



# Wiltshire Climate Change Adaptation Action Plan

**Level 1 report**

April 2010



## Contents

### Abbreviations

1. Executive summary .....	1
2. Introduction .....	7
3. Summary of initial consultation responses .....	10
4. Summary of document review .....	14
5. Summary of local climate impacts profile for Wiltshire .....	16
6. Likely climate changes in Wiltshire.....	17
7. Overview of detailed project plan: next steps.....	20

Appendix 1: Summary of initial consultation responses

Appendix 2: Document review

Appendix 3: Local climate impact profile for Wiltshire

Appendix 4: Likely climate changes in Wiltshire

Appendix 5: Detailed project plan

Appendix 6: Wiltshire NI188 self assessment matrix April 2010

“The UK government target to limit climate change to a relatively safe level of 2°C is unlikely to be achieved. Temperature rises above 2°C will increase the level of climate disruption throughout the 21st century and might lead to abrupt, severe and irreversible changes in climate.”

**The Lancet, 2009**



## Abbreviations

<b>COIN</b>	Climate Outreach Information Network
<b>LAA</b>	Local Area Agreement
<b>LCLIP</b>	Local Climate Impact Profile
<b>LRAP</b>	Local and Regional Partnership Board
<b>LSP</b>	Local Strategic Partnership
<b>NI</b>	National Indicator
<b>PSB</b>	Public Service Board
<b>SWCCIP</b>	South West Climate Change Impacts Partnership
<b>SWRIEP</b>	South West Regional Improvement and Efficiency Programme
<b>TDP</b>	Thematic Delivery Partnership
<b>UKCP09</b>	United Kingdom Climate Projections 09



## **1.0 Executive summary**

### **Climate change**

- 1.1 Climate change is a global issue, but its impacts are felt locally and are affected by physical, social and economic factors specific to a given area.
- 1.2 Some degree of climate change is now unavoidable even if carbon emissions fall dramatically. This is because greenhouse gases remain in the atmosphere for many decades.
- 1.3 Unavoidable climate change will result in hotter and drier summers (leading to drought), warmer and wetter winters (leading to flooding), rising sea levels and more severe weather (such as storms).
- 1.4 It is important the council can continue to deliver its services in the future, even as the climate changes. Actions to prepare for climate change are referred to by the term climate change adaptation.
- 1.5 This report summaries how Wiltshire Council has met the requirements of Levels 0 and 1 of the National Performance Indicator (NI) 188 "Planning to Adapt to Climate Change". This is a process which will help the council prepare an action plan for dealing with a changing climate.

### **Progress so far**

- 1.6 NI188 is split into five levels (0 to 4). This report summarises the work undertaken in Levels 0 and 1. We have a target to meet Level 3 by March 2011. Each NI188 level is split into stages and progress so far is as follows:

#### **Levels 0.1, 0.2 and 0.3 – Initial project planning**

- 1.7 An initial project plan, prepared and shared with partner organisations, was a requirement of these levels (0.1, 0.2 and 0.3).
- 1.8 An initial project plan was approved by the council in December 2009 and was circulated to council departments and key partner organisations.
- 1.9 A simple consultation document was circulated, which included a short questionnaire, and this was used to collect useful information to help understand what action has already been taken, and to help inform future work. A summary of the questionnaire results is set out within the main report (Section 3).

#### **Level 0.4 – Identifying a baseline**

- 1.10 This level involves reviewing a selection of existing council documents to see how climate change adaptation is already being taken into consideration by the council. Twenty documents were reviewed.
- 1.11 It is clear there is a lot of work to do to ensure climate change is properly considered within the documents the council produces. However, preparing an adaptation plan will help with this process.

### **Level 1.1 – Public commitment**

- 1.12 The council signed the Nottingham Declaration in May 2009 and this was re-affirmed in October 2009.
- 1.13 Training for Wiltshire elected councillors on climate change was also held in March 2009 and further training and workshops will take place as part of future work.

### **Level 1.2 – Understanding current vulnerability**

- 1.14 Work is underway to prepare a Local Climate Impacts Profile (LCLIP). This will consider how the weather is already affecting council activities. An example might include refuse collection being disrupted during adverse weather or outdoor events needing to be cancelled.
- 1.15 The LCLIP is being prepared in consultation with other councils across the south west and funding has been provided to pay for this work to be completed.

