

# County Durham Climate Change Strategy



February 2012

**Draft for Consultation**

Contents:

1. Forward
2. How to use the strategy
3. Policy Drivers
4. The Issues
5. 2020 Vision
6. Key Themes
  - Public Sector Performance
  - Low Carbon Economy
  - Built Environment
  - Natural Environment
  - Transport and Infrastructure
  - Community Engagement
  - Impacts Beyond our Boundaries
7. Conclusion

‘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 twentieth century’

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

# **1. Forward**

Ever since the Council was formed in 2009, climate change and sustainability have been central themes in our ambition to create a better, more vibrant, low carbon economy and society. The Council has signed up to extremely challenging targets to reduce emissions, not only from our own services but also to aim to reduce emissions from across the County.

The Climatic system is extremely complex, however there is undisputable evidence and overwhelming scientific consensus that the climate is changing and that the main cause can be attributed to human activity. Even discounting the climate change argument, the strategy is still about effective and efficient use of non-renewable and unsustainable resources, including energy and materials.

These challenges also come at a time when the economy is facing severe constraints, therefore we must ensure any investments have a real long lasting benefit to the residents and businesses of the County.

The aim of this strategy is to create an overarching vision and high level objectives which set out where we want the County to be by 2020. The publication of this strategy is only the beginning. Once adopted the strategy will be followed by an action plan which will detail how we intend to deliver on our vision.

Climate change is one of the most important issues we have as a Council. How we and our partners deliver on these challenges will impact upon on our economic competitiveness. By creating sustainable communities that are resilient to climate impacts will help to attract businesses and jobs to the County. We still have a long way to go, but through continued partnership working, between communities, business and the public sector we want County Durham to become a thriving, resilient and engaged low carbon community.

## **2. How to Use the Strategy**

The Climate Change Strategy sets out the clear vision and objectives of the County Durham Partnership that will take us to a low carbon County and help us to meet the challenges posed by changes to the climate. It provides the vital link between the Sustainable Community Strategy and forthcoming Climate Change Delivery Plan. The strategy sets out seven key themes which we consider to be essential in creating a low carbon and resilient County. Each key theme has a vision and a series of high-level commitments that will form the basis of the Delivery Plan. The development of this strategy will also provide a framework to ensure all future strategies and action plans by the Council and its partners embed climate change and sustainability actions throughout.

### **Delivery**

Our primary aim is to create a Delivery Plan with measurable and accountable actions based around each thematic area, in order to deliver the key commitments outlined within the strategy. The Delivery Plan will be updated each year and will include short and medium term actions, with existing plans and strategies feeding into it. These actions will be monitored and reviewed by the Climate Change Steering Group and then reported to the Altogether Greener Partnership and Overview and Scrutiny Committee.

### **Partners**

Whilst the strategy has been developed by the Council, targets cannot be achieved in isolation. Only by working in partnership with local communities, businesses and other statutory organisations can we ensure that emissions are reduced and we are resilient to the effects of a changing climate.

#### Key Partners

County Durham & Darlington NHS Foundation Trust	Tees, Esk and Wear Valleys NHS Foundation Trust	Town and Parish Councils
Area Action Partnership's	Durham Constabulary	Durham Fire and Rescue Service
Environment Agency	Durham University	Private Sector Partners
Third Sector	NHS County Durham and Darlington	

### **3. Policy Context**

The Sustainable Community Strategy (SCS) is the overarching plan for County Durham. It informs all other strategies developed by the Council and its partners. The SCS has the following ‘Altogether Greener’ objectives:

- Mitigate the impact of and adapt to climate change
- Promote pride in our communities to deliver a cleaner greener County Durham
- Enhance, conserve and maximise the value of County Durham’s natural environment to the benefit of all
- Enhance, conserve and promote County Durham’s built environment
- Deliver sustainable waste management solutions

In 2010, the Council and Partnership agreed a target to reduce CO<sub>2</sub> emissions across County Durham by 40% or 742,000 t of CO<sub>2</sub> by 2020 (based upon 1990 levels). This includes emissions from the domestic, business, commercial and transport sectors. This is a challenging target, as it is above the Government target set in the Climate Change Act which sought a 34% improvement. Nonetheless, we feel it is important for the County to aim for such an ambitious target and are confident it is achievable considering our expertise and resources.

