Peak District National Park Climate Change Action Plan

2009 – 2011

May 2009

www.peakdistrict.gov.uk/climatechange

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Foreword

The science is clear – the climate is changing at an ever faster rate due, in the main, to the release of greenhouse gases resulting from human activities. Over the coming years we can expect increased summer and winter temperatures; decreased summer rainfall; increased winter rainfall and more extreme weather events such as storms, droughts and floods.

Our understanding of the possible climate change impacts on the National Park is growing (see Appendix 3). On a positive note the natural, built and social landscapes of the National Park can be a force for good in our efforts to mitigate the causes and adapt to the effects of climate change.

Much of the National Park captures, stores and transports water for its own and surrounding populations; the moorlands provide an opportunity to absorb and lock carbon into the peat for centuries to come; and the National Park's fast flowing streams and rivers offer us possible small-scale hydro electric sites for the generation of renewable energy. There will, however, also be ecological changes that will bring about less welcome alterations to traditional landscapes, flora and fauna; and we must be prepared for social, financial and regulatory shifts that could put pressure on our National Park work and values.

The Climate Change Act's target of an 80% reduction in greenhouse gases by 2050 brings into sharp focus the challenge we all face. Whether we live, work or visit the National Park we all have a part to play.

Since April 2008 we, The National Park Authority, and our partners have been working on the Peak District National Park Climate Change Action Plan. It aims to do two things:

1) Map the existing actions taking place within the National Park that will help to mitigate the causes of or adapt to the consequences of climate change in the National Park and which need continued support (see Appendix 2);

2) Identify where new 'Headline Actions' are required or existing work needs to be intensified and expanded to address National Park-specific climate change issues (pages 10 to 16).

This is a plan for the National Park itself, not just for us, the National Park Authority (the organisation). Hence we need the support of the numerous partners and stakeholders that operate or have an interest within the National Park.

Climate Change affects us all – public, private, and community organisations are already taking or planning their own actions. The National Park Climate Change Action Plan tries to avoid duplicating these actions focusing on National Park specific actions that may not have previously been fully considered.

Many organisations and individuals have already contributed to the content of this Action Plan – and we thank them for their help thus far. Now the hard work really starts, getting down to action. We hope that you, whatever your involvement in the National Park, will join with us in facing up to the challenges and responsibilities that climate change will present us in this special place.

Jim Dixon
Chief Executive

Narendra Bajaria
Chair

Anne Ashe
Lead Member on Climate change

Introduction - Climate Change and the Peak District National Park

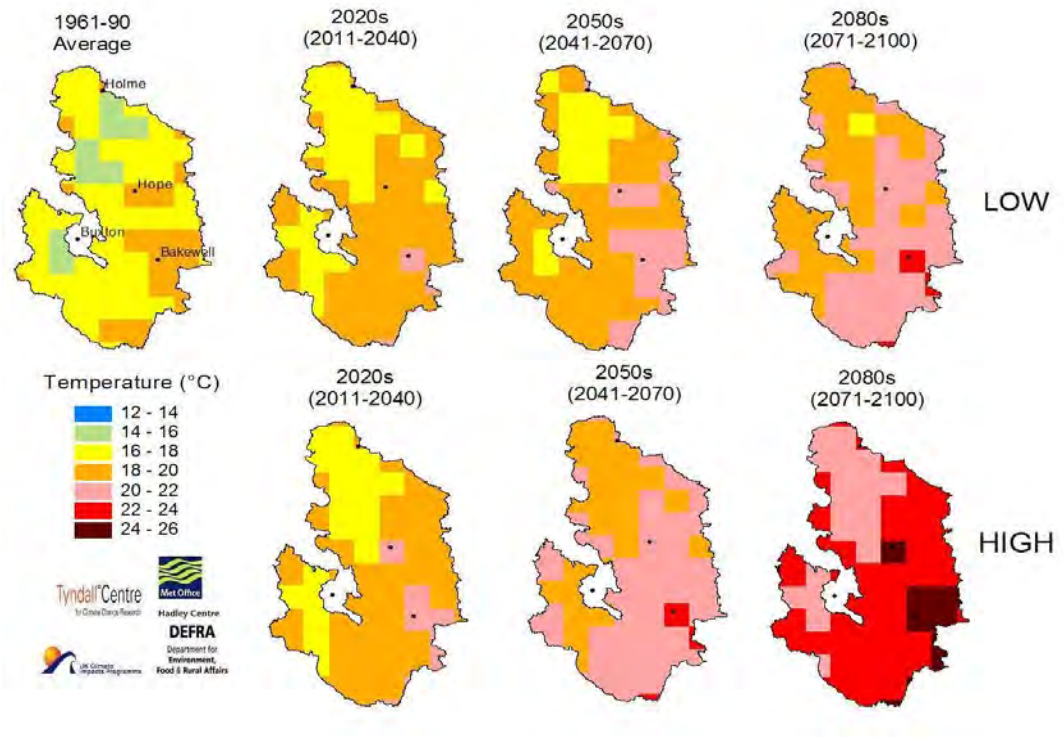
The build-up of greenhouse gases (GHGs[1]) in the earth's atmosphere acts like a blanket keeping in the sun's energy. This is causing the earth to heat up. The increased energy within the earth's climate is resulting in a change to the traditional weather patterns that humans and current habitats are adapted to and rely on for their existence. GHGs occur naturally and have always fluctuated over time: however the rapid rate with which humans have been emitting them, due largely to the burning of fossil fuels, is now known to be directly contributing to unprecedented rapid climate change.

There is now an overwhelming body of scientific evidence highlighting the serious and urgent nature of climate change. The fourth report from the Intergovernmental Panel on Climate Change (IPCC) published in November 2007 shows conclusively that the debate over climate science has moved from whether or not it is happening to what action we need to take.

What Does This Mean for the Peak District National Park?

Work continues to better understand how climate change will impact on specific geographic areas like the Peak District National Park (PDNP). The UK Climate Impacts Programme (UKCIP) has produced a series of climate change predictions (UKCIP02) based on different GHG emissions forecasts (see Figures 1&2). These models are due to be updated in 2009 however they are not expected to show any lessening of the severity of the predicted climate change. Recent studies indicate that the rate the climate is changing is faster than even that predicted by IPCC's fourth report[2].

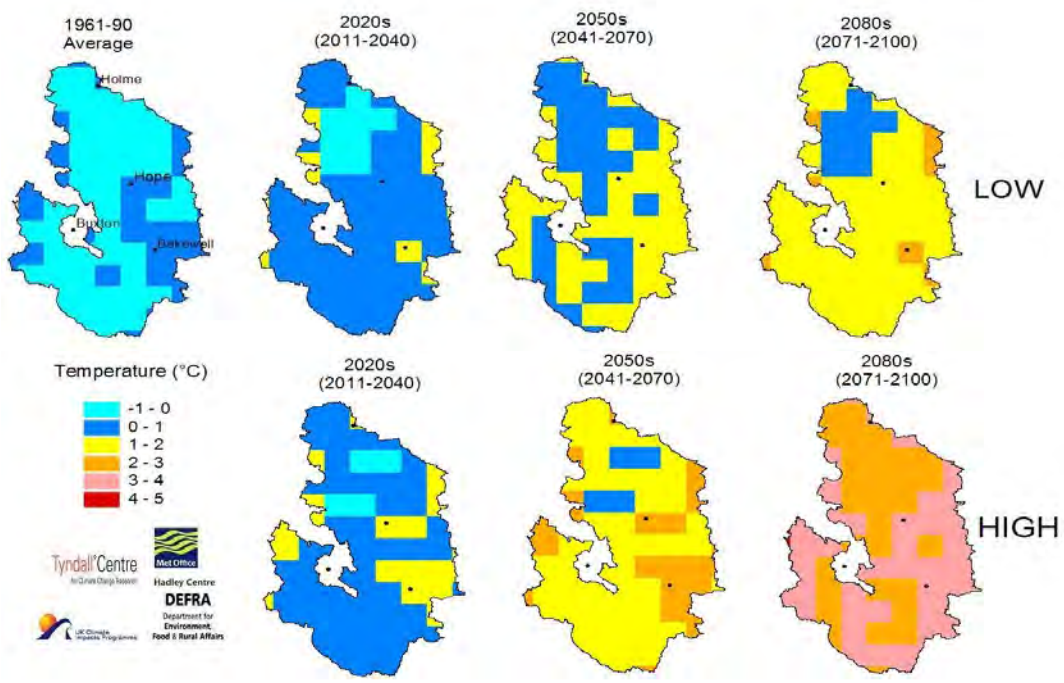
Fig. 1 PDNP Summer Temperature Predictions (low & high GHG emissions scenarios)



Source: Gina Cavan, University of Manchester

[1] A Glossary of acronyms can be found in Appendix 4
[2] Tin, T. 2008. Climate change: faster, stronger, sooner – A European update of climate science, *WWF* http://assets.wwf.org.uk/downloads/cc_science_paper_october_2008_1.pdf

Fig 2. PDNP Winter Temperature Predictions (low & high GHG emission scenarios)



Source: Gina Cavan, University of Manchester

In summary over the coming years the Peak District National Park is expected to experience increased summer and winter temperatures; decreased summer precipitation; increased winter precipitation and more extreme weather events (storms, droughts and flood events).

Important Peak District habitats will be affected – within the Dark Peak peat formation will be slowed or reversed, heather moorland will be at greater risk of fires, bracken may spread, limestone rivers and streams in the White Peak may become seasonal and the species composition of the dales ash woodland will change. Bird species such as Merlin, Red Grouse, Golden Plover and Twite as well as plants such as Cloudberry, Northern Marsh Orchid and Jacob's Ladder are likely to be lost from the Peak District as they move northward.

