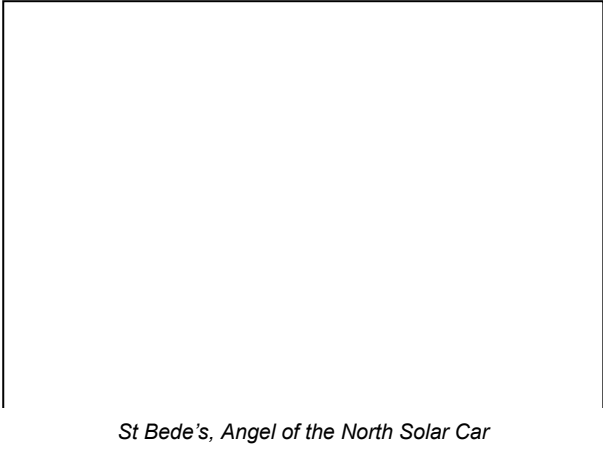
Between 2003 and 2006 The Council carried out a series of road shows to residents in conjunction with partner agencies including the Fire Service, The Energy Savings Trust, Warm Front, The Pensions Service and Citizens Advice; helping to advise people on grants and assistance that is available to keep warm, reduce energy bills, become more energy efficient and keep safe in their own homes. The road shows proved very popular with over 50 events and over 8000 people attended over this period. The events have also featured at Flu-Jab days in doctor's surgeries and given talks to community groups and other organisations.

Targeting and identifying those areas that need most assistance is always a difficult task and in 2004 with partnership funding, the Council commissioned an Aerial Thermal Infra-Red imaging survey of the area. The results of the survey highlighted areas across the district with high heat loss in housing and these were effectively targeted over the next few years significantly helping to reduce the Carbon Emissions across the area

Thermal Image picture of Area

Awareness Raising schemes have taken place in conjunction with schools and through events in the Town Centre

In 2005, Chester-le-Street took part in the Regional Solar Car Challenge, where primary schools built and designed a solar car to take part in a race. Heats were held at the Riverside Stadium and the three winners chosen represented the District at the Regional Final held at



*St Bede's, Angel of the North Solar Car*

Nissan in Washington. The three schools that entered the finals were Roseberry Primary School, Red Rose Primary School and St Bede's School. Red Rose and Roseberry primary school qualified for the final race in the speed category. Both schools had an excellent race, coming second and third respectively. Red Rose also managed to gain second place in the design category. The Solar Car project gave the children a chance to learn about and use a renewable energy technology in a fun and interesting way.

In 2007 another awareness raising campaign took place in conjunction with the local schools around the future of Chester-le-Street District and what it may look like in 30 years time Focusing on how we will live and travel, talks took place to around 20 schools and over 1000 pupils on what effect Climate Change was having on the District and how weather had changed dramatically over the past 20 years. Over 500 entries were received into a competition organised by Chester-le-Street DC ranging from articles by children in secondary schools to drawing of transport and homes from pupils in primary schools. The winners were selected by Trai Anfield of BBC Look North and were used in a newspaper that was sent as a wraparound in the Chester-le-Street Advertiser in November of that year. The winning entry was by Lauren Moss and her article appears as the short story at the beginning of this strategy

The Christmas Lights in Chester-le-Street have recently been changed from standard light fittings to LED. These reduced the energy consumption by over 94% and 540 kW of energy in the first year of its operation alone. To give a practical demonstration of how energy efficient the Christmas lights were, Chester-le-Street developed an energy bike that was used light up a Christmas Display at the switch-on of the Christmas Lights in December. The Bike was connected up to a generator that used human power to generate the energy to light the display. Supported by Npower, The principle behind the display was to demonstrate how little energy the Christmas Lights were using in comparison to previous years by actually being lit from Pedal Power. The event proved to be very successful and attracted local and regional media attention.