The Council is a signatory of the EU Covenant of Mayors; and as such, there is a requirement on the Council to reduce emissions by at least 20% (based upon 2005 data) and develop a Sustainable Energy Action Plan detailing how these reductions will be made and report on this every two years. Attaining these targets will provide economic opportunities, reduce health inequalities and create sustainable communities.

#### **3.1 The County Durham Plan**

The County Durham Plan is the overarching planning document for County Durham. It seeks to identify what is needed and where, identifying those areas which will attract new long lasting investment whilst understanding what each settlement needs in terms of services and opportunities. It will also establish a range of policies and strategies designed to improve and manage growth in a sustainable way. Ensuring development is sustainable is one of the key aspects of the plan. It will also help to ensure new emissions arising from development are minimised, so the actions we seek to take within this Strategy and Delivery Plan are not negated by emissions arising from development.

## 4. The Issues

Climate Change is likely to be one of the most challenging issues for Durham County Council and its partners over the next 10 years and beyond. Although it is an issue which will have significant global consequences, there will still be considerable impacts for County Durham that we will need to be prepared to address. In 2010, Climate North East commissioned studies into the economics of climate change, which revealed that failing to adapt and to build resilience will obstruct the ability to realise the economic opportunities from both mitigation and adaptation.

The studies revealed that the total Expected Annual Damages (EAD) of climate change impacts without adaptation for significant impacts (e.g. heatwaves or flooding) by 2050 will be approximately £600m per annum for the North East. Furthermore, the adaptation costs are estimated at around £80-100 million per annum (by 2050), giving a cost benefit ratio of 7 to 1 in favour of adaptation.

Long-term climate changes mean that by the 2050's:<sup>1</sup>

- Rainfall patterns will change with increases of up to 21% in winter and reductions of up to 37% in summer, with an overall reduction of 10%;
- Average seasonal temperatures will increase, with extreme hot temperatures increasing by around 3°C and heatwaves likely to occur more often;
- There will be a reduction in the number of frost days and a major reduction in winter snowfall of around 45% to 83%; and
- Average sea levels will rise by around 0.3m with an increase in sea surge levels of a further 0.3m.

Based upon such evidence, the long-term impacts and issues for County Durham are likely to include:

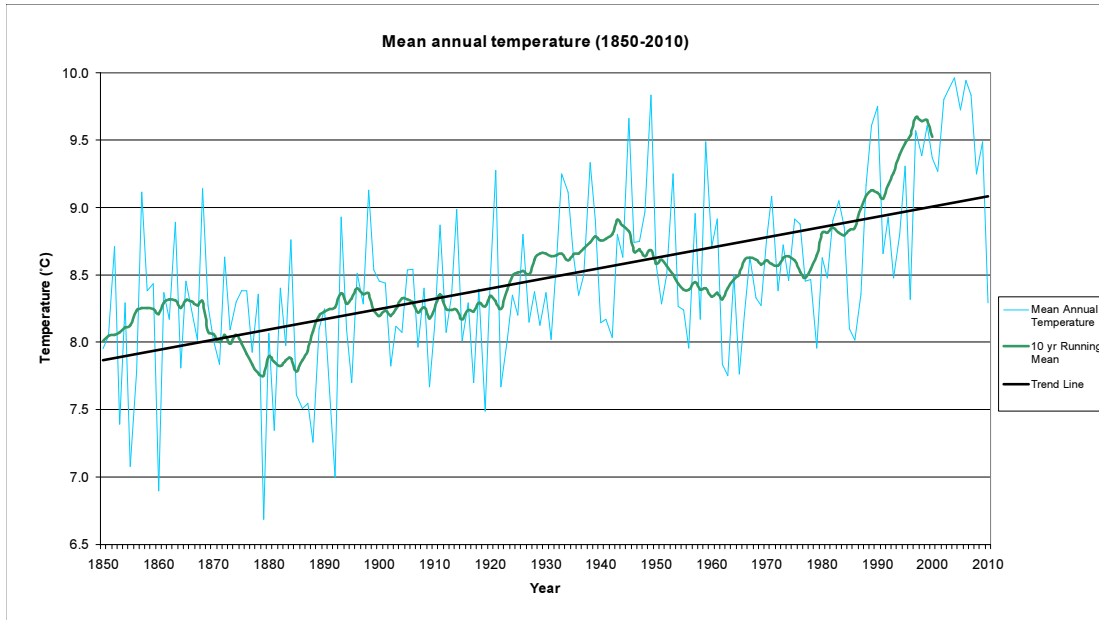
Higher risk of disruption due to weather events	Soil subsidence	Increase in insurance costs
Increase in air conditioning costs	Higher risk of skin cancer	Loss of native plant and animal species
Increased risk of grassland and forest fires	Higher levels of road maintenance	Higher risk of summer excess deaths