More detailed consideration of possible climate change impacts on the PDNP can be seen in Appendix 3.

The Need for Action

There is now consensus on the urgent need to take action on climate change. Growing political pressure is feeding down into policy from the international to the local scale, as clearly shown in Appendix 1. Commitments made in the Kyoto Protocol have resulted in the Climate Change Act 2008. The Act requires 80% cuts in GHGs by 2050. These legal requirements will put even greater pressure on the regional and sub-regional organisations to respond to targets for reducing Carbon Dioxide (CO_2) under the National Performance Framework Indicator NI186 as well as responding to other targets such as National Indicators NI188 and NI189 for taking action on climate change.

The background context for this Action Plan includes an analysis of the existing commitments on climate change from the global to the local (see Appendix 1). The challenge in the Peak District National Park is to understand the contributions these national, regional and sub-regional commitments on climate change will make to this area and identify what specific further actions are required that will add value in addressing PDNP climate change issues.

An Action Plan for the Peak District National Park

The current National Park Management Plan 2006-2011 sets out an Outcome (4) for Climate Change and Natural Resources which recognised the need for a National Park specific Action Plan to form a basis for addressing the specific climate change issues in the National Park and working towards achieving the outcome. From the outset the Action Plan was intended to complement and not duplicate the key constituent and sub-regional agency and local authority Climate Change strategies and programmes such as those helping to deliver Local Area Agreement climate change targets.

Thus the Peak District National Park Climate Change Action Plan aims to do two things:

1. Map the existing actions taking place within the National Park that will help to mitigate the causes of or adapt to the consequences of climate change in the National Park and which need continued support (see Appendix 2);

2. Identify where new 'Headline Actions' are required or existing work needs to be intensified and expanded to address National Park-specific climate change issues (pages 10 to 16).

This is an Action Plan for the Peak District National Park - the *National Park area*, not just the Peak District National Park Authority (PDNPA) - the *organisation.* It is an expansion of the current NPMP Outcome 4 actions, giving more detail of what needs to be delivered by partners and stakeholders within the National Park as well as the PDNPA.

The Role of the Peak District National Park Authority

The PDNPA has an important role to play, ensuring it supports and influences action on climate change whilst still delivering its core legal purposes:

- to conserve and enhance the natural beauty, wildlife and cultural heritage of the area;
- to promote opportunities for the understanding and enjoyment of the Park's special qualities by the public.

These purposes are delivered alongside the "duty" to seek to foster the economic and social well-being of the communities within the National Park.

In March 2008 at a Ministerial seminar with the Department for Environment, Food and Rural Affairs (DEFRA) the English National Park Authorities Association (ENPAA) identified the potential unique contributions that NPAs have to play in tackling Climate Change. They were:

1. Carbon/ecosystem management on a landscape scale
2. National Parks as test beds for climate change adaptation on a landscape scale
3. Promoting energy conservation and micro-generation in remote rural economies
4. Communicating with millions of visitors there to explore & learn about the environment

The Two Types of Action on Climate Change

Actions tackling climate change are normally classed into the following two types:

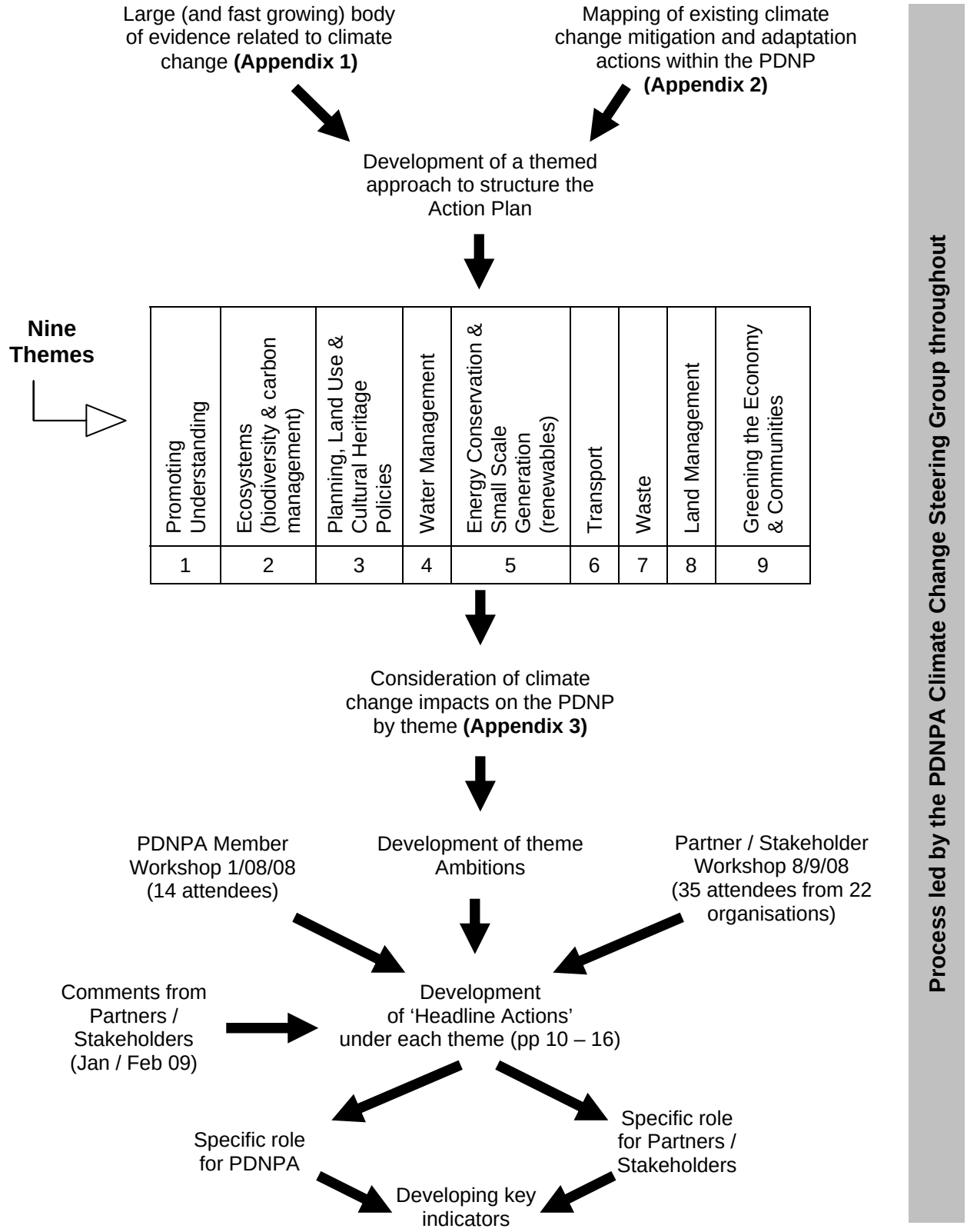
1. **Mitigation** actions. These are related to GHG emission reductions that will help reduce the extent of future climate change;

2. **Adaptation** actions. These are required to cope with the changes that will occur as a result of climate change, especially if GHG emissions continue to rise. Even if all emissions were stopped tomorrow adaptation would still be required due to the momentum for change built into the climate from the existing GHG levels.

Creating an Action Plan for the Peak District National Park - The Process

Work on the Action Plan commenced in April 2008. The diagram below (Figure 3) summarises the process that has been undertaken to deliver the work to date.

Figure 3. Stages in Creating the Action Plan



Mapping the Existing PDNP Climate Change Actions

An important output from the production of this Action Plan has been the mapping of the existing climate change actions currently taking place within the PDNP. The result of this work can be seen in Appendix 2. It recognises the wide contributions being made by many partners and stakeholders across the National Park to mitigate and adapt to climate change impacts. The PDNPA will aim to support these in line with National Park purposes in order to help their continuation, and in many cases expansion or intensification. The mapping table (Appendix 2) identifies which NPMP Outcomes existing actions relate to so as to keep track of them through relevant partnerships and programmes.

The Nine Themes

To help structure the content of a National Park-specific Action Plan a series of themes have been developed (see Fig.4). The themes reflect the role that the National Park plays in taking action on climate change and also the cross cutting issues that need to be addressed to deliver GHG emission reductions.

Figure 4. The nine themes

No.	Theme
1	Promoting Understanding (e.g. communication, education, research & interpretation on Climate Change)
2	Ecosystems (biodiversity & carbon management)
3	Planning, Land Use & Cultural Heritage Policies
4	Water Management
5	Energy Conservation & Small Scale Generation (renewables)
6	Transport
7	Waste
8	Land Management
9	Greening the Economy & Communities

The themes are presented in no particular order. No weighting has been assigned.

With a cross-cutting subject such as climate change there are inevitably strong links and overlaps within the themes. In particular Theme 3 – Planning, Land Use & Cultural Heritage Policies has strong links with Themes 5 – Energy Conservation & Small Scale Generation (renewables) and Theme 6 – Transport. Theme 2 – Ecosystems (biodiversity & carbon management) has close links with Theme 8 – Land Management.

Theme Ambitions

To provide a sense of the desired ‘direction of travel’ each theme contains an ambition. Comments on the ambitions were sought at the external partner / stakeholder workshop held on 8 September 2008, and the ambitions refined accordingly. This action plan, along with existing activity, will provide an initial effort towards meeting the ambitions, however the changes required are very long term and actions to tackle climate change will need to continue well beyond 2011 and be further embedded in future work plans if the ambitions are to be achieved.

Climate Change Impacts on the Peak District National Park

For each theme a list of possible climate change impacts was developed (see Appendix 3). These impacts then helped inform the Headline Actions.