*A Local resident powering the light display*

There have also been many other successful approaches and innovative ways of tackling climate change from the use of hand held thermal imaging cameras on properties to working

in partnership with De-Montfort University in developing methods to encourage the uptake of low carbon technologies across the area.

The production of this Strategy develops the plans for mitigation of climate change through reduction of greenhouse gas emissions beyond the domestic side and will also encompass the following activities:

- **Council operations, changes in practices could result in significant reductions in utility costs and greenhouse gas emissions (i.e. council buildings energy consumption, planning policy, waste management, transport);**
- **Sectors outside direct council control where local partners can influence change (i.e. business energy consumption, local communities and individual choice).**

### **Carbon Neutral Edmondsley**

An ambitious scheme to reduce the carbon emissions of Edmondsley has been instigated by the Council in partnership with several organisations including the village itself. A feasibility study was carried out in 2004, which identified that the village's energy demand could be met by renewable technology. This could be carried out through an embedded energy system with district heating. The plan is to develop a centralised energy plant that will generate heat and electricity for the village. The heat in turn would be distributed to each dwelling who joins the scheme via an underground pipework network. The electricity generated in turn would be fed into the national grid, but used to subsidise the village's needs.

While the concept itself, is fairly simple, there are many issues and areas that need to be developed before the schemes can be undertaken. This includes gaining full support of the village, ensuring that the proposed technology is acceptable to the residents and the infrastructure is put into place to support the scheme.

There has already been a considerable amount of work carried out in the village, This includes improvements to insulation, heating systems, and general building repairs as well as carrying out a comprehensive thermal imaging study of the village. This has allowed for the first time a greater understanding of weakness occurring in the fabric of the buildings and the routes through which heat escapes the properties and what work can be carried out to prevent this from occurring.

# 5. Carbon Dioxide Emissions Baseline and progress for Chester-le-Street

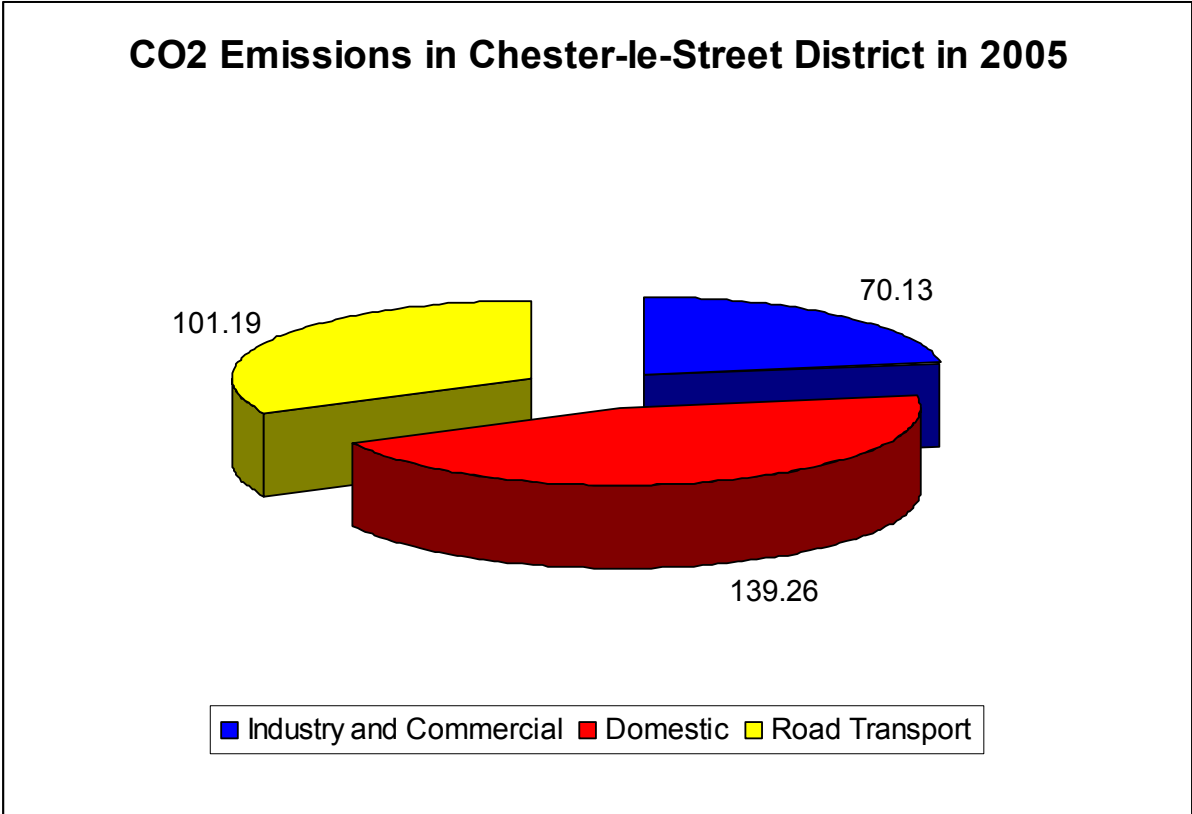
Using energy data collected by DEFRA for national use, In 2005\* Carbon dioxide emissions for the district were measured as 326,000 tonnes of CO<sub>2</sub> per annum. The diagram below identifies emissions from the following sectors:

- Domestic Sector
- Local Industry/Business
- Local Road Transport

By setting this emissions baseline it will enable the impacts of future greenhouse gas reduction activities to be assessed.

*\*The 2005 Data used is the agreed Baseline figures set by Government*

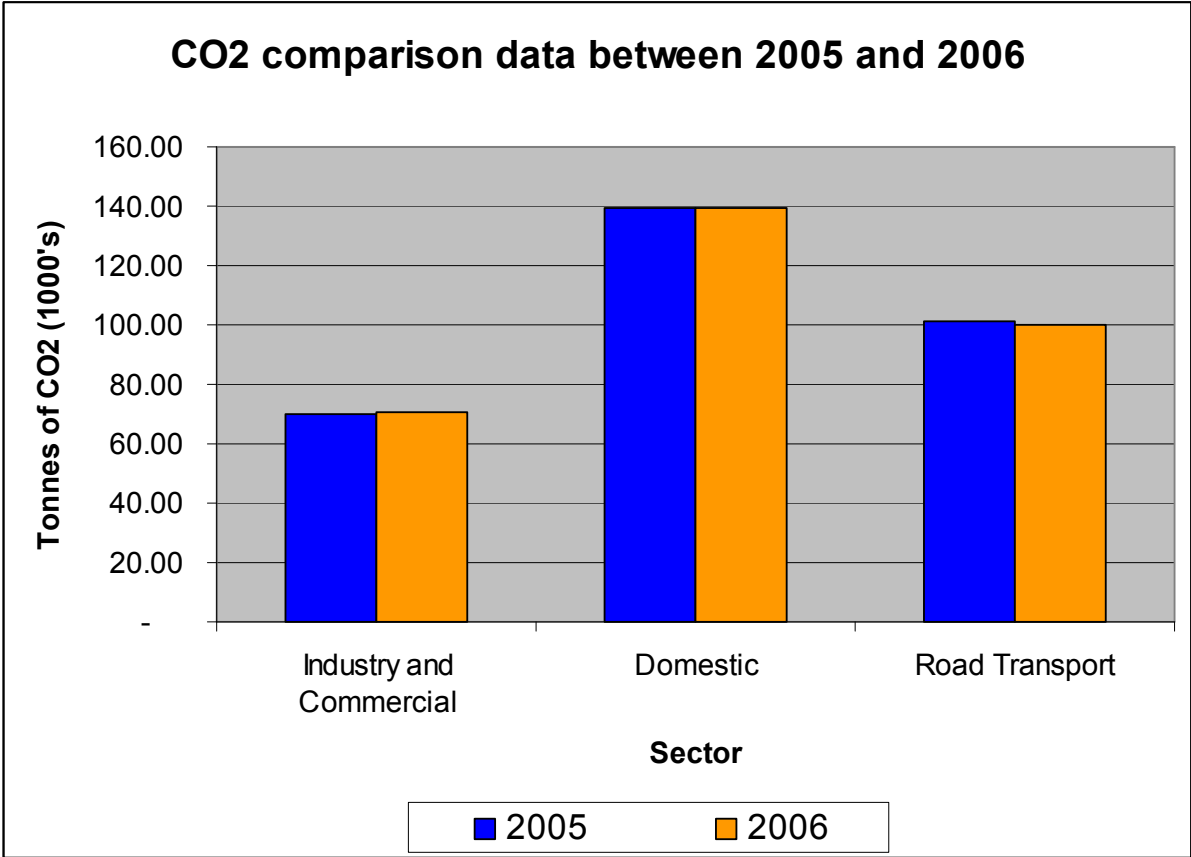
**Figure 1**  
Carbon Dioxide Emissions Baseline for Chester-le-Street District (total approx 310,450 tonnes)