### **Level 1.3 – Potential impacts from future climate change**

- 1.16 The Met Office has developed a tool to help us consider how the climate might change in the future. This is called the United Kingdom Climate Projections 09 (UKCP09).
- 1.17 This has been used to identify likely climate changes in Wiltshire, including changes in temperature and precipitation, for the 2020s, 2050s and 2080s.
- 1.18 Key headline findings include likely increases in temperature, based on a medium emissions scenario, of between 1.2 °C and 1.7 °C by the 2020s, 2.2 °C and 2.9 °C by the 2050s, and 3.1 °C and 4.1 °C by the 2080s.

### **Level 1.4 – Project planning**

- 1.19 The council has a target to complete Level 2 of NI188 by the autumn of 2010 and Level 3 by March 2011.
- 1.20 A project plan has been developed which sets out how these levels will be completed. The approach is based on learning from other authorities across the South West. Further details are set out within Section 7.

## 2.0 Introduction

- 2.1 The purpose of this document is to summarise how Wiltshire Council has met the requirements of Levels 0 and 1 of National Indicator (NI) 188 'Planning to Adapt to Climate Change'.
- 2.2 Climate change is a global issue but its impacts are felt locally and are affected by physical, social and economic factors specific to a given area.
- 2.3 For service providers, climate change adaptation means ensuring we can continue to deliver our services in future even as the climate changes. Some degree of climate change is now unavoidable even if carbon emissions fall dramatically. Our historic greenhouse gas emissions and the persistence of these gases in the atmosphere, as well as the slowly increasing warming of the oceans, make this inevitable.
- 2.4 Unavoidable climate change will result in the South West experiencing hotter and drier summers (leading to drought), warmer and wetter winters (leading to flooding), rising sea levels and more severe weather (eg storms).
- 2.5 It is therefore very important for us to be prepared for the unavoidable consequences of climate change.
- 2.6 Preparing a Climate Change Adaptation Plan will ensure we meet our responsibilities against National Indicator (NI) 188 'Planning to Adapt to Climate Change'. This measures how prepared we are in Wiltshire to continue delivering services under a changing environment. The plan is intended to be developed in partnership, led by the council.
- 2.7 Progress against NI188 is broken down into five Levels, 0 to 4 (see Table 2.1 overleaf). There are a number of specific requirements for each level and we will need to demonstrate that these levels have been fully met.
- 2.8 This report summarises the findings of the main stages of work undertaken to meet the requirements of Levels 0 and 1. In particular this relates to:  
  
Levels 0.1, 0.2 and 0.3 Initial Project Planning: **Section 3 and Appendix 1**  
Level 0.4 Identifying a Baseline: **Section 4 and Appendix 2**  
Level 1.2 Current Vulnerability: **Section 5 and Appendix 3**  
Level 1.3 Future Weather and Climate: **Section 6 and Appendix 4**  
Level 1.4 Ongoing Project Planning: **Section 7 and Appendix 5**
- 2.9 A summary of the work undertaken for each stage is shown by Table 2.2 (overleaf) and our submission to DEFRA for completing this work is set out within **Appendix 6**.

**Table 2.1: Summary of the requirements of NI188**

<b>Level</b>	<b>Description/ Requirement</b>
<b>0</b>	<b>Getting started</b>
0.1	Initial project planning
0.2	Engagement of community, service users and key LSP partners
0.3	Scoping project resources
0.4	Identifying a baseline
0.5	Supplementary aim - developing a vision
<b>1</b>	<b>Public commitment and impact assessment - assembling an evidence base</b>
1.1	Include other expertise, leadership and public commitment
1.2	Understanding current vulnerability
1.3	Identifying some significant potential impacts from future weather and climate
1.4	Sharing the load and ongoing project planning
1.5	Supplementary aim - monitoring future impacts
1.6	Supplementary aim - weather and climate database
<b>2</b>	<b>Comprehensive risk assessment</b>
2.1	Comprehensive assessment of potential impacts
2.2	The risk-based assessment revealing priority issues
2.3	Identify priority actions
2.4	Implement priority actions
2.5	Integrate LSP partners
2.6	Supplementary aim - monitor new business
2.7	Supplementary aim - monitor effectiveness of early adaptation measures
<b>3</b>	<b>Comprehensive action plan (and prioritised action plan in priority areas)</b>
3.1	Developing a comprehensive adaptation action plan
3.2	Embedding climate risks into decision making
3.3	Implementing adaptation responses
3.4	Supporting LSP and partner organisations
<b>4</b>	<b>Implementation, monitoring and continuous review</b>
4.1	Monitoring implementation of plan
4.2	Monitoring performance of adaptation actions
4.3	Review and updating of plans