Headline Actions

As a result of input from the numerous consultees a series of 'Headline Actions' have been identified for each of the nine themes (see pages 10 to 16). The Headline Actions set out the main new or expanded National Park-specific actions to be taken over the coming years that will add value to existing progress being made on climate change mitigation and adaptation. The Headline Actions also indicate the respective roles that the PDNPA and PDNP partners and stakeholders will play in terms of taking them forward. They are for the most part National Park specific, but there are also some more 'generic' Headline Actions e.g. those linked to GHG emission reductions, which need to be recognised and taken forward due to their importance nationally and internationally.

The Headline Actions should be seen as an expansion of, or in addition to, the *existing* actions on climate change currently taking place within the PDNP by a wide range of partners and stakeholders (see Appendix 2). This Action Plan focuses on the short term - the Headline Actions identified will need to be reviewed in 2011 and most likely continued / further embedded in work beyond this date.

Next Steps

The PDNPA will take forward the Action Plan as follows:

1. Work on developing appropriate indicators to assess progress;

2. Ensure that the actions to be led by the PDNPA are put forward as part of the organisation's budget and service planning process;

3. Engage partners and stakeholders within the National Park to assist in their contribution to the delivery of the Headline Actions;

4. Monitor the actions through the National Park Management Plan annual monitoring report.

5. Review the Action Plan in 2011.

Headline Actions 2009 – 2011

The Headline Actions aim to recognise that we need to take action on the biggest *risks* to the National Park posed by climate change, or where the *greatest savings* can be made in terms of GHG emissions, whilst being compatible with National Park purposes. Taking this approach has proved difficult due to the lack of data and guidance around the subject. The Headline Actions also therefore aim to be pragmatic actions that can be taken forward straight away. They have been identified through a process of consultation with Partners, Stakeholders and with NPA Members and Officers. The Headline Actions try to pick out the role a National Park should play in contributing to action on climate change. They also aim to support the actions outlined in the numerous NI186 delivery plans covering the National Park.

To help with the numerous acronyms there is a glossary in Appendix 4.

Theme 1: Promoting Understanding (e.g. communication, education, research & interpretation on Climate Change)

Ambition: Those who live, work or visit the National Park understand the concept of climate change, what they can do to reduce greenhouse gas (GHG) emissions, and how they can adapt to a changing climate in a way that reduces the negative impacts on their health and wellbeing.

Headline actions, between now and 2011, which will help us move towards the ambition.

No.	Theme 1 – Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
1.1	Encourage those who live, work or visit the National Park to better understand their carbon footprint and what they can do to reduce it.	LAEP / PDNP Constituent Local Authorities PDIP Business Link Envirowise Carbon Trust/ESTAC MEA DEFRA - Act on CO_2	Advice to businesses e.g. through L&WR / EQM Promotion of government Act on CO_2 campaign Promotion through communications (web and print) Messages via Visitor Centres & Field staff Education work through Losehill Hall Advice from the Planning Service SDF
1.2	Promote understanding of the landscape changes and possible adaptations likely to result from climate change.	MFF Partners NE NT PDIP EH	Education work through Losehill Hall and Field Services
1.3	Share information and data on climate change impacts within the National Park to better inform strategies and action plans.	NE EA LAEP PDNP Constituent Local Authorities LCILP UK Climate Projections DEFRA / DECC MFF Partners EH	Information and data from Research, Policy and Partnerships Service Staff training / performance framework

Links to other existing PDNP / PDNPA strategies or programmes

One of the main ways these actions will be progressed is through existing partnerships and target group action plans identified under the NPMP 'Understanding the NP' Outcome 8 such that where the PDNPA is seeking to change peoples' awareness and understanding of the National Park, this is done in a way that ensures an understanding of the climate change implications. The Nottingham and Derbyshire Local Authority Energy Partnership's 'Everybody's Talking about Climate Change' and the Staffordshire OC_3 campaigns are providing valuable support in this area.

Theme 2: Ecosystems (biodiversity & carbon management)

Ambition: Ecosystems within the National Park hold or absorb carbon dioxide, and are better able to adapt to the effects of climate change.

Headline actions, between now and 2011, which will help us move towards the ambition.

No.	Theme 2 - Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
2.1	Monitor, through the Biodiversity Action Plan (BAP), the impact of climate change on vulnerable species and habitats within the National Park.	NE FC NT EA RSPB Wildlife Trusts	PDLBAP co-ordination
2.2	Identify and implement appropriate management measures to reduce the impact of climate change on vulnerable species and habitats within the National Park.	PDLMAS (including NE, EA, FC) Landowners and managers	PDLBAP co-ordination Use PDNPA estates as test-beds Contribution through PDLMAS
2.3	Research and demonstrate the role of moorlands and peat/soil in carbon management and storage within the National Park.	MFF Partners Peat Compendium ENPAA Climate Change group	Support MFF Management of PDNPA estates Losehill Hall / MICCI Project

Links to other existing PDNP / PDNPA strategies or programmes

One of the main ways to deliver these actions will be through the Peak District Biodiversity Action Plan and through programmes of land management and moorland work already focusing on carbon management. This work has wide ownership amongst partners in the National Park and is well placed to work towards improving the resilience of biodiversity to future climate change. The recent Landscape Character Assessment will also inform this area of work.

Theme 3: Planning, Land Use & Cultural Heritage Policies

Ambition: Planning, land use and cultural heritage policies within the National Park lead to a reduction in greenhouse gas (GHG) emissions and support adaptation to a changing climate.

Headline actions, between now and 2011, which will help us move towards the ambition.

No.	Theme 3 - Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
3.1	Ensure the National Park LDF takes on board its climate change objectives, the climate change action plan and the subsequent implications on development.	LDF consultees – statutory, agencies, authorities and communities	Producing the LDF
3.2	Find ways of contributing to local, regional and national energy conservation and renewables targets within the context of a protected landscape.	EMDA AWM YF NWDA	Ensuring through guidance and policy that renewables etc are appropriate to the protected landscape
3.3	Replace the current SPG Energy: Renewables and Conservation with an SPD covering low carbon development and development better able to adapt to a changing climate.	LDF consultees – statutory, agencies, authorities and communities English Heritage Planning Agents	Produce a supplementary planning document.
3.4	Support efforts to reduce the impacts of climate change on the cultural heritage of the National Park, and ensure historic buildings can reduce their GHG emissions and adapt to a changing climate.	EH NT Owners of archaeological sites and heritage buildings	Advice from Cultural Heritage team & Planning Service

Links to other existing PDNP / PDNPA strategies or programmes

These key areas of climate change action are being examined for the National Park Local Development Framework and for future updates in planning guidance. Specific evidence is being researched on further opportunities to integrate renewable energy technologies, including water power, into the National Park. The recent Landscape Character Assessment is informing this work. There are also links with the PDNP Cultural Heritage Strategy.

Theme 4: Water Management

Ambition: Within the National Park water is captured, stored, transported, delivered and used in a manner that reduces greenhouse gas (GHG) emissions and helps reduce the impacts of drought and floods on people, the natural and built landscape.

Headline actions, between now and 2011, which will help us move towards the ambition.

No.	Theme 4 - Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
4.1	Maintain adequate water supplies and quality within the National Park, through improved catchment management, and within environmental limits.	EA ST UU YW MFF Partners / SCaMP Project	Advice to land managers / famers
4.2	Develop a better understanding of the measures that enable the National Park to contribute to flood risk alleviation both in and outside the Park.	EA MFF Partners ST UU YW PDNP Constituent Local Authorities	Supporting research in this area through MFF work
4.3	Encourage those who live, work or visit the National Park to reduce their water use.	ST UU YW Envirowise Business Link PDNP Constituent Local Authorities Peak District & Derbyshire DMP	Advice to businesses e.g. through L&WR / EQM Environmental Management work to reduce the PDNPA's water use Planning Service advice

Links to other existing PDNP / PDNPA strategies or programmes

Key partners leading on resource management, such as the Environment Agency are already integrating climate change thinking into their catchment management plans. These headline actions will seek to focus this work on climate change implications for river and wetland ecology, water quality and quantity and flood risk management in the National Park.

Theme 5: Energy Conservation & Small Scale Generation (renewables)

Ambition: Within the National Park energy conservation and small scale generation (renewables) are supported and promoted as appropriate to a protected landscape.

Headline actions, between now and 2011, which will help us move towards the ambition.

No.	Theme 5 - Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
5.1	Work to support energy conservation initiatives within the National Park.	LAEP Carbon Trust ESTAC Energy Companies (via CERT) PDNP Constituent Local Authorities EH	Advice to businesses e.g. through L&WR / EQM SDF Good practice projects on PDNPA's own estate Planning Service advice

No.	Theme 5 - Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
5.2	Seek to reduce the GHG emissions from organisations' operations and service provision within the National Park.	LSPs / LAAs – NI185&186 Carbon Trust LAEP / MEA	Environmental Management work to reduce PDNPA's carbon footprint Advice to businesses e.g. through L&WR / EQM Contribution to LAA NI186 targets Planning Service advice
5.3	Encourage projects, appropriate to a protected landscape and historic buildings, which will contribute to small scale renewable generation capacity within the National Park.	LAEP / MEA Business Link Land owners/managers EH Water / utilities companies DECC (LCBP & Bio-energy grant scheme) EH	SDF financial support for renewables LDF policies & Planning Service advice

Links to other existing PDNP / PDNPA strategies or programmes

These actions build on National and Local Area Agreement related initiatives (specifically those covered by NI186) on energy conservation and renewable energy development across domestic, industry and public sectors.

Theme 6: Transport

Ambition: Transport infrastructure, services and policies in the National Park support and enable reduced greenhouse gas (GHG) emissions from travel and are better able to adapt to the effects of climate change.

Headline actions, between now and 2011, which will help us move towards the ambition.