County Durham must also be in a position to take advantage of the opportunities that climate change may bring. Such opportunities, if managed carefully, can bring about long-term benefits:

Business relocation, due to excellence in building performance and water scarcity issues elsewhere	Increased potential for tourism	Reduced winter deaths because of milder winters
Greater potential for outdoor lifestyles		

<sup>1</sup> Climate Change Action Plan for the North East

The annual temperature changes in County Durham have recently been assessed through the examination and analysis of historical data supplied by Durham University<sup>2</sup>. The following graph demonstrates how temperatures have changed in Durham City from 1850 to 2010. Mean annual temperatures have increased from 8.0°C in 1850 to 9.5°C in 2009 (with a steep drop to 8.3°C in 2010 due to the exceptionally cold winter in this year). This matches national trends showing that warming is occurring.



<sup>2</sup> A report to investigate historical climate change in County Durham and explore future implications for climate change adaptation in the region (2011) – Andrew Telford, Durham University Student

## 5. 2020 Vision

“By 2020 County Durham will be a thriving, resilient and engaged low carbon community”.

### Headline Objectives

#### Mitigation

We will reduce CO<sub>2</sub> emissions by 40% (or 742,000 t) by 2020 from 1990 levels, ensuring year on year reductions.

We will reduce the demand for energy, ensure homes and businesses are energy efficient and will promote alternative low carbon forms of energy generation.

#### Adaptation

Durham County will be a highly resilient place to live.

We will build upon the Council’s Adaptation Action Plan and ensure that individuals and organisations are more prepared for the challenges of a more extreme environment.

## 6. Key Themes

The key themes, as well as the vision above have been agreed at the County Durham Climate Change Steering group, part of the Altogether Greener Partnership.



## **Public Sector Performance**

### **Vision:**

County Durham will have a strong and flexible public sector, working together to ensure emissions are reduced on an annual basis, and resilience is embedded into services.

### **Issues:**

At a time when the economy is fragile, Durham County Council, health delivery organisations, Durham University, Tees, and all partners must provide leadership. Reducing demand and energy consumption, whilst investing in new low carbon forms of energy will not only save money (especially considering energy price rises) and potentially jobs, it will also help to stimulate growth in the low carbon economy and prove to residents that the public sector can work together in an integrated way for the benefit of communities.

The public sector must also show leadership by ensuring sustainable procurement solutions are embedded into contracts, that waste is dealt with in the most sustainable way and that recycling levels are maintained and improved upon.

### **Outcomes:**

Durham is a county where partners work together to reduce environmental impact and eliminate waste. Sustainability is recognised as an overarching ethos which pulls together all the three strands of environmental protection, social inclusivity and economic regeneration.

### **We will:**

- Ensure that all corporate strategies have taken account of climate change and how it will impact on service/strategy delivery.
- Continue to set and achieve CO<sub>2</sub> reduction targets for Council activities and report on our performance annually.
- Work to achieve the objectives set out in our carbon management plan.
- Work with our public sector partners to reduce their CO<sub>2</sub> emissions.
- Minimise wastage and promote sustainable options across the public sector supply chain.
- Mainstream sustainable procurement into all of our purchasing activities.
- Reduce the amount of waste going to landfill and increase the amount being recycled and report on these figures and attainment of targets annually.
- Reduce water consumption across the estate.
- Encourage reduction and reuse initiatives, both domestically and commercially.