**Table 2.2: Summary of NI188 Level 0 and 1 work by Wiltshire Council**

<b>Level 0 - Getting started</b>
<b>0.1 Initial project planning</b>
<b>0.2 Engagement of community, service Users and key LSP partners</b>
<b>0.3 Scoping project resources</b>
<ul style="list-style-type: none"> <li>• An initial project plan was approved by the Wiltshire Council Climate Change Board and the Wiltshire Environmental Alliance in December 2009. Approval was also gained from the Government Office for the South West</li> <li>• An initial consultation document was circulated to each council department and Thematic Delivery Partnership in December 2009. This included an overview of the initial project plan, an explanation of the NI188 process and a short questionnaire</li> <li>• A summary of the consultation responses is set out in <b>Section 3</b>.</li> </ul>
<b>0.4 Identifying a baseline</b>
<ul style="list-style-type: none"> <li>• A document review has been undertaken. This is set out in <b>Section 4</b>.</li> </ul>
<b>0.5 Supplementary aim - developing a vision</b>
<ul style="list-style-type: none"> <li>• This matter will be addressed as part of future NI188 work.</li> </ul>
<b>Level 1 - Public commitment and impacts assessment - assembling an evidence base</b>
<b>1.1 Include other expertise, leadership and public commitment</b>
<ul style="list-style-type: none"> <li>• The council signed the Nottingham Declaration in May 2009 and this was re-affirmed in October 2009</li> <li>• Training for Wiltshire elected councillors on climate change was held in March 2009</li> <li>• Further training and workshops will be organised during the Phase 2 work.</li> </ul>
<b>1.2 Understanding current vulnerability</b>
<ul style="list-style-type: none"> <li>• A Local Climate Impacts Profile is being prepared in consultation with the South West Climate Change Impacts Partnership. This is set out in <b>Section 5</b>.</li> </ul>
<b>1.3 Identifying some potential impacts from future weather and climate</b>
<ul style="list-style-type: none"> <li>• A profile of likely future climate change impacts has been prepared and this is set out within <b>Section 6</b>.</li> </ul>
<b>1.4 Sharing the load and ongoing project planning</b>
<ul style="list-style-type: none"> <li>• A revised project plan has been prepared setting out the approach for completing Level 2 of the NI188 work. This is discussed further within <b>Section 7</b>.</li> </ul>
<b>1.5 Supplementary aim - monitoring future impacts</b>
<b>1.6 Supplementary aim - weather and climate database</b>
<ul style="list-style-type: none"> <li>• These matters will be considered as part of future NI188 work.</li> </ul>

### 3.0 Summary of initial consultation responses

- 3.1 An initial consultation was undertaken between December 2009 and January 2010. This was targeted at each Wiltshire Council department and Local Strategic Partnership (LSP) Thematic Delivery Partnerships (TDP). The aim was to begin the process of awareness raising and gaining buy-in to the need for a Wiltshire adaptation plan.
- 3.2 The initial consultation document provided a brief outline of the initial project plan, an explanation of the requirements of NI188, and also a short questionnaire. The questionnaire was designed to collect information useful to help inform the process of meeting some of the requirements of Levels 0 and 1 of NI188.
- 3.3 It is a requirement of Level 0.1 of NI188, as set out in the Local and Regional Partnership Board (LRAP) Guidance Note for NI188, to “Develop and share with partners, and to consult with LSP partners, an Initial Project Plan”. It is also a requirement of a later stage of NI188, Level 2.5, to incorporate LSP partners in the process: “By Level 2, whatever the starting point has been, you should now expect to be involving LSP partners”. For this reason it was decided that LSP partners should be incorporated into all Wiltshire NI188 activity from the beginning.
- 3.4 The consultation document can be downloaded from the following web page: <http://www.wiltshire.gov.uk/climatechangeadaptation.htm>.
- 3.5 The consultation document was sent to each of the four Wiltshire Council departments and eight Thematic Delivery Partnerships (TDPs) (Table 3.1).