No.	Theme 6 - Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
6.1	Ensure the National Park Sustainable Transport Action Plan contributes to climate change mitigation and adaptation issues.	Highway and transport authorities associated with the National Park Train and bus operators Local transport partnerships Peak Area Transport Forum	Promoting actions within the National Park Sustainable Transport Action Plan
6.2	Promote local accessibility, walking and cycling routes and expand the existing network within the National Park.	Highway and transport authorities within the National Park Derbyshire Dales and High Peak Accessibility Partnership Sustrans Peak District & Derbyshire DMP Local Transport Partnerships	ROW improvements Promotional role to visitors Free Ranger Guided Walks Planning Service role Cycle hire centres Negotiating concessionary access routes Promotion of walking and cycling on PDNPA estates

Links to other existing PDNP / PDNPA strategies or programmes

The forthcoming National Park Sustainable Transport Acton Plan will be one way that these actions can be built into key partner plans including regional and county local transport plans and that more focus can be put into promoting lower carbon transport solutions in the PDNP. The transport actions identified in the numerous NI186 delivery plans will also contribute to action in this area.

Theme 7: Waste

Ambition: Communities and organisations within the National Park follow the waste hierarchy (reduce, reuse, repair, recycle) as a way of reducing greenhouse gas (GHG) emissions.

Headline actions, between now and 2011, which will help us move towards the ambition.

No.	Theme 7 - Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
7.1	Encourage those who live in, work in or visit the National Park to practice the 4Rs 'Reduce, Reuse, Repair, Recycle'.	PDNP Constituent Local Authorities WRAP	Advice to businesses e.g. through L&WR / EQM Environmental Management work to reduce the PDNPA's waste arisings SDF

Links to other existing PDNP / PDNPA strategies or programmes

Strategic waste management is mainly a local authority role with key new targets included within Local Area Agreements for reducing waste going to landfill. The PDNPA has a supporting role as a planning authority (especially in respect of building waste) and in communicating key recycling messages.

Theme 8: Land Management

Ambition: Land management practices within the National Park support a reduction in greenhouse gas (GHG) emissions and enable better adaptation to the effects of climate change.

Headline actions, between now and 2011, which will help us move towards the ambition.

No.	Theme 8 - Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
8.1	Influence land management schemes (especially agri-envi schemes) to encompass climate change mitigation and adaptation actions.	NE NT DEFRA RSPB EA CLA RDAs FPD NFU EH	Lobbying government and policy makers
8.2	Continue Moors for the Future as an example of landscape scale project with climate change mitigation and adaptation benefits.	MFF Partners	Financial support / host MFF Partnership

No.	Theme 8 - Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
8.3	Work to promote low carbon land management practices within the National Park as appropriate to a protected landscape.	Land owners, especially major estates – eg Haddon and Chatsworth) FC Water companies NT NE	Use PDNPA estates as test beds / examples of good practice Advice via Farm Advisors and through PDLMAS Advice through L&WR / EQM progamme

Links to other existing PDNP / PDNPA strategies or programmes

The Local Development Framework will play a key role in setting out a strategic approach to land use within the National Park. Further strategic plans for land management will be taken forward by key partners such as Natural England and the Environment Agency. Many of these plans are informed by the recent Landscape Character Assessment.

Theme 9: Greening the Economy & Communities

Ambition: Communities and organisations within the National Park are supported and enabled to reduce their greenhouse gas (GHG) emissions, and are better prepared to adapt to the effects of climate change.

Headline actions, between now and 2011, which will help us move towards the ambition.

No.	Theme 9 - Headline Actions	Stakeholders / partnerships involved in delivery	Role(s) of the PDNPA
9.1	Support people and communities in their aspirations to reduce their GHG emissions and adapt to climate change.	PDSEG LAEP PDNP Constituent Local Authorities MEA VCOs RCCs ESTAC	Contribute to PDSEG / LAEP SDF Support through L&WR Planning Service advice
9.2	Support the environmental economy to reduce its GHG emissions and adapt to climate change e.g. food producers, products from the Peak District, sustainable tourism initiatives.	Peak District & Derbyshire DMP PDFG PDP Envirowise Carbon Trust	Advice through L&WR / EQM & the Planning Service
9.3	Encourage major emitters of GHGs (e.g. the cement, minerals and aggregates industry) to reduce their GHG emissions.	EU ETS	Political lobbying LDF policies

Links to other existing PDNP / PDNPA strategies or programmes

Within the PDNP existing agencies and authorities have a key role in influencing, advising and regulating economic sectors, but PDNPA and other PDNP partners have a supporting role in promoting specific sustainable solutions and local product development that will help reduce GHG emissions.

APPENDIX 1 – Climate Change Context – Global to Local

International Context

Initiative	Description	Relevance to the PDNP
EU Emissions Trading Scheme	The key policy introduced by the European Union to help meet the EU's greenhouse gas emissions reduction target of 8% below 1990 levels under the Kyoto Protocol. National Allocation Plans set an overall 'cap' on the total amount of emissions allowed. Installations covered by the Scheme are required to monitor and report their emissions. They may use all or part of their allocation and have the flexibility to buy additional allowances or to sell any surplus allowances generated from reducing their emissions below their allocation.	Requires large GHG emitters within the National Park to reduce their emissions.
Intergovernmental Panel on Climate Change	Set up in 1998 by the World Meteorological Organization (WMO) and by the United Nations Environment Programme (UNEP) the IPCC is a scientific intergovernmental body. It was established to provide the decision-makers and others interested in climate change with an objective source of information about climate change. IPCC's Fourth Assessment Report's key conclusions were that: it is "unequivocal" that global warming is occurring and the probability that this is caused by human emissions of greenhouse gases is over 90%.	Instrumental in collating the evidence base which concluded that climate change is being caused by human activity. This prompted national and international action (see below).
Kyoto Protocol	The first ever international treaty to set legally binding emissions reduction targets on developed countries that have ratified it. Countries agreed to targets that will reduce their overall emissions of a basket of six greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride). The UK agreed to reduce its emissions by 12.5 per cent below 1990 levels over the period 2008-2012. The United Nations Climate Change Conference in Poznań, 1-12 December 2008, explored action post the current Kyoto Protocol period. EU decision in December 2008 to go for 20% of energy from renewables by 2020.	UK commitment to reduce GHG emissions leads to resource efficiency programmes e.g. Carbon Trust / EST and local government targets e.g. NI 185 & NI 186

National Context

Initiative	Description	Relevance to the PDNP
Adapting to Climate Change Programme	Brings together the work already being led by Government and the wider public sector on adapting to climate change. It will co-ordinate and drive forward the development of the Government's work on adaptation in the future.	Will influence and inform the way those who live, work or visit the PDNP adapt to a changing climate.
Climate Change Act 2008	Requires cuts in GHGs of at least 80% by 2050.	Sets legally binding targets for emission reductions which will strengthen and promote renewable energy generation alongside energy and resource efficiency schemes.

Initiative	Description	Relevance to the PDNP
English Heritage Climate Change Guidance	Extensive information on the impacts of climate change on the historic environment, i.e. buildings, sites and landscapes, and advice on mitigation and adaptation.	Guidance on actions for mitigating and adapting to the impacts of climate change on the historic environment of the PDNP.
ENPAA Climate Change Working Group	Following a ministerial seminar in March 2008 a Climate Change Working Group was set up with representatives from all England's National Parks. The aims are to share good practice and inform how National Parks can play their part in climate change mitigation and adaptation.	Commitments and good practice from other National Parks will be fed into work at the PDNP level.
Natural England's Climate Change Campaign	Campaign to raise awareness of the impacts of climate change on England's wildlife and landscapes and to help put into practice those measures which are required to give wildlife the best chance of survival.	Raises awareness of the impact of climate change on the natural environment within the PNDP and how the landscape can adapt.
National Performance Framework Indicators	At the local authority level the National Performance Framework for local authorities and their public sector partners defines a new indicator set which includes four climate change related indicators. They are: • NI185 CO_2 reduction from local authority operations • NI186 Per capita reduction in CO_2 emissions in the local authority area • NI188 Planning to adapt to climate change • NI189 Flood risk management	Influences actions / resources invested by local authorities within the PDNP.
Nottingham Declaration	Signed in February 2007 by the Peak District National Park Authority the Nottingham Declaration recognises the central role of local authorities in leading society's response to the challenge of climate change. Signatories pledge to *"[w]ithin the next two years develop plans with our partners and local communities to progressively address the causes and the impacts of climate change…"*	Has led to the development of Climate Change Action Plans by local authorities within the PDNP.
Planning Policy Statement: Planning and Climate Change - Supplement to Planning Policy Statement 1	Sets out how planning, in providing for the new homes, jobs and infrastructure needed by communities, should help shape places with lower carbon emissions and resilient to the climate change now accepted as inevitable.	Influences the design and type of developments within the PDNP.
Stern Review on the Economics of Climate Change	Taking action now to reduce GHG emissions will be cheaper (1% of GDP) than dealing with the consequences of not taking action.	Action on climate change is required within the National Park and will be cheaper the sooner we start.
UK Climate Change Programme	Sets out the UK policies and priorities for action in the UK and internationally. Reports annually to parliament.	Influences policies filtering down from national to local government.
UK Climate Impacts Programme (UKCIP)	Helps organisations to adapt to inevitable climate change. Produced climate changes scenarios (UKCIP02) for the UK to help identify the effects of climate change. More accurate UK Climate Projections (previously known as UKCIP08) are due in Spring 2009.	Provided the UKCIP02 climate predictions showing the possible climate scenarios within the PDNP.