The above chart shows that by far the biggest contributor to CO<sub>2</sub> emissions in Chester-le-street is Domestic Housing followed By Transport. As the District is primarily a commuting Town, this is to be expected and also highlights where the key areas the action plan will be directed towards.

Recently the 2006 figures were released for the district. These have shown a slight decrease in carbon emissions across the district. CO2 has gone down from 310,450 tonnes to 310,130 tonnes. However not all energy consumption was reduced. While reductions have been made in the use of gas, solid fuel and oil, especially in housing, there have been large rises in the consumption of electricity in business and housing. This is mainly due to the rise of plasma and LCD technology in home entertainment, increased sales of portable air conditioning systems (as 2006 had a particularly hot summer) and the increased purchases of IT equipment. The result of this increased usage is that Chester-le-Street has effectively “stood still” in effectively reducing carbon. It also shows that one of the key priorities for this strategy is awareness raising to ensure people understand how to use energy efficiently and effectively at home and at work e.g. switch it off!

**Figure 2**  
Carbon Dioxide Emissions comparison for Chester-le-Street District between 2005 and 2006



## **6. Key Priority Areas**

The overall aims of the Climate Change Strategy are to:

- Highlight the benefits of reducing energy use and carbon emissions to local communities and business sectors
- Set realistic targets for reducing greenhouse gas emissions across the District
- Ensure appropriate stakeholders/partners participate in the strategy with appropriate responsibility for delivery of actions
- Establish a methodology and mechanisms for monitoring progress

These aims will be highlighted in each of 5 key areas for action:

- 1) Domestic
- 2) Commercial and Public
- 3) Transport
- 4) Zero and Low Carbon Technologies
- 5) Awareness Raising

While each of these areas is important to ensuring Climate Change is effectively tackled many of the issues are cross-cutting

## **7. Climate Change Action Plan**



## 1) Actions for CO<sub>2</sub> savings in the Domestic Sector

### Existing Performance

Chester-le-Street District Council is already involved with a significant number of initiatives to improve the quality and energy efficiency of the housing in the district including:

- Warm and Healthy Homes Campaign assists households and fuel poor to claim the range of grants available to improve the energy efficiency of their homes
- In partnership with the Go-Warm Area based Scheme in County Durham and Warm Front, there exist a variety of free or discounted home insulation schemes
- High priority of eliminating fuel poverty
- CLS Senior Sustainability Officer is Chair of the North East Domestic Energy Forum
- Sustainable Community Strategy states that it will “Promote sustainability and energy efficiency in residential dwellings to achieve affordable warmth”
- Annual Reporting on the Home Energy Conservation Act has highlighted significant improvements across the District
- Cestria Community Housing have proactively Insulated their housing stock and have an on-going replacement programme of double glazing and the installation of high efficiency boilers