## **Low Carbon Economy**

### **Vision:**

County Durham will be known for its thriving low carbon economy, and helping to encourage innovation, new products and services. It will be a leading location for green business growth capitalising on the key strengths of the area.

### **Issues**

One of the biggest challenges to the UK is the increase in energy prices predicted over the 10 years and beyond. This will impact upon all sections of society but especially energy intensive users which will be penalised for their consumption and bear the brunt of low carbon taxation. These users may leave the UK, thereby reducing CO2 emissions but conversely increasing the importation of embedded carbon through imported goods. This could in turn lead to a loss of jobs as an unintended consequence following the migration of energy intensive industries.

Rural communities currently have less choice or access to lower cost utilities and infrastructure, making many people in such areas fuel poor. Industry and consumers often lack awareness of microgeneration technologies and the benefits of energy efficient products and innovative ways of working. Bringing such technologies within reach of all residents is a key issue that needs to be addressed.

Access to low cost capital to embed innovation, research and development and implement efficiency measures and micro-generation must be a key driver. The lack of public programmes to accelerate infrastructure development for new and emerging sectors may also be an issue in the future

There are also a plethora of opportunities for all sectors should they take up the challenge. The future proofing of businesses, through, energy efficiency, innovative technologies and process will help give County Durham Businesses a competitive edge. We will aim to lead the way on technology innovation with the main partners of Durham County Council, Colleges and Universities and businesses collaborating on low carbon infrastructure, supply chain development, whilst helping to safeguard local expertise, jobs and apprenticeships in emerging sectors

### **Outcomes:**

County Durham will have numerous green jobs and be an expanding centre of excellence for training and enterprise, ensuring that by 2020 sustainability is embedded within business.

Efficiency and energy reduction will be core activities within all businesses. Business will be more efficient and will regularly carry out energy efficiency checks.

Technology Innovation Centres including Durham University and the region's HE and FE institutions will continue to be at the forefront of research and development in low carbon technologies, and working with the County's businesses to support the sector.

Over 26% of the County's electricity consumption will be made up from low carbon and renewable energy sources with 6% of the County's heat being generated by low

carbon/renewable sources. There will also be an expansion of community owned renewable energy schemes.

**We will:**

- Create spaces and environments that will help enterprise to flourish, including the expansion of Netpark, and development of Eastgate.
- Work through the Innovation Framework to collaborate with Technology Innovation Centres, including PETEC, NETPark and the higher education sector including Durham University and other partners to help encourage enterprise, innovation and product development.
- Work with employers to encourage graduates to remain within the County in new and emerging sectors.
- Link in to regional schemes, ensuring we have a co-ordinated approach throughout the region.
- Ensure we maximise the use of European funding to achieve our ambitions.
- Investigate and promote where applicable the use of external incentives, in order to encourage and grow green business.
- Promote green tourism and local food.
- Promote renewable and low carbon forms of energy in appropriate locations.
- Promote micro generation schemes across the County aiding individuals, community groups and businesses to access capital through the Green deal and alternative sources.
- Work with partners to develop community interest renewable energy projects.
- Have developed our first district heating scheme.

## **Built Environment**

### **Vision:**

County Durham will have a strong and resilient built environment, with high quality, innovative and above all, sustainable development adding to the vibrancy of towns and villages.

### **Issues:**

Effective planning is one of the key elements required to mitigate and adapt to the challenges of climate change. Energy efficiency, low carbon and renewable energy policies will need to play a very significant role in achieving sustainable development, much of which will be implemented through The County Durham Plan.

The biggest challenge for County Durham is in ensuring current homes, businesses and public buildings are as energy efficient as possible. Increased resilience to the impacts of climate change must also be planned and implemented in those most vulnerable places and communities

There is an opportunity within the County Durham Plan and associated documents to ensure sustainability is embedded within future development within County Durham. That opportunity must be taken otherwise the County could be strategically disadvantaged due to an unwillingness to mitigate and adapt.