Regional & Sub-Regional Context

East Midlands

Initiative	Description	Relevance to the PDNP
Derbyshire Local Climate Impacts Profile (LCLIP)	Assesses the impact of identified significant weather events from 2000 – 2008 on the delivery of council services.	Better understanding of the local impacts of climate change on the PDNP so decisions can be made and services modified accordingly.
Derbyshire Partnership Forum Climate Change Strategy	The PDNPA, as part of the Derbyshire Partnership Forum has supported the goal to *"put into place, at both the corporate and community levels, measures which will lead to a reduction of greenhouse gas emissions of at least 60% of 1990 levels by 2050 at the latest; measures to absorb and store CO_2 where possible and measures to ascertain the impacts of climate change in Derbyshire and to adapt the delivery of our services accordingly".*	High level commitment from a range of key partners to work to reduce GHG emissions at a corporate and community level within the Derbyshire area of the PDNP.
East Midlands Climate Change Programme of Action	Helps ensure that households, businesses and individuals understand what climate change means for them, what they can do to reduce greenhouse gas emissions, how to adapt to unavoidable changes in the climate and what support is available. Revised Programme of Action Due to be released at the end of 2008.	Influences actions / resources invested within the East Midlands area of the PDNP.
Everybody's Talking about Climate Change campaign	DEFRA supported Nottingham and Derbyshire climate change public awareness campaign.	Increased public awareness of climate change alongside pledges to take action by individuals to reduce their carbon footprint. Resources to support local authorities within the Derbyshire area of the PDNP in their efforts to tackle climate change.
High Peak and Derbyshire Dales Local Strategic Partnership – NI 186 & 188	LSP covering the High Peak and Derbyshire Dales areas.	The LSP's Local Area Agreement includes targets to reduce CO_2 through NI 186 and adapt to climate change through NI 188.
Nottingham & Derbyshire Local Authority Energy Partnership (LAEP)	Partnership of local government organisations with the aim of: sharing good practice; promoting more sustainable energy use in local authorities and their communities and supporting action to tackle and prepare for the climate change national indicators.	Helping reduce the carbon footprint of the PDNP.

North West

Initiative	Description	Relevance to the PDNP
Cheshire County Council – Climate Change Scrutiny Review	The review acknowledges the County Council is itself a major consumer of energy and other resources. The Authority considers it has a key role in demonstrating leadership in combating climate change, is prepared to work with other public and private agencies and the community to cut overall emissions and better management can cut emissions and save money still further.	Corporate commitment to support efforts to reduce GHG within the PDNP.
North West Climate Change Action Plan	Aims to stimulate and measure the progress of England's Northwest towards a low-carbon economy, preparing it for the challenges of a changing climate and expected future energy demands, whilst protecting and enhancing quality of life and preserving the Northwest's rich environment.	Commitment from a range of key partners to work to reduce GHG emissions at a corporate and community level within the area of the PDNP that covers the North West region.

West Midlands

Initiative	Description	Relevance to the PDNP
Moorlands Together Local Strategic Partnership	LSP covering the Staffordshire Moorlands.	The LSP's Local Area Agreement includes targets to reduce CO_2 through NI 186.
Staffordshire County Council's Corporate Climate Change Action Plan – A Hard Rain	Staffordshire County Council has formally adopted a Corporate Action Plan, mapping out a strategy for responding to the challenge of climate change. It sets the ambitious target of a 60% reduction in carbon dioxide emissions from the County Council's buildings, vehicles and street lighting, by 2050. It also calls for the preparation of Adaptation Plans, to ensure that the authority can continue to meet the needs of the public during the extremes of weather which may now be inevitable as a result of a changing climate.	Will reduce the GHG emissions from SCC's estates and operations within the PDNP.
Staffordshire Declaration on Climate Change	This was signed by the PDNPA in June 2008 – similar to the Nottingham Declaration (see above).	Has led to the development of Climate Change Action Plans by local authorities within the PDNP.
Staffordshire's OC3: Our County, Our Climate, Our Choice	An online guide to help the residents of Staffordshire through the morass of information relating to climate change. It aims to direct users to the most relevant, up-to-date and reliable information.	Better understanding of the issues of climate change and what individuals can do to be part of the solution.

Yorkshire & Humber

Initiative	Description	Relevance to the PDNP
Yorkshire and Humber Regional Assembly – Meeting the climate change challenge and Your Climate – Climate Change Action Plan	'Meeting the Climate Challenge' sets out the regional targets on climate change at what should be done to mitigate the causes of and adapt to the effects of climate change. The 'Your Climate' website includes a series of documents relating to climate change in the Yorkshire and Humber region. The Climate Change Action Plan is currently being revised and updated (Nov 2008).	Information and climate change actions that help prepare adaptation responses and mitigate the causes of climate change within the Yorkshire and Humber area of the PNDP.

Peak District National Park Context

Initiative	Description	Relevance to the PDNP
Bonsall Energy Group	Aim to undertake projects that will help Bonsall reduce its carbon footprint and may involve the development of energy-saving projects, renewable energy schemes, recycling, educational projects or other activities to foster a more sustainable community.	Helping reduce the carbon footprint of the PDNP.
Climate Change Action Plan - Commitment by Members	On 7 December 2007 Members approved the recommendation that *"A report be brought to the Authority no later than December 2008 on a wider strategy for addressing impact of and adaption and mitigation to climate change within the National Park".*	Focuses on the actions required to ensure the PDNP plays its part in terms of climate change mitigation and adaptation.
Ilam Climate Change Project	Project designed to take the village of Ilam to carbon neutrality.	Helping reduce the carbon footprint of the PDNP.
Matlock Area Climate Action Forum	Campaign group aiming to raise awareness of climate change in the Matlock area.	Helping reduce the carbon footprint of the PDNP.
Moors for the Future Partnership	Landscape scale partnership project focusing on moorland restoration, management and research with the associated carbon and water catchment benefits.	Understanding the role that moorlands play in terms of climate change mitigation and adaptation. Stabilisation work reduces carbon loss and improves water catchment management.
National Park Management Plan	Provides the overarching vision for the future of the Peak District, to be achieved in partnership with all agencies and stakeholders with an interest in the National Park. Outcome 4 focuses on Climate Change and Natural Resources.	The document providing the vision for the PDNP and guides the work of the PDNPA from 2006 – 2011.
Peak District National Park Authority Environmental Policy	Adopted in December 2007 this statement sets out how the Peak District National Park Authority will work to reduce the environmental impact from its own estate and operations including a target to reduce its own carbon footprint.	Reduction in GHG emissions from the PDNPA's estates and operations.
Peak District National Park Sustainable Development Fund	A fund provided by Government to support sustainable development in national parks. Numerous climate change related projects have been supported.	Helping communities within and around the PDNP improve their environmental sustainability.

Initiative	Description	Relevance to the PDNP
Peak District Sustainable Energy Group	Formed in early 2007 the Peak District Sustainable Energy Group (PDSEG) is a partnership of organisations in the Peak District that share the common aim of promoting and supporting local activity that will help to address climate change and reduce carbon footprints.	Helping reduce the carbon footprint of the PDNP.
Sustainable Edale	Aims to reduce the carbon footprint of the parish of Edale and raise awareness of sustainability in the area.	Helping reduce the carbon footprint of the PDNP.
Sustainable Winster	A local initiative aimed at making waste reduction and energy savings easier, so saving money and giving the planet a helping hand.	Helping reduce the carbon footprint of the PDNP.
Sustainable Youlgrave	"Taking the Youlgrave area *beyond* carbon neutral."	Helping reduce the carbon footprint of the PDNP.

APPENDIX 2 – Mapping Existing Actions on Climate Change within the Peak District National Park

This information has been obtained through research, one to one meetings, the PDNPA Member workshop and an external partner / stakeholder workshop. Although many of the actions could sit across a range of themes they are grouped under what is considered to be the most relevant, with reference also made to the other themes they contribute to.

Each action is also referenced to the NPMP Outcome(s) it best sits under. The outcomes are listed in Figure 5. More detail can be found in the Peak District National Park Management Plan 2006 – 11.

Figure 5. National Park Management Plan Outcomes

No.	Outcome
1	Biodiversity
2	Cultural Heritage
3	Natural Beauty
4	Climate Change and Natural Resources
5	Mineral Extraction
6	Traffic, Travel and Accessibility
7	Recreation and Tourism
8	Understanding the National Park
9	People and Communities
10	Economy

Theme 1: Promoting Understanding (e.g. communication, education, research & interpretation on Climate Change)

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Running CC information & communication on how CC is impacting on the High Peak & Longshawe Estate. Walk leaders briefed. (a&m)	NT	1	8
Moors for the Future research & collaborative approach. (a&m)	MFF	1,2,4,8	1,4
Natural England Climate Change campaign. (a&m)	NE	1,2	1,3,4
NE's 'Countdown 2010' funding research on Climate Change. (a&m)	NE	1	4
Everybody's Talking about Climate Change Campaign. (m)	Notts & Derbys LAEP	1	4
Feeding into LCLIP project. PDNPA to participate in Phase 2 of project Oct – Dec 2008.	HPBC / DCC EMRA / GOEM	1,2,4,8	4
PDNPA Members Training – what planning can do in terms of Climate Change. (a&m)	PDNPA	1,3	4
Keeping up pressure to raise awareness of fires e.g. Fire Watch (started by MFF & continued by the Ranger Service). (a&m)	MFF / PDNPA / Fire Services	1,2	1
Research & understanding on Moorland restoration & carbon management. (a&m)	MFF / Academic Community	1,2	1,4
SDF & East Midlands CRI funded hydro power feasibility study on 40 sites within the Peak District. (m)	FPD	1,5	4
Education & awareness on Climate Change through walks and talks. (a&m)	FPD / Ranger Service	1	8
Encouraging all partners to sign the Nottingham Declaration. (a&m)	DPF / SCC	1	4
Eco Schools project support. (a&m)	DCC	1,9	4
College of the Peak – new eco training centre and environmentally friendly building courses. (a&m)	DCC	1,5	10