Table 1: Actions for CO<sub>2</sub> savings - Domestic Sector

Task	Ref:	Actions to reduce Climate Change	Delivery Partners	Resources	Outputs
Continue to Promote Energy Efficiency Schemes	D1	Insulation schemes are being delivered in Partnership with Go-Warm. This scheme will continue until 2010. Grants for High Efficiency Boilers are available through Warm Front to people in receipt of set benefits or over the age of 70. Ensure that these schemes maintain a high profile across the district	CLS EST Eaga Go_Warm, Fuel Utilities	No additional funding or staff resources required	Home Energy Conservation Act requires a 2% cut in energy consumption per annum  A 3% commitment is achievable
Existing Dwelling Fuel Poverty Target	D2	Establish a minimum energy efficiency target for all existing domestic properties will greatly assist in achieving long fuel poverty reduction targets <ul style="list-style-type: none"> <li>• Min energy performance of SAP 65 for all existing properties</li> <li>• Comply with Warm and Healthy Homes Strategy and Energy Conservation Act targets to eliminate fuel poverty by 2016</li> </ul>	EST Eaga NEA LSP LAA EEC Fuel Utilities	Funding for measures to achieve SAP 65 is available for certain criteria  No additional funding or staff resources required	Eradication of fuel poverty across the District
New Dwellings Building Regs and renewables enforcement	D3A  D3B	Ensure compliance and enforcement with Part L of Building Regulations is a priority focus for new build developers  Enforce the Merton Rule – 10% of all energy must be generated from renewable sources	Planning Policy team  Building Control  Senior Sustainability Officer	Officer time required from planning policy team and building control	New housing built to high energy efficiency standards

CO2 reduction in New Dwellings	D4	<p>Set Local Development Framework (LDF) escalating target to reduce carbon emissions in new housing developments</p> <p>Consult on and adopt Minimum Standards from the Code For Sustainable Homes to reduce CO2 emissions from New properties</p>	<p>Planning Policy team</p> <p>Senior Sustainability Officer</p>	<p>Development of LDF is currently ongoing with planning policy team</p>	<p>New housing developers must include renewable energy measures within new developments</p>
Develop targets for CO <sub>2</sub> reductions in Existing Dwellings	D5	<p>Carry out a scoping study with research support into opportunities and areas to continue making carbon reductions from existing dwelling</p> <ul style="list-style-type: none"> <li>• Include areas on reducing fuel poverty and improving health</li> </ul>	<p>Senior Sustainability Officer</p> <p>NEA</p> <p>EEC</p> <p>Fuel Utilities</p>	<p>Funding required, to be sourced</p>	<p>Long-term targets set to allow significant CO2 reductions to occur</p>

## 2) Actions for CO<sub>2</sub> savings in the Commercial and Public Sector Buildings

### Existing Actions

Chester-le-Street is responsible for the administration of approx 70 buildings which have energy usage. The operation and maintenance of these buildings fall under the responsibility of the service team whose responsibility they are. Many of the buildings under the management of CLS are small and use very little energy such as changing rooms and communal rooms, however a few building are large and require careful management. The Main and largest buildings that require close energy management are the Civic Centre, the Leisure Centre and the Riverside Stadium. While no action plan or strategy is in place to tackle these buildings directly, work has been carried out to identify potential savings along with careful management practices that have reduced CO<sub>2</sub> emissions.

In the commercial sector, many energy improvements are driven through economic savings, however while this is true in larger businesses, many smaller businesses cannot afford either the time or fees to develop energy strategies. It is well known that currently there is a gap in the provision of energy advice to small and medium business enterprises (SMEs), though Grants are available to help businesses

The following are some of the actions that have been undertaken:

- A Carbon Trust Energy Audit has been conducted against the 5 largest buildings owned by the Council
- Re-roofing of the Civic Centre has taken place, with higher levels of insulation to reduce emissions and heat gains
- Procurement – sustainability is a strong theme in procurement strategy / members of the North East Purchasing Organisation (NEPO) to ensure best value when purchasing energy with green credentials.