### **Outcomes:**

Homes and businesses will be as energy efficient as possible, helping to eradicate fuel poverty.

The new County Durham Plan will ensure that new development will be located so as to minimise emissions, will aim to facilitate new zero carbon buildings and develop buildings that are resilient to the impacts of climate change.

### **We will:**

- Aim to go beyond building regulations by working with developers to ensure applications for new development are as sustainable as possible.
- Ensure all homes in the County are insulated to current standards with the aim of improving the efficiency of those worst performing homes.
- Target an average SAP rating for County Durham Housing of above 70.
- Ensure businesses have the support needed to enable them to reduce emissions.
- Ensure those communities most at risk to the impacts of climate change have been defined and measures are in place that will help to mitigate those impacts.
- Monitor new development to ensure energy efficiency and carbon minimisation standards are being set.
- Aim to reduce emissions from our current building portfolio by investing in a range of energy efficient and low carbon technologies.
- Promote pride in our communities to deliver a cleaner, greener County Durham.

## **Natural Environment**

### **Vision:**

County Durham will have a comprehensive and sustainable network of multi-functional green spaces and corridors throughout the County that, whilst being accessible to the public, connect and enhance bio-diverse habitats, enhance the quality of place and serve to ensure the County is more resilient to extremes of weather.

### **Issues:**

The natural environment in every aspect is fundamental for life. The protection and enhancement of these systems is essential as they provide places to relax and enjoy; places that are safe transport corridors for walkers and cyclists; places that provide our food; places that provide habitats for a diverse range of species; places that help to mitigate issues such as flooding or provide shade and shelter during periods of high temperatures. They even help to mitigate climate change by providing areas that store carbon (such as peatland habitats). The system must, however be maintained and expanded upon to ensure such areas are resilient to climate impacts, such as flooding, heatwaves and increased risk of invasive species and disease.

### **Outcomes:**

By 2020 the County will have much interconnection of green infrastructure, linking habitats, whilst providing space for residents to relax and enjoy.

### **We will:**

- Work with neighbouring authorities to create interconnected Green Infrastructure networks.
- Protect and enhance green spaces maximising multi-functionality and connectivity.
- Prioritise the creation of appropriate new habitats in GI projects and other new developments.
- Aim to ensure the Biodiversity Action Plan (BAP) aims and objectives are met.
- Support the implementation of Sustainable Urban Drainage Systems (SUDS) within urban areas, particularly in connection with new built development.
- Ensure that habitats/species are able to adapt to climate change either by ensuring that actions taken across the County do not restrict species/habitat movement in response to climate change.

## **Transport and Infrastructure**

### **Vision:**

County Durham will aim to reduce CO<sub>2</sub> emissions from transport, through the promotion of travel choices and alternatives to private car travel, ultra low carbon vehicles, walking, cycling and more integrated travel planning

### **Issues:**

County Durham is a large geographic area covering 862 square miles. It is largely rural with the city of Durham providing the County's main centre. The County has 11 other main towns, with smaller service centres. This adds up to dispersed settlements and longer journeys. Currently 25% of all emissions come from the transport sector, reducing this, whilst ensuring economic growth is a major challenge.

Issues such as attitude change to car ownership is entrenched in the travelling public and is an area that will be difficult to effect. The two potential relief roads in Durham may result in an increase in emissions as it could encourage greater use of the private car, however this needs to be measured against potential economic benefits.

### **Outcomes:**

By 2020 the County, as a result of the actions taken within the Local Transport Plan 3 (LTP3), will have reduced emissions from transport, reduced congestion, especially in Durham city, increased the number of cycle ways and footways, whilst ensuring the associated infrastructure is in a condition that meets the challenges of more extremes of weather.