**Table 3.1: Wiltshire Council departments and Thematic Delivery Partnerships**

Council departments	Children and Education
	Community Services
	Neighbourhood and Planning
	Resources
Thematic Delivery Partnerships	Children and Young People’s Trust
	Community Safety Partnership
	Environmental Alliance
	Health and Wellbeing Partnership
	Housing Partnership
	Resilient Communities Partnership
	Strategic Economic Partnership
Transport Partnership	

- 3.6 Twenty responses were received, including at least one from each council department and five of the TDPs. Key council areas such as emergency planning, highways and business transformation were represented along with responses being received from partners such as Natural England, Environment Agency and Wessex Water.
- 3.7 Two TDPs felt unable to respond as they did not have an adequate understanding of the topic. This may indicate how important further training and awareness raising will be for this topic area.

- 3.8 This section provides a brief summary of the responses. A detailed breakdown of the responses is outlined within **Appendix 1**.

**Qu1. Do you have any comments on the initial project plan?**

- 3.9 There was a good level of support for the plan overall. The importance of links between climate change adaptation and mitigation were highlighted and that many important factors need to be considered. These include: long-term economic shifts, food security, water and waste management, energy security, public health and welfare issues. The importance of including and linking to other agencies was also raised, for example: NHS, Police, Fire & Rescue, Water Companies and others.

**Qu2. Do you think the plan will adequately accommodate all organisations in the Local Strategic Partnership (LSP) and their ways of working?**

- 3.10 The majority of respondents indicated support for the plan (12 out of 20) with only one respondent answering no. It was suggested that a programme of staff and public education would be essential and that agencies outside of the LSP may also need to be involved.

**Qu3. Do you agree that forming a multi-agency steering group will be the best approach to taking this work forward?**

- 3.11 There was wide spread support for establishing a steering group (17 out of 20). However, some respondents indicated that such a steering group would only focus on their own area of delivery. It was suggested that an expert group might be more appropriate as this could bring in a wider range of skills and experience and take a broader view.

**Qu4. Please indicate if you would like to nominate a representative to this group.**

- 3.12 A number of respondents indicated a willingness to participate in a steering group.

**Qu5. Do you think that your service area/organisation would be able to contribute to developing a Climate Change Adaptation Plan?**

- 3.13 A number of useful responses were received. Many comments related to both climate change mitigation and adaptation which highlights the overlaps between these areas and perhaps also the need for further training. It is recognised that the level of understanding about climate change adaptation is not always high. It is clear that a wide range of council and LSP partner activities are likely to be affected by climate change and need consideration in the adaptation plan

**Qu6. Does your service area/organisation already collect relevant data?**

- 3.14 It is clear that a wide range of relevant information is already collected across the council which will be useful to help inform the production of an adaptation plan. Examples include: details of school closures related to weather, highway flooding issues, information on sewer flooding and contingency planning for carers.

**Qu7. What council service areas/partner organisations do you consider to be most relevant for helping to develop a Climate Change Adaptation Vision?**

- 3.15 It is clear that a Climate Change Adaptation Vision should be cross cutting and encompass all council departments and LSP partners.

**Qu8. What do you consider to be a sensible shelf life for a vision? Please indicate number of years and add a brief explanation.**

- 3.16 The responses to this question were very mixed and ranged from the suggestion that a vision should have a maximum shelf life of two years to 20 years or beyond“ (It would be out-of-date after six months”). The majority of responses suggested that three to five years would be the most appropriate time scale. Several respondents suggested the value in aligning a vision to Wiltshire Council’s Corporate Plan which is updated every four years.