### Performance Improvements for Additional CO<sub>2</sub> savings

The Governments 2006 Climate Change Programme suggests an additional 0.2Million tonnes of carbon dioxide could be saved in the commercial sector by 2010 by simply providing energy advice and support to Small to Medium size businesses.

The proposed additional measures relate to the following:

- Rolling out the Governments Energy Efficiency Loans scheme for SMEs
- Introducing measures under the Governments Action Energy Programme to encourage SMEs to take up free energy saving opportunities
- Provision of a free specialist advice and site survey service from the Carbon Trust and Energy Saving Trust to show businesses how to save energy

Success in delivering these measures is likely to depend crucially on effective engagement at a local level with the business sector to encourage action and take up of the free advice and support services. Therefore, the assumption is made that if the actions set out below on providing more effective advice are put into effect, they will yield a 3.5% reduction in emissions by 2010.

**Table 2: Actions for CO<sub>2</sub> Savings –Commercial and Public Buildings**

<b>Task</b>	<b>Ref:</b>	<b>Actions to reduce Climate Change</b>	<b>Delivery Partners</b>	<b>Resources</b>	<b>Outputs</b>
Establish an Energy Management Strategy for Public Buildings	P1	<p>Develop an energy management strategy to provide value for money in utility accounts including:</p> <ul style="list-style-type: none"> <li>• Accurate monitoring of elec, gas and water usage along with detailed energy performance data to allow monitoring of targets</li> <li>• Record and financially manage all utility accounts</li> <li>• Achieve best value</li> <li>• Compliance with environmental and procurement policies</li> <li>• Compliance with current and future legislation</li> <li>• Reduction of energy use and carbon dioxide emissions</li> </ul> <p>Participate in the Local Authority carbon management programme run by the Carbon Trust</p>	EST Carbon Trust Action Energy NEPO	Ensure effective management of building is embedded into the new Authority to help reduce emissions	<p>Reduced Utility accounts</p> <p>Best value achieved in utility accounts</p> <p>Energy usage and carbon dioxide emissions reduced</p>
Existing Public Buildings Refurbishment Schemes	P2	<p>Set high energy efficiency standards for all refurbishment schemes and consider the use of renewable energy systems</p> <p>Funding may also be available through the next round of the treasury's Invest-to-Save programme</p>	Senior Sustainability Officer Carbon Trust One North East	No additional staff resources required energy efficiency improvement measures to be costed in works carried out	<p>Sustainable energy systems provide percentage of renewable energy</p> <p>Energy usage reduced</p>

<p>Assist Local Businesses to Save Energy and reduce carbon emissions</p>	<p>P3</p>	<p>Develop a promotional strategy to inform the local business sector that government grants and support are available to assist them to reduce energy bills and energy consumption to meet climate change emission targets:</p> <ul style="list-style-type: none"> <li>• Identify employers with Durham County Council Development Agency and Business Forum</li> <li>• Approach business energy managers to introduce the free help and support available external agencies</li> </ul> <p>Encourage reinvestment of financial savings into business using energy efficient practices</p>	<p>Senior Sustainability Officer Carbon Trust One North East EST Carbon Trust</p>	<p>No additional funding required  Senior Sustainability Officer to work with LSP and business forums</p>	<p>Reduction of business energy usage and carbon dioxide emissions</p>
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### 3) Actions for CO<sub>2</sub> savings in the Transport Sector

#### Existing Council Transport Actions

Chester-le-Street District Council is carrying out the following actions to reduce energy use and emissions from its own travel and transport activities:

- 100% of the fleet use biodiesel (5% mix)
- Continuously Regenerating Traps fitted to 2% of vehicles – a device for capturing particulates from diesel engine exhausts
- Vehicle trackers fitted to 27% of the fleet, reducing private mileage and speeding problems can also be monitored
- Commitment to write a green fleet management plan
- Commitment to introduce a vehicle replacement policy to take advantage of new technology (EU4)

#### Existing General Road Transport Emissions Activities

- The Environment, Housing and Planning sub-group of the Local Strategic Partnership (LSP) has recently established a transport sub-group
- Local Transport Plan (responsibility of Durham County Council) has set a non-mandatory target to constrain growth in CO<sub>2</sub> emissions from road transport to 1% per annum to 2010.
- Chester-le-Street Local Development Framework (LDF) aims to incorporate more proactive and positive statements on parking and accessibility guidelines for new developments to reduce transport emissions

#### Additional CO<sub>2</sub> savings from concerted local actions

Encourage the development of Green Travels Plans for Businesses and for the District and utilise the development of the LDF to ensure new developments seek to reduce vehicle travel through home working, proximity to work, access to public transport routes

**Table 3: Actions for CO<sub>2</sub> savings - Road Transport Sector**

<b>Task</b>	<b>Ref</b>	<b>Actions to Reduce Climate Change</b>	<b>Delivery Partners</b>	<b>Resources</b>	<b>Outputs</b>
Local Travel Plan	T1	<p>Develop a travel plan to look at commuting and business travel, with targets for energy/ CO<sub>2</sub> reduction. This could include:</p> <ul style="list-style-type: none"> <li>• Promoting car sharing schemes</li> <li>• Improving facilities for walking and cycling</li> <li>• Staff awareness to encourage reduced car usage</li> </ul>	<p>CLS DCC LSP Transport sub-group EST Sustrans</p>	<p>Officer time required for the development of a full travel plan</p>	<p>Greater awareness of climate change impacts of car usage leading to reduction of car usage</p>
Fleet management	T2	<p>Encourage development of a fleet management plan leading to:</p> <ul style="list-style-type: none"> <li>• Development of green fleet management plan</li> <li>• Clear targets for reducing carbon emissions</li> <li>• Driver training and use of incentives for improvements</li> <li>• Trial of clean fuel vehicles in the council fleet i.e. electric cars; dual fuel cars</li> </ul>	<p>EST LSP Transport sub-group</p>	<p>EST Transport Programme offer free fleet consultancy  Officer time required</p>	<p>Reduced emissions from Council fleet operations</p>
Planning policies	T3	<p>Develop LDF policies on encouraging new developments to be closer to work places and accessible to public transport hubs</p>	<p>LSP Transport sub-group Carbon Trust</p>	<p>Local Authority Carbon Management Programme contains information on sustainable transport schemes</p>	<p>Decreased use of cars and increased use of other forms of transport</p>



## 4 Actions for CO<sub>2</sub> savings – Zero and Low Carbon Technologies

### Existing local actions

Chester-le-street is carrying out the following actions in this sector:

- Aims to encourage the use of renewable energy and low carbon technologies within regeneration schemes
- Aims to enforce use of sustainable energy measures as part of the master planning stage via planning policy
- The Council are looking into an exemplar project in the district containing different energy saving features to be showcased.

### Additional CO<sub>2</sub> savings from concerted local action

Power generated by domestic renewable energy would have the effect of reducing greenhouse gas and electricity energy demand and consequently:

- Save energy
- Reduce carbon emissions
- Reduce domestic energy bills

The installation of renewable technologies into domestic housing will also help to alleviate the problem of Fuel Poverty across the area.

Integrating renewable energy technologies into either new build or retrofit will produce energy savings to contribute to the additional savings for concerted local action set out for the sectors above.