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Notts & Derbyshire Energy Partnership – support the network and promote best practice. (a&m)	DCC	1	4
Raising awareness to businesses through the use of a Resource Efficiency Diagnostic Tool. (m)	BLEM	1	10
Envirowise offer advice and guidance to businesses on energy saving/resource efficiency. (m)	Envirowise	1	10
www.staffsoc3.org.uk	SCC	1	4
Losehill Hall education and training activities	PDNPA	1	8
Providing advice on CC issues to landowners and promoting sustainability. (a&m)	FWAG / NE / FC	1,8	1,4
Providing advice to visitors on how to use the NP more sustainably, e.g. use of public transport, walking, cycling (leaflets, info. panels, podcasts). (m)	PDNPA and Partners	1,6	6,7
Writing Energy Saving Policy and promoting "Every Action Counts" to small groups. (m)	DDCVS	1,6,9	4,9
PDSEG Conference (07). (a&m)	PDSEG	1,5,6,9	4,9
Running Events for Farmers re: Renewables. (m)	FLC	1,8,9,5	10
Visual displays of energy use in public buildings – numeric and graphic – to raise awareness. (m)	General	1	4
"Science meets the Eye" Art Exhibition containing visually stimulating research outputs used to "hook" public into finding out more about CC, etc.	MFF	1,2,4	8
Work with LSP Partners to map and reduce their CO_2 and Project Carbon initiative work with Communities. (m)	SME	1	4

Theme 2: Ecosystems (biodiversity & carbon management)

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Keeping up pressure to raise awareness of fires e.g. Fire Watch (started by MFF & continued by the Ranger Service). (a&m)	MFF / PDNPA / Fire Services	2,1	8
Working out the NT's carbon store – vegetation & soils database. (m)	Haycock Associates & NT	2	4
Trying to reduce the environmental impact of the NT – peat management & NT properties. (m)	NT / NE	2,5	4
Looking for a major piece of land to act as a test bed (ability to mitigate and adapt) to manage the impacts of CC e.g. Eastern Moors. (m)	NT / PDNPA	2,8	1,4
Fire scenario mapping. (a)	NT / NE	2	4
Carbon Group within the NT focusing on both upland and lowland farms. The Wallington Project in Northumberland is looking at the whole property in terms of carbon. (a&m)	NT	2,8	4
Ensuring existing habitats are robust and expanded and linked – within and out with the NP – improving conditions to withstand CC; creating stepping stones, corridors, linkages; landscape scale approach e.g. Vision Project. (a&m). eg restoring White Peak plateau connecting Dales.	PDNPA / FC	2,8	1
Monarch Project – predicting the response of biodiversity to CC – info taken and applied at a local level. (a)	UKCIP & Centre for Ecology & Hydrology (CEH)	2	1
Biodiversity & water – managing water flow supply, river restoration, rewetting. Flood risk management. (a)	EA / NE	2,4	4
Aim to improve biodiversity and health of sites so they are more resilient to CC. (a)	PDNPA / FC / MBC	2	1
Financial and advice support for peatland restoration. (a&m)	NE	2,8	4

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Policies to proactively support biodiversity gains in developments – conserve the existing habitats and expand if possible. (a&m)	PDNPA	2	1
Stabilising erosion on blanket peat. Keep carbon store on the moors (13-20m tonnes of CO_2). (m)	MFF	2,8	1,4
Restoration of blanket bog function – the next step following stabilisation. (m)	MFF	2,8	1,4
Sequestration – v. slow process but the areas are large and if maintained the carbon will be permanently locked in the Peat. (m)	MFF / MBC	2,8	4
Large scale Cotton grass propagation. (m)	MFF	2,8	1,4
Management of wildfires on the moors – fire operations support within the Peak District. (a&m)	MFF / PDNPA / Fire Services	2,8	4
Explore potential for new broadleaf planting - using PDNP landscape character assessment. (a&m)	MBC	2,4,8	1,3
"Increasing water supplies for moorland fire fighting" Studies in fire risk mapping, cost benefit analysis and hydrological assessment of suitable fire pond locations (m)	MFF	2,4	4
Sphagnum Project. Re-introduction of peat building plants onto PD moors. (a&m)	MFF	2,4	1,4
Ensuring that the Peak District is top of the list for future NE Climate Change Seminars work - focus on peat and sub montane. (a&m)	PDNPA / NE Future	2,1	4,8
EIAs and protected species surveys for planning to help sustain existing habitats and species.	FWAG	2,3	1
Preparing and advising on agri-environment schemes to help maintain and enhance farm habitats. (a&m)	FWAG / NE	2,8	1
Ongoing research work into dynamics and processes of upland environment.	MFF	2	1,4
Delivery of Peak District BAP. (a&m)	BAP Partners	2	1
Targeting and delivery of agri-environment schemes. (a&m)	NE & Partners	2,8	1,2,3,4, 7,8,10
Links to surrounding areas – create habitat network/corridors. (a)	NE / PDNPA	2 4 8	1
Fire Operations Group (FOG)	PDNPA / NT Moorland Owners Fire Service	2	4

Theme 3: Planning, Land Use & Cultural Heritage Policies

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Developing a Carbon Budget for the NT – trying to achieve 20% net gain (including carbon in the landscape). (a&m)	Fred Worral, Uni of Durham & NT	3,5,9	4
NT and NE Climate Change scenarios. (a)	NT / NE	3,8	4
Over 2008&09 the PDNPA will carry out an analysis of 'Forces for Change' to better plan & manage the landscape to cope with the implications of Climate Change. (a)	PDNPA	3,8	1,4
Environmental Impact Assessments to safeguard existing habitats. (a&m).	DCC / NE EA / FC	3,2,4,6,8	1
Take a flexible approach to nature conservation in the face of a changing climate. (a)	PDNPA	3,8	1
Supplementary Planning Guidance (SPG) on energy conservation & renewables. (m)	PDNPA / HPBC	3,5	2,4,9
Design Guide – covers passive solar and shutters etc. (a)	PDNPA	3,5	2,4,9

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Development Strategy – explores the best places to group land use practices to help conserve the landscape, reduce the need to travel etc. (a&m)	PDNPA / HPBC	3,6	6,9
FPD strongly involved with planning & policies – provide a view that NPs can be a test bed for sensitive micro renewables and DE networks. (m)	FPD	3,5	4,9
Working in Partnership on Climate Change – Derbyshire Partnership Forum & Regional Climate Change Partnership. (a&m)	DCC / DPF / EMRA	3,6	4
DPF developing guidance on Action Planning for partners. (a&m)	DPF	3,6,9	4
Discourage floodplain development. (a)	PDNPA	3,4	9
EIAs and protected species surveys to safeguard habitats and important species. (a)	FWAG	3,2	1
Guide to sustainable development. (a&m)	SMDC	3	4,9
Sub-regional climate change study – potential for renewables. (m)	HPBC / PDNPA / DDDC / DCC	3,5	2,4
Design and Access statement – renewables and energy conservation. (m)	PDNPA	3,5	2,4,9

Theme 4: Water Management

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Biodiversity & water – managing water flow, river restoration, rewetting. (a)	EA	4,2,8	1,4
Discourage floodplain development. (a)	PDNPA	4,3	9
1/5th of England's water flows through NT estates. Exploring water risk assessment to help manage risk. (a)	NT	4	4
Dew pond restoration work. (a)	Vision Project	4,8	4,1
Promote Sustainable Urban Drainage (SUDs) on larger scale developments. (a)	PDNPA	4 3	4
Water management benefits in terms of water quality & storage. (a&m)	MFF	4	4
Flood risk management for surrounding catchments. (a) Ensure extensive consultation re: this. Will have ecological / archaeological implications.	MFF	4,8	4
Sheffield City Council established Flood Working group with "all" partners – PNP Catchment Upper Don. (a)	SCC	4,8	4
Community Risk Registers for each district prioritising risks including those posed by CC, e.g. flooding. (a)	DCC	4	4
Local Flood Resilience Group (partnerships with EA and districts (at least). (a)	DCC	4,8,9	4
Design and Access Statement – Checklist. (a&m) Water Management – planning process. (a)	PDNPA	4	9
Catchment sensitive farming initiative – Peaks and Dales. (a) Work at Markets and Visits to farmers	FWAG / NE	4,8	1,4,10
Work with Severn Trent Water to enhance and sustain habitats surrounding reservoirs and minimise nutrient deposition. (a)	FWAG / STW	8	1,4
Encouraging farmers to plan nutrient usage and helping with agri-environment scheme application to protect land from erosion and run off. (a&m)	FWAG / NE	4,8	1,4,10
Specific policies in LDF. (a&m)	PDNPA	4,6	9

Theme 5: Energy Conservation & Small Scale Generation (renewables)