**Qu9. Is there an opportunity for the vision to be linked to other strategies/ plans?**

- 3.17 A wide range of other plans and strategies were suggested that a vision could be linked to which reflect activity across the council and LSP partners. It is likely that any vision should be cross cutting and inform activity across all council and LPS areas. Linking a Climate Change Adaptation Vision to either the corporate plan or the emerging Wiltshire Climate Change Strategy (WCCS), might be appropriate.

**Qu10. How should the public be involved in developing a Climate Change Adaptation Plan? Please outline some possible ideas.**

- 3.18 A number of useful ideas were presented and there is clear support and recognition that some involvement of the public is important. Aligning such activities to the community area boards was by far the most popular suggestion.

**Qu11. Do you think there would be value in organising a public event to promote climate change adaption in Wiltshire?**

- 3.19 The clear majority of respondents supported this idea (13 out of 20) with only two responses answering no. However, there was more support for an ongoing and low key conversation rather than a single event. It was suggested that a single event would increase travel, which we should be avoiding, and attract only those people who are already committed to climate change action. It was suggested that more innovative ways of engaging with members of the public who do not normally get involved was needed, perhaps using existing networks.

**Qu12. It would be useful to have an understanding of any climate change adaptation related work that has already been reported in the media in Wiltshire. Are you aware of any such examples?**

- 3.20 Few examples of existing adaptation related work was presented and the majority of respondents answered no (11 out of 20). Furthermore, some of the examples presented related to climate change mitigation rather than adaptation. This highlights the need for further awareness raising.

**Qu13. Is your organisation (if not Wiltshire Council) already working on any climate impacts studies?**

3.21 Some examples of work underway which relates to climate change are discussed. However, many of these relate to climate change mitigation rather than adaptation.

**Qu14. For what time period does your service area or organisation currently plan?**

3.22 There is a large variation within the answers to this question ranging from one to fifty years. It is clear that different activities across the council require planning for different time periods and any climate change actions will also need to consider how impacts will be affected over time.

**Qu15. For what time periods do decisions made by your service or organisation have an impact and on what (for example in planning infrastructure provision)? Please provide details and examples that may relate to the Climate Change Adaptation Plan (CCAP).**

3.23 Similar response as for Question 14 above.

**Qu16. Do you think there are any specific training needs relating to climate change adaptation? This may relate to council service areas, councillors, partner organisations, or the wider community. Please list any training needs you think exist.**

3.24 It is clear that a training need relating to climate change exists both within the council and within the LSP partners. A number of useful suggestions are made and these include the need for awareness training, for example: What is it all about? Why does it matter? How will it affect me? The need for ownership and leadership is also highlighted, in particular the need for the council to provide community leadership through the community area boards.

**Qu17. It would be very helpful if you could please list any key policies or strategy documents which your service area/organisation publishes. This will help us select appropriate documents to be included in the document review.**

3.25 Some examples of documents are presented which are very helpful. Refer to Section 4.

**Qu18. Please add any other comments.**

3.26 A number of useful comments are made. These include the need to define the scope of the adaptation plan. Will the plan consider direct impacts on Wiltshire such as heat or precipitation, or will indirect impacts also be considered, such as migration, food security or pathogens. A question is also raised about how maladaptation will be considered.

3.27 The importance of engagement with the production of the Wiltshire Core Strategy (WCS) and Local Transport Plan (LTP) is also made as these documents can have a significant impact on how climate change mitigation and adaptation action can be progressed in Wiltshire.

#### 4.0 Summary of document review

- 4.1 One of the initial requirements of **NI188 Level 0: Getting Started** is to complete a document review. This is referred to as **Level 0.4 – Identifying a Baseline**.
- 4.2 The document review provides a stock-take of existing Wiltshire Council documents, such as plans and policies, and therefore provides a baseline understanding of what the authority is already doing to consider climate change adaptation.
- 4.3 Detailed research was undertaken to produce a reliable method for Wiltshire Council to carry out the document review. The Local and Regional Partnership Board (LRAP) 2008 Guidance Notes for NI188 makes it clear that at this stage only an initial identification of broad areas is required. For this reason, the method was designed to be reliable and achievable.
- 4.4 This section provides a brief summary of the findings of the document review. A more detailed description of the process and the findings are set out within **Appendix 2**.