**Table 4 Actions for CO<sub>2</sub> savings – Zero and Low Carbon Technologies**

<b>Task</b>	<b>Ref</b>	<b>Actions to Reduce Climate Change</b>	<b>Delivery Partners</b>	<b>Resources</b>	<b>Outputs</b>
Renewable Energy Strategy	R1	<p>Develop a renewable energy policy to:</p> <ul style="list-style-type: none"> <li>• Identify council sites that may be appropriate for renewable technologies</li> <li>• Consider use of renewable energy systems as part of refurbishment schemes to council operational buildings</li> <li>• Consider use of renewable energy systems as part of new council buildings</li> <li>• Consider use of renewable energy systems in Council domestic schemes</li> <li>• Work with partners to encourage showcase schemes i.e. Eco Schools Programme</li> </ul>	<p>Carbon Trust</p> <p>EST</p> <p>DCC</p> <p>CLS</p> <p>LSP</p>	<p>Senior Sustainability Officer to progress with partners</p>	<p>Strategy will allow renewable energy technologies to be used in council projects</p>
Local Development Framework	R2	<p>LDF to set a target of at least 10% energy use from on-site renewables in new developments</p> <p>LDF could require new developments, particularly major retail, commercial and residential, to have embedded within them a minimum of 10% energy supply from renewable sources</p>	<p>Planning Strategy</p>	<p>LDF is already being progressed by Planning Team</p>	<p>New developments will employ renewable energy technologies to meet statutory requirements</p>
Promotion of Renewable Energy Grants	R3	<p>Develop promotional campaign to highlight the availability of government grants for renewable energy measures</p>	<p>CLS</p> <p>EST</p> <p>DCC</p>	<p>No additional funding required</p>	<p>Greater awareness of renewable energy and uptake in domestic and commercial projects</p>

## **5 Actions for CO<sub>2</sub> savings –Awareness of Climate Change for Public, Staff and Local Businesses**

The Governments Climate Change Programme produced in 2006 suggests significant reductions in energy consumption and greenhouse gas emissions will be achieved by providing relevant advice, support and training on how to save energy and minimise greenhouse gas emissions.

A key part of achieving these reductions is through a change in the way we use and think about our energy. This can only be done through a series of awareness raising programmes and training to professionals to help embed new thinking into people's consciousness

The table on the following page sets out actions for achieving energy savings by raising awareness and providing practical help and support.

Table 5: Actions for CO<sub>2</sub> savings – Training and Awareness

Task	Ref	Actions to Reduce Climate Change	Delivery Partners	Resources	Outputs
Community awareness and publicity campaign	TA1	Partner on the Act on CO2 Campaign to provide clear advice to encourage local public to make lifestyle and behaviour changes in favour of saving energy and reducing climate change	CLS EST LSP LAA	No additional funding required	Encourage lifestyle changes necessary for sustained reductions in energy use and emissions
Community Training Events	TA2	Carry out rolling programme of training events in all settlements 2006 - 2008 to produce a community energy network district wide to develop community involvement in reducing greenhouse gas emissions	CLS EST NEA LSP	No additional funding required	Move towards sustainable communities
Travel Awareness	TA3	Expand awareness on alternatives to car travel, provide information to residents and businesses  Work with agencies to provide information to local public	DCC LSP EST	No additional funding required  Free advice and information available from the EST	District wide awareness raising leading to lifestyle changes and actions
Renewable Energy training for Planning Officers and key staff	TA4	Provide training on planning issues relating to renewable energy technologies and climate change issues: <ul style="list-style-type: none"> <li>Planners, Building Control, internal key staff, Housing officers</li> </ul> Engage planning service and others in training to encourage understanding and support to increase the uptake of low carbon technologies	NEDEF EST CSE EEBPP	No additional funding required  Free external training available	Training on Planning Issues around renewable energy  Enhanced understanding of renewable technologies

School Education	TA5	Work in conjunction with schools to continue to raise awareness through innovative schemes	CLS DCC Climate Change teacher	No additional funding required Free external training available	Children can influence adults to make the lifestyle changes necessary to reduce greenhouse gas emissions
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**8. References**