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Trying to reduce the environmental impact of the NT – NT properties. (m)	NT	5,2	2,4
Design Guide – covers passive solar and shutters etc. (a) and "Renewables" SPG	PDNPA	5,1,3	2,4,9
Focusing on energy conservation in new build projects. (a&m)	NT / DCC / PDNPA	5	4,9
Green Environment Group within the NT which properties can bid into for funds. (a&m)	NT	5,9	2,4
When renovating buildings strive for the greenest option that's appropriate to the property and the budget. (a&m) + 60% - 80% national Carbon reduction target	PDNPA / DCC	5	2,4,9
Domestic housing – Energy Efficiency Advice Centre focuses on those in fuel poverty. (a&m)	Notts & Derbyshire Energy Partnership	5,1,9	4
Regional Housing Board funding to support fuel poor who are not covered by Warm Front. (a&m)	DDDC	5	9
HPBC Beacon Council for sustainable energy – installed ½ hourly metering in August 2007. Carbon footprint 3550 tonnes. (m)	HPBC	5,9	4
Warm Front campaign - saving 1,100 tonnes of CO_2 within the High Peak. (a&m)	HPBC / DDDC	5,9	9
Fuel poverty surveys to support households. (a&m)	HPBC / DDDC	5	9
DCC joined the Local Authorities Carbon Management Programme – exploring emission reductions from 1200 buildings and staff travel / fleet management and streetlighting. (m)	DCC / SCC Phase 4	5,9	4
DCC street lighting – replacement with more energy efficient units + Road Signs. (m)	DCC	5,9	4,3
Annual monitoring and reporting of DPF & DCCs carbon footprint with targets for reduction. (m)	DCC / DPF	5,9	4
DCC using Salix funds for energy efficiency improvements + match fund from internal budgets £400K in total. (m)	DCC	5,9	4
Wood Fuel – Advice, grants. Wood Boilers/Heating. (m)	FC / EMDA / DEFRA	5,8	4
Sustainable energy groups inc. Youlgrave, Bonsall (PDSEG). (a&m)	PDSEG / DRCC / PDNPA	5,4,6,7,9	2,4
Exemplar projects on own estate. (a&m)	PDNPA	5,9	4
Sustainable Youlgrave Renewable Energy Schemes. (m)	S. Youlgrave	5,9	4
Sub-regional climate change study – exploring potential for renewables – commissioned. (m)	PDNPA / HPBC / DDDC	5,3	4,9
Redundant Building Grant encourages higher level energy spec. (m)	DDC / DDEP	5	4
Design and Access statement – checklist for energy conservation and renewables – first stage of planning process. (m)	PDNPA	5,3	4,9
Energy audits included in Home Fire Risk checks, followed up with measures, e.g. insulation where needed (Staffordshire). (m)	SCC Fire & Rescue	5	4
Fuel Poverty Programme – HPBC. (m)	SMDC	5	9
Energy reduction targets met 3 yrs running – HPBC. (m)	SMDC	5,9	4
Study of renewable energy options for council undertaken. (m)	SMDC	5,9	4
Business mileage reduction targets set – HPBC. (m)	SMDC	5,6,9	4
Ilam Climate Change Project. (a&m)	SMDC / PDNPA / SCC	5,9	4

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Adopted energy saving actions and targets for Estate. (m)	DDDC	5,9	4
FPD Hydro Survey. (m)	FPD / T4S / PDNPA	5	4
Providing advice of energy efficiency and renewable technologies. (m)	FWAG	5	4

Theme 6: Transport

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Development Strategy – explores the best places to group land use practices to help conserve the landscape, reduce the need to travel etc. (a&m)	PDNPA	6,3	9,6
Public transport links to National Nature Reserves promoted. (m)	NE	6	6,7
SAFED (Safe & Fuel Efficient Driving) training for HPBC staff. (m)	HPBC	6,9	6
HPBC Travel Plan – increasing use of video and telephone conference facilities (supported financially by DCC). (m)	HPBC / SCC	6,9	6
DCC Highways in partnership with Nottinghamshire and Leicestershire researching Climate Change impacts on road network policies and standards including adaptation options. (a)	DCC / SCC	6	4
BLine and Gold Card schemes to encourage bus travel. (m)	DCC	6	6
Peak Connections – promotion of public transport within the PDNP. (m)	Peak Connections	6	6
Ranger Guided walks linked to public transport. (m)	PDNPA	6	6,7
MFF Audio Trails start/finish at PT links. (m)	MFF	6	6,7
Pool Cars. (m)	SMDC / PDNPA / DCC / SCC	6,9	6
Green Travel Plan for the National Park Authority emerging. (m)	PDNPA SCC	6,9	6
Extending NP cycle network and current promotion of cycling opportunities/short breaks. (m)	LAs / PDNPA Sustrans / DMP / DCC	6	6,7
Staffs Share-a-lift for Staffs area of PDNP. (m)	SCC	6,9	6
Cycle scheme / cycle loans to staff. (m)	Some LAs	6,9	6
Bus pass loans to staff. (m)	Some LAs	6,9	6
Council target for reducing business mileage and green travel plan targets. (m)	SMDC	6,9	6
Accurate monitoring of CO_2 emissions from business travel through electronic claims system. (m)	SMDC	6,9	6
Z Fleet health check reports done with EST funding. (m)	SMDC	6,9	6

Theme 7: Waste

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
HPBC kerbside recycling – 31% 2007/08, aiming for 37% in 2008/09. (m)	HPBC / SMDC	7	9
Production of a DCC waste matrix – identify all wastes from all services, assess then examine where they go to explore recycling options with the associated carbon savings. (m)	DCC	7	4
DCC run waste seminars with NISP on resource efficiency. (m)	DCC	7,9	4
Business link provide a gateway for information, advice and support for businesses looking to reduce their waste – including links to financial incentives. (m)	BLEM	7,9	10
DDDC kerbside + “bring” recycling targets – planned increase over life of PDNPA policy. (m)	DDDC	7	9
Using recycled materials. (m)	DCC	7	4

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Links with Groundwork Trusts across Derbyshire, Cheshire, etc. (m)	PDNPA	7,1,9	4,9
Encouraging farmers to produce waste management plans, completing waste regulation forms + looking at different ways to reduce diffuse pollution. (m)	FWAG / EA	7,4,8	4,10
New household waste strategy introduced with 65% recycling now achieved	SMDC	7	9
Training session for farmers	FLC	7,8	4,10
Promotion of E.A.C to community groups	DDCVS	7	9

Theme 8: Land Management

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Restoration of blanket bog function – the next step following stabilisation. (m)	MFF	8,2,4	4
Large scale Cotton grass propagation. (m)	MFF	8,2	1,4
Working on more sustainable land management policies – boils down to the soil. (a&m)	NT / NE / FC PDNPA / DEFRA	8	4,10
Agri environment schemes afford an element of protection to maintain existing quality. (a)	PDNPA / NE / DEFRA / FC / FWAG	8	4,10
Supporting farms with good environmental practices and positive conservation activities through Environmental Quality Mark scheme. (a&m)	PDNPA & Partners	8,5,9	2,10
Restoring peat bogs, gully blocking. (a&m)	PDNPA / MFF	8,4	1,4
Promotion of landscape scale projects e.g. Vision Project & MFF. (a)	NE / PDNPA	8	2,3
Agri environment support and finance. (a&m)	NE / FC	8,9	10
ELS encourages reduced fertiliser use with the associated carbon savings. (a&m)	NE	8	4
Responding on upland ELS – essentially would like Peak District uplands landscape character to remain the same and sustain rural livelihoods, especially farming. (a&m)	PD Land Managers / Farmers / FPD	8	2,10
Encourage stocking levels to avoid overgrazing. (a)	PDNPA / NE	8	10
Exploring landscape scale partnerships for sites Looking for sites which can be used as a test bed for adapting to CC e.g. Eastern Moors. (a)	PDNPA & Partners	8	3
Promotion of Local Foods/Cuisine to local groups/shops, Farmers' Markets etc. (m)	PDNPA / NFU	8	10
Promotion of diversification through training, inter-regional visits, case studies	FLC	8,3	10
Providing advice for sustainable farming including agri-environment schemes, energy efficiencies and nutrient planning	FWAG / NE / PDNPA	8,5	10
Development of Farmers Business Network.	FLC	8	10

Theme 9: Greening the Economy & Communities

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Eco Schools project support. (a&m)	DCC / SCC	9,1	8
DCC run waste seminars with NISP on resource efficiency. (m)	DCC	9,7	4
Agri environment support and finance. (a&m)	NE / FC / PDNPA	9,8	10
Environmental Quality Mark (EQM) support. (a&m)	NE / PDNPA	9	10
Grant scheme for environmental grants to community groups. (a&m)	HPBC / PDNPA SDF / SMDC / MBC	9	10

Existing climate change adaptation (a) or mitigation (m) actions within the PDNP	Organisations involved	CCAP Theme	NPMP Outcome
Joined experimental Carbon Trading Scheme between 30 other councils run by the Local Government Information Unit (LGIU). (a&m)	HPBC	9	4
Shop Smart, Shop Local campaign to support the local economy. (m)	HPBC	9	10
DCC sustainable procurement project – carried out training on sustainable procurement to include emissions and ethical issues. (m)	DCC	9	4
Investigating work with the National Forest to support locally sourced biomass. (m)	DCC / FC	9	10
Green Environment Group within the NT which properties can bid into for funds. (a&m)	NT	9,5	2,4
Sustainable Edale, Winster, Youlgrave. Bonsall, Bakewell, Ilam projects. (m)	Community Groups	9,5	2,4
Target to reduce NE's carbon footprint by 50% by 2010 (travel & building carbon emissions). (m)	NE	9,5	4
HPCVS Sustain Project – environmental support for community & voluntary organisations. (m)	HPCVS	9	9
Staffordshire Moorlands Project Carbon – energy reduction advice for organisations within the SMDC area. (m)	SMDC	9,1	4
PDSEG. (m)	Various	9,5	2,4
Green Tourism National Accreditation Scheme promoted locally by VPD&D DMP / other DMPs. (m)	DMPS	9	7
Resource Efficiency programme for SMEs throughout the region. (m)	Business Link / EMDA	9	10
LEADER Fund for DDDC and HPBC Businesses to encourage greener business. (m)	RAZ	9	10
Advice and info on fuel poverty via HPBC. (a&m)	HPBC	9	9
Development of affordable warmth grant, Fuel poverty = spending >10% of income on fuel. (a&m)	DDDC	9	9
Encouraging rural businesses to consider emission reduction and water harvesting. (a&m)	FWAG	9,4,5	10

APPENDIX 3 – Possible Climate Change Impacts on the Peak District National Park

This section lists possible direct or indirect changes to the landscape and activities within the Peak District National Park as a result of climate change. The information has been generated from a range of references and contributions from stakeholders within the PDNP. The impacts have been summarised under the nine themes in order to help inform the Headline Actions.