### **We will:**

- Aim to reduce dependence on the private car, especially for short journeys through:
- Working with and alongside public transport operators to improve where possible the quality of services including the use of more fuel efficient vehicles
- Improving the transport infrastructure in order to reduce journey times and therefore CO<sub>2</sub> emissions
- Aim to reduce emissions from fleet vehicles and make public transport more accessible at the right times.
- Promoting alternative travel choices, flexible working arrangements, car sharing and active travel as an alternative to driving
- Aim to reduce energy use associated with street lighting
- Working with rail operators to improve access to the local rail network, especially in East Durham
- Working with partners to make transport information more accessible
- Ensure electric car charging points are rolled out across the County
- Reduce the impact of travel on air quality
- Ensure high speed broadband is delivered across the County
- Pursue the purchasing of low carbon fleet vehicles and low carbon car club vehicles
- Ensure infrastructure is resilient to climate change

## **Community Engagement**

### **Vision:**

County Durham is a highly engaged and proactive area, with the Council and its partners delivering upon priority actions.

### **Issues:**

Whilst many of the commitments in this strategy relate to Public Sector led objectives, engagement with communities is integral to the successful delivery of a low carbon future. We need to encourage behavioural change that will protect and enhance the environment and quality of life in County Durham is embedded across communities.

Effectively communicating climate change requires careful understanding of people's motivations and barriers as well as thoughtful planning. We need to understand what drives people to make changes in their lives

### **Outcomes:**

By 2020 County Durham residents will be well informed of the issues around climate change and whilst we appreciate there may not be universal agreement over the causes of climate change we hope to have an acknowledgment of the need to reduce emissions, adapt to climate changes and appreciate the potential benefits to themselves and the wider County.

### **We Will:**

- Develop and implement a comprehensive and inclusive Climate Change Communications Plan and use existing networks to relay this information.
- Highlight the benefits to residents of all ages of engaging in learning about climate change and taking practical action.
- Develop practical community led carbon reduction initiatives.
- Provide leadership whilst working with AAP's and voluntary groups to take the challenge forward.
- Enable access to funding streams in order to deliver on community priorities.

## **Impacts Beyond our Boundaries**

### **Vision:**

Residents of County Durham are aware of the impacts that are faced by communities from outside of the County. We will endeavour to ensure that climate related impacts are not increased as a result of County Durham operations

### **Issues:**

How residents, business and the public sector impact upon areas and communities outside of County Durham is a complicated one. From issues around promoting local produce and how this impacts upon developing nations, the impacts of our actions can have far reaching and potentially unforeseen consequences.

Exactly how we balance the use of local products and materials with support for communities in developing nations, through Fair Trade programmes has been the subject of much debate. We must therefore ensure we have a fair and equitable policy, promoting the use of local sustainable materials and produce, whilst also promoting 'Fair Trade' and equivalent sustainable products, when items cannot be purchased locally.

Local food and produce must be supported as this aids the local economy, social cohesion and is generally less carbon intensive than importing goods and services. Many of the issues concerning climate change are beyond the scope of a single authority or Partnership and will require co-operation to resolve.

Some aspects of conventional climate change reporting do not include the whole range of impacts. Concentrating on just the 'in-use' emissions rather than how much energy/CO2 is used in its manufacture could ignore a significant contributor to climate change

### **Outcomes**

We will aim to have a collective approach to climate change issues with a broader understanding of the impacts and opportunities. When products are not available locally, Fair Trade and associated sustainability classifications will be a standard requirement for purchases.

### **We Will**

- Be aware of and consider the impacts of our decisions beyond the County boundary.
- Work with neighbouring authorities on regional and sub regional projects.
- Incorporate indirect carbon emissions into our work where practicable.
- Promote Fair Trade and other sustainability classifications.
- Work across Europe developing international programmes that share best practice.
- Respond positively to requests to share information and expertise to communities outside of County Durham and indeed outside of the UK.



## **7. Conclusion**

The vision and objectives within the strategy are intended to benefit our local environment and the people that live and work in it. In publishing this document, we aim to set the standard for future action to alleviate the effects of climate change, to raise awareness among local people about the issues at stake, ensure sustainable development and work in partnership with the local community to develop a more sustainable future for the County.

Partnership working is an integral element that runs through the strategy, such is the importance that we place upon it. The Area Action Partnerships as well as the Town and Parish Councils are key partners in delivery of this strategy at a community level. The Climate Change Steering Group, which is independent and has a strategic focus, will monitor and challenge the Council on its delivery of the strategy, as will Members through Overview and Scrutiny Committee.