#### Assessment process

- 4.5 Clearly, it would be unrealistic to review all documents produced by the council. Twenty documents were selected to be reviewed in detail (Table 4.1). This number was considered to be realistic and achievable and provides a useful baseline understanding of what action the council is already taking on adaptation.
- 4.6 The documents chosen are mostly considered to be either 'key statutory' or 'key non statutory' and many have particular relevance to climate change impacts.
- 4.7 The assessment process considered the extent the documents were already addressing climate change adaptive actions and if suggestions for possible future adaptive actions are made. Four main questions were considered:
  - a. Recognising 'changing weather patterns' and 'extreme weather events'
  - b. Recognising 'projected climate change' and 'possible impacts'
  - c. What type of adaptive capacity has already been built/ could be built?
  - a. What type of adaptive actions has already been delivered/ could be delivered?
- 4.8 The term **adaptive capacity** refers to adaptation responses such as commissioning research or undertaken staff training. The term **adaptive actions** refers more directly to physical activity such as building flood defences or installing external shading to buildings.
- 4.9 Each document was scored against four adaption levels. These were:



A detailed explanation of the scoring process is set out in **Appendix 2**.

## Results

- 4.10 Fifteen of the documents reviewed achieved the 'not started' score and none reached the 'advanced' level. Two documents achieved the 'foundation' score and three the 'intermediate' level (Table 4.1).

**Table 4.1: Overall score for how well climate change adaptation is incorporated into the documents assessed.**

No	Document title	Adaptation score
1	A Sustainable Community Strategy for Wiltshire	Foundation
2	Council Constitution	Not started
3	Major Incident Plan	Not started
4	Business Continuity Plan	Not started
5	Children and Young People's Plan	Not started
6	Homelessness Strategy	Not started
7	Local Transport Plan 2	Intermediate
8	Wiltshire Transport Asset Management Plan: DRAFT	Not started
9	Bus Information Strategy	Not started
10	Parking Action Plan	Not started
11	West Wiltshire Leisure and Recreation DPD	Not started
12	Workplace Transformation Programme	Not started
13	Wiltshire Workspace and Employment Land Strategy	Not started
14	Wiltshire 2026: Planning for Wiltshire's Future	Foundation
15	South Wiltshire Core Strategy - Proposed submission document	Intermediate
16	Commissioning Strategy Framework	Not started
17	Community Safety Strategic Plan	Not started
18	Wiltshire and Swindon Structure Plan	Not started
19	Wiltshire and Swindon Waste Core Strategy	Not started
20	Wiltshire and Swindon LRF Extreme Weather Protocol Assessment	Intermediate

- 4.11 Key results include:

- a. Fewer than half of the documents contain information on weather or projected climate change or possible impacts
- b. There are twice as many references in the documents to adaptive capacities than there are to adaptive actions
- c. Very few documents make any reference to opportunities associated with possible climate change impacts.

- 4.12 Overall, it is clear that climate change adaptation is not well integrated into existing Wiltshire Council documents. However, this is a new area and work to prepare an adaptation plan will help to raise awareness.

- 4.13 Many council services are already affected by weather events and much work is focused on dealing with the impact of weather. What may be needed is raising awareness to join up this work better with a consideration for how they may be affected by, and adapt to, climate change.

- 4.14 The document review provides a useful baseline which can be repeated in the future to monitor how much progress has been made in this area.
- 4.15 A future action may need to consider how climate change adaptation can be embedded more successfully into future plans and policies produced by the council.