Theme 1: Promoting Understanding (e.g. communication, education, research & interpretation on Climate Change)

Possible Climate Change Impacts

- Increased demand for educational resources relating to climate change
- Better integration of climate change messages into existing communication media
- Demand from Government for communication to support taking actions on reducing GHG emissions

Theme 2: Ecosystems (biodiversity & carbon management)

Possible Climate Change Impacts

- Reduced vernalisation (cold winter weather required for flowering)
- Lengthening of growing season
- Change in flora types
- Potential stimulated photosynthesis & yields
- Change the quality or composition of grasslands
- Increased/change in range of native/alien pest & disease problems some may become invasive
- Low river flows reduce effluent dilution, which increases the likelihood of algal blooms and damage to wetlands and aquatic habitats
- Biodiversity losses due to higher water temperatures, poor water quality and eutrophication
- Change in timing of event (biological phenology)
- Dryer landscapes more prone to fire especially peat moorland – habitat loss and CO_2 released
- Water logging damages habitats
- Major ecological change in upland areas, wetlands and aquatic habitats
- Low summer rainfall may stress protected sites
- Increased pressure for afforestation or demand for coppicing

Theme 3: Planning, Land Use & Cultural Heritage Policies

Possible Climate Change Impacts

- Change in building design and materials to cope with a changing climate
- Changes in the distribution of pests that threatens the integrity of historic buildings, collections and designed landscapes
- Alteration of agricultural and forestry practices, could pose a risk to buried archaeological sites, traditional farm buildings and historic landscapes
- Increase pressure on landscape in hot weather – especially riverside / shaded areas
- Pressure to reduce GHGs leads to more small scale generation planning applications
- Pressure from government for proactive approach in policy and practice towards coping with climate change
- Increased pressure for local employment sites to reduce commuting, including via farm diversification

Theme 4: Water Management

Possible Climate Change Impacts

- Increased water demand plus droughts could worsen water supply problems in and round the PNDP
- Sewerage system overflow following intense rainfall
- Increase in flooding due to wetter winters and more extreme rain events
- Design integrity of some historic buildings and landscapes could be damaged by the need to provide new and more effective rainwater disposal, storage systems or flood protection features

Possible Climate Change Impacts

- More focus from surrounding urban areas on importance of upland water catchment management and ways to help reduce urban flooding
- More frequent intense rainfall - increased erosion of archaeological sites and damaging flooding in historic settlements, the latter making historic buildings difficult to insure
- Reduced low flow levels in summer in upland streams and rivers leading to de-oxygenation and increased impacts of diffuse pollution
- Reservoirs increasingly silted up
- Impact on the PDNP landscape with the need for additional reservoir / water storage
- Larger drainage systems / flood defences - impact on the landscape & habitats

Theme 5: Energy Conservation & Small Scale Generation (renewables)

Possible Climate Change Impacts

- Energy conservation and renewables design conflicts with PDNP Design Guide

Theme 6: Transport

Possible Climate Change Impacts

- High temperatures can cause damage to road and rail infrastructure and restrictions to navigation on waterways
- Increased demand for public transport services due to GHG reduction targets and fuel cost savings
- Gales and flooding during winter will affect all modes of transport
- Passenger discomfort in hot weather
- Pressure from government for polices that reduce personal motorised travel and increase non-motorised and rail travel

Theme 7: Waste

Possible Climate Change Impacts

- Increased pressure for local waste disposal and recycling / composting facilities to reduce ‘waste miles’ – possible landscape impacts
- Increased demand for anaerobic digestion plants within the Park – possible landscape impacts

Theme 8: Land Management

Possible Climate Change Impacts

- Water shortages could lead to reduced crop production
- Increased costs for irrigation and livestock feed
- Intense rainfall and periods of drought would lead to soil damage and erosion
- Reduced frost damage, longer growing season
- Change in agricultural markets, demand and competition
- Increased cost of insurance
- Increasing diversification opportunities for farmers and land managers
- Drought may mean less water for livestock and herbage for feed
- Increased impact on landscape from animals outside in wetter weathers or from higher stocking densities
- More damage to woodlands from high winds
- Increased grazing opportunities in winter
- More soil eroded from surface runoff
- Historically authentic tree plantings difficult to conserve
- More demand for shelters to overwinter animals or shade them from the summer heat. Visual impact on the landscape
- Change to land use management that minimises disturbance to carbon rich soils e.g peat
- Increase in wet weather related animal health problems / pest & disease problems

Theme 9: Greening the Economy & Communities

Possible Climate Change Impacts

- Low flow and poor water quality may restrict recreational activities on rivers / lakes impacting on the local economy
- Increased demand for environmental advice and recognition for 'green businesses' e.g. Peak District Environmental Quality Mark (EQM) award, Green Tourism Business Scheme (GTBS) etc
- Warmer, drier and sunnier summers could benefit domestic summer tourism
- Restrictions on industrial water supply (e.g. for cooling)
- Increased cost of carbon will affect energy intensive industries / activities – long term reduction in demand for stone & cement?
- Expansion of small scale renewable generation potential
- Insurance industry – higher payouts for storm damage, flooding and subsidence
- Power cuts due to storm and flood damage
- Structural damage and subsidence
- Very hot weather – possible reduction in visitor numbers
- Demand for additional / different visitor experiences to cope with the changing weather
- Increase pressure on landscape in hot weather – especially riverside / shaded areas
- More job opportunities related to the environment / low carbon products and services
- Mental stress to victims of extreme weather events
- Significantly fewer cold-related deaths (mainly the elderly)
- Increase in heat-related summer deaths and more cases of food poisoning, vector and water-borne diseases
- Increased medical emergencies especially following extreme weather events e.g. gales, flooding
- Increased heat related aggression – more abuse for Field Staff
- Increased visitor numbers 'escaping' urban heat islands – pressure on PDNP and its facilities

APPENDIX 4 – Glossary of Acronyms

A AWM – Advantage West Midlands
B BAP – Biodiversity Action Plan
BLEM – Business Link East Midlands
C CC – Climate Change
CCAP – [Peak District National Park] Climate Change Action Plan
CEH – Centre for Ecology & Hydrology
CLA – Country Land and Business Association
CERT - Carbon Emissions Reduction Target
D DCC – Derbyshire County Council
DDCVS – Derbyshire Dales CVS
DDDC – Derbyshire Dales District Council
DDEP – Derby and Derbyshire Economic Partnership
DECC – Department of Energy & Climate Change
DEFRA – Department for Environment, Food and Rural Affairs
DFP – Derbyshire Partnership Forum
DfT – Department for Transport
DMP – [Peak District & Derbyshire] Destination Management Partnership
DRCC – Derbyshire Rural Community Council
E EA – Environment Agency
EAC – Every Action Counts
EH – English Heritage
ELS – Entry Level Scheme
EMDA – East Midlands Development Agency
EMRA – East Midlands Regional Assembly
ENPAA – English National Park Authorities Association
EST – Energy Saving Trust
ESTAC – Energy Saving Trust Advice Centre
EU ETS – European Union Emissions Trading Scheme
F FC – Forestry Commission
FLC – Farming Life Centre,
FOG – Fire Operations Group
FPD – Friends from the Peak District
FWAG – Farming and Wildlife Advisory Group
G GHGs – Green House Gases
GOEM – Government Office for the East Midlands
H HPBC – High Peak Borough Council
HPCVS – High Peak Community & Voluntary Support
L LAs – Local Authorities
LAEP – Nottinghamshire and Derbyshire Local Authorities' Energy Partnership
LDF – Local Development Framework
LCBP – Low Carbon Buildings Programme
LCILP – Local Climate Impact Profile
LAA – Local Area Agreements
LSP – Local Strategic Partnerships
L&WR – Live & Work Rural
M MBC – Macclesfield Borough Council
MEA – Marches (soon to be Midlands) Energy Agency
MFF – Moors for the Future
MICCI – Moorland Indicators of Climate Change Initiative
N NE – Natural England
NEDDC – North East Derbyshire District Council
NI185 – CO_2 reduction from Local Authority operations

NI186 – Per capita reduction in CO_2 emissions in the LA area
NI188 – Planning to adapt to climate change
NI189 – Flood and coastal risk management
NFU – National Farmers' Union
NP – [Peak District] National Park
NPAs – National Park Authorities
NPMP – National Park Management Plan
NT – National Trust
NWDA – North West Development Agency

O
OC3 – Our County, Our Climate, Our Choice - Staffordshire

P
PDFG – Peak District Food Group
PDIP – Peak District Interpretation Partnership
PDLBAP – Peak District Local Biodiversity Action Plan
PDLMAS – Peak District Land Management Advisory Service
PDNP – Peak District National Park
PDNPA – Peak District National Park Authority
PDP – Peak District Products
PDSEG – Peak District Sustainable Energy Group

R
RAZ – Rural Action Zone
RDAs – Regional Development Agencies (see EMDA, YF, NWDA & AWM)
ROWs – Rights of Way
RSPB – Royal Society for the Protection of Birds

S
SCC – Staffordshire County Council / Sheffield City Council
SMDC – Staffordshire Moorlands District Council
SME – Small and Medium Enterprises
SPD – Supplementary Planning Document
SPG – Supplementary Planning Guidance
SPITS – South Pennine Integrated Transport Strategy
ST – Severn Trent Water

U
UKCIP – UK Climate Impacts Programme
UU – United Utilities

V
VCOs – Voluntary and Community Sector Organisations
VPD&D – Visit Peak District & Derbyshire

W
WRAP – Waste Resources Action Programme

Y
YF – Yorkshire Forward
YW – Yorkshire Water