## **5.0 Summary of Local Climate Impacts Profile for Wiltshire**

- 5.1 The council is in the process of producing a Local Climate Impacts Profile (LCLIP). This is one of the requirements of Level 1 of NI188 and is set out under **Level 1.2 – Understanding Current Vulnerabilities**.
- 5.2 The LCLIP considers how weather is already affecting council activity and will help to raise awareness of our current vulnerabilities to weather events in Wiltshire.
- 5.3 Starting with an assessment of the present weather conditions makes for a relatively simple introduction to the longer term complexities of exploring future impacts. Existing weather impacts often provide a useful guide to how the authority may be affected by weather in the future.
- 5.4 In particular, the LCLIP will gather information on the following:
  - a. The nature and the magnitude of the consequences of recent weather
  - b. The identity of the agency, or agencies, responsible for managing the consequences of events
  - c. The preparedness of responsible agencies to deal with the consequences of local weather events
  - d. The details of weather events and impacts that caused these consequences
  - e. Together, this information will allow an initial judgement to be made on what were significant consequences for a local authority/ organisation and its locality.
- 5.5 The LCLIP for Wiltshire is being prepared in consultation with the South West Climate Change Impacts Partnership (SWCCIP) and is being funded by the South West Regional Improvement and Efficiency Programme (SWRIEP). The work will be completed in August 2010 and this document will form **Appendix 3** and will be added to the council website at the following link:  
<http://www.wiltshire.gov.uk/climatechangeadaptation.htm>
- 5.6 The LCLIP is being prepared in accordance with the Local and Regional Partnership Board (LRAP) 2008 Guidance Notes for NI188 and will help to inform the completion of the NI188 **Level 2 – Comprehensive Risk Assessment**.

## **6.0 Likely climate changes in Wiltshire**

- 6.1 One of the important requirements of NI188 Level 1: Public Commitment and Impacts Assessment – Assembling an Evidence Base is to: **identify some significant potential impacts from future weather and climate (Level 1.3)**.
- 6.2 This process is based on the 2009 UK Climate Projections (UKCP09) published in June 2009 by the Met Office Hadley Centre.
- 6.3 The Local and Regional Partnership Board (LRAP) 2008 Guidance Note for NI188 suggests that this work should include “interpreting the UKCP09 projections” to “provide appropriate information for the locality on appropriate timescales, relevant weather and climate variables”.
- 6.4 An assessment of the UKCP09 data has been made to consider possible climate changes in Wiltshire. This work has considered the predicted changes to both temperature and precipitation in summer and winter for the 2020s, 2050s, and 2080s. The results will help inform the completion of the requirements of **Level 2 of NI188 – Comprehensive Risk Assessment**.
- 6.5 This section briefly summaries the findings of this work. More detail can be found in **Appendix 4** which is available at the following council web page: <http://www.wiltshire.gov.uk/climatechangeadaptation.htm>.

### **The UKCP09 climate projections**

- 6.6 There are a number of choices and variables when presenting findings from the UKCP09 work which need to be considered. These include the following:
  - a. Time periods
  - b. Spatial resolution
  - c. Emissions scenarios
  - d. Probability levels
  - e. Climate variables.

These matters are discussed in more detail in **Appendix 4**.

### **Summaries of climate changes in Wiltshire for the 2020s, 2050s and 2080s**

- 6.7 Summaries are provided which show the likely changes in temperature and precipitation in Wiltshire for the 2020s, 2050s, and 2080s under the medium emissions scenario (this is considered to be the most realistic). In each case the figures represent the ‘likely range’ (probability levels of between 33% to 67%), and changes are relative to the 1961 and 1990 baseline.

**Likely changes in temperature and precipitation in Wiltshire for the 2020s under a medium emissions scenario**

**Temperature**

- Increase in annual mean temperature by between 1.2 and 1.7°C
- Increase in summer mean temperature by between 1.2 and 2.0°C
- Increase in winter mean temperature by between 1.0 and 1.6°C
- Increase in temperature of warmest summer day by between 0 and 2.7°C

**Precipitation**

- Annual precipitation stays roughly the same
- Decrease in summer mean precipitation by between 1 and 15%
- Increase in winter mean precipitation by between 2 and 10%
- Increase in precipitation on the wettest winter day by between 2 and 11%

**Likely changes in temperature and precipitation in Wiltshire for the 2050s under a medium emissions scenario**

**Temperature**

- Increase in annual mean temperature likely to be between 2.2 and 2.9°C
- Increase in summer mean temperature by between 2.3 and 3.5°C
- Increase in winter mean temperature by between 1.8 and 2.6°C
- Increase in temperature of warmest summer day by between 0.9 and 4.4°C

**Precipitation**

- Annual precipitation stays roughly the same
- Decrease in summer mean precipitation by between 10 and 28%
- Increase in winter mean precipitation by between 9 and 22%
- Increase in precipitation on the wettest winter day by between 6 and 21%

**Likely changes in temperature and precipitation in Wiltshire for the 2080s under a medium emissions scenario**

**Temperature**

- Increase in annual mean temperature likely to be between 3.1 and 4.1°C
- Increase in summer mean temperature by between 3.3 and 4.9°C
- Increase in winter mean temperature by between 2.4 and 3.5°C
- Increase in temperature of warmest summer day by between 1.2 and 5.8°C

**Precipitation**

- Annual precipitation stays roughly the same
- Decrease in summer mean precipitation by between 13 and 34%
- Increase in winter mean precipitation by between 12 and 29%
- Increase in precipitation on the wettest winter day by between 11 and 29%

**Possible climate change impacts in Wiltshire**

- 6.8 It is important to consider how the likely climate changes projected over the period to the end of the century will impact on Wiltshire. Many impacts are possible across a range of different sectors, including transport, for example road surfaces melting under higher temperature, increased subsidence in drought conditions, greater disruption to the road and rail network from increased flooding and or storms.
- 6.9 Further work is needed to ascertain the particular nature of vulnerabilities or opportunities associated with climate change in Wiltshire in more detail. This will be reported further within the Level 2 report.

## 7.0 Overview of detailed project plan: next steps

- 7.1 The next key steps in the process of completing a Wiltshire Climate Change Adaptation Plan will be to complete the requirements of Levels 2 and 3 of NI188 by March 2011.
- 7.2 A revised project plan has been prepared which builds on the achievement of Levels 0 and 1 and sets out the approach for completing the Level 2 work. **Level 2 – Comprehensive Risk Assessment** will be completed by October 2010.
- 7.3 A Level 2 report will be published in October 2010 summarising the findings of the risk assessment work and will include a final project plan. This plan will set out the approach to reaching Level 3 by March 2011.
- 7.4 This section provides a brief overview of the approach to completing Level 2. More detail of the methodology is described in **Appendix 5**.

### Comprehensive risk assessment

- 7.5 The methodology selected for completing the requirements of Level 2 has been developed from learning and best practise gained from the South West NI188 Network, facilitated by the Environment Agency. In particular, the experience of Dorset County Council has been very helpful in helping us develop our approach. The methodology is considered to be realistic and achievable, fully meet the requirements of NI188 and will allow Wiltshire Council to prepare a robust Climate Change Adaptation Plan.
- 7.6 The comprehensive risk assessment work will consist of three parts:
  - a. A reference group will be established to help co-ordinate Wiltshire's Level 2 and 3 NI188 work across the council. This will be part of the existing resilient council group. Engagement of the LSP will also be established through the Public Service Board (PSB).

The **resilient council group** includes performance and risk managers, emergency planners, council insurance staff and departmental risk leads.

The **Public Service Board (PSB)** comprises chief executives of the various partner organisations that make up the LSP.
  - b. A workshop will be convened for council and LSP representatives to help raise awareness and understanding of the NI188 process and climate change adaptation in general. This workshop will be run during June 2010 and will be facilitated by the Climate Outreach Information Network (COIN) and follows the successful running of workshops for other authorities across the South West including Gloucestershire County Council.
  - c. Undertake risk assessment of council service activity. LSPs will also be encouraged to undertake similar risk assessment activity alongside the council.
- 7.7 The risk assessment work itself will involve interviewing key staff across council service areas and will assess the short term impacts of climate change, using information derived from the LCLIP (Section 5), and for the 2050s, using information derived from UKCP09 (Section 6).

- 7.8 Service management 'buy-in' to this process will be essential and relevant officers will be nominated to complete this work during the August to October 2010 period.
- 7.9 Successful completion of the comprehensive risk assessment will inform the completion of the requirements of Level 3 of NI188 by March 2011. This is important to ensure obligations under NI188 relating to performance, inspection, reputation and achievement of financial reward are all fulfilled.