



# Wiltshire Climate Change Adaptation Action Plan

**Level 1 report**

**Appendix 2: Document review**

April 2010



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## Glossary

All references are from the Local and Regional Partnership Board (LRAP) 2008 Guidance Notes for NI188 unless indicated otherwise.

### **The difference between weather and climate:**

**Climate:** is the average weather in a locality over an extended period. Climate scientists normally use a thirty-year period which, in periods of stable climate, has been sufficient to provide a reliable average including the inevitable peaks and troughs of natural variability.

**Weather:** describes what is happening at any point in time, be it: torrential downpours of rain; exceptionally high temperatures; thunderstorms.

### **The concepts of vulnerability, impacts, consequences and adaptation:**

**Vulnerability:** the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity (IPCC, 2007)<sup>1</sup>.

Vulnerability is therefore mainly a function of locality and depends upon:

- local physical features (such as topography, rivers, settlements);
- local weather and climate (averages and extremes);
- local socio-economic characteristics (such as dependence on agriculture, tourism or transport links and the presence and extent of particularly vulnerable groups); and
- the preparedness of the local community to respond both in the short-term and the long-term.

**Impacts:** describe the effects of different weather and climate events. So flooding and drought are examples of impacts of particular types of weather and climate.

**Consequences:** are generally the focus of our attention as these are either the hazardous threats from which we try to defend ourselves, or the beneficial opportunities that we try to exploit.

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<sup>1</sup> IPCC 2007. IPCC Fourth Assessment Report; Working Group II Report; Impacts, Adaptation and Vulnerability

**Adaptation:** describes the actions that we take to reduce the negative consequences and enhance the beneficial consequences of weather and climate events. We have found it useful to distinguish between;

- Building Adaptive Capacity (BAC).
- Delivering Adaptation Actions (DAC).

**Building Adaptive Capacity:** describes many of the adaptation responses that local partners will undertake, especially in the first instance. New project management systems need to be put in place, data on future climate will need to be assembled and shared, research commissioned, training and member/staff development required. All of these activities can be seen as Building Adaptive Capacity.

**Delivering Adaptation Actions:** these are generally illustrated by physical examples such as increasing the height of a flood defence wall or installing external shading above south-facing facades. But it can also include non-physical actions, such as changing the school calendar to reduce the exposure of schoolchildren to heat wave conditions, or installing early warning systems for local flooding.

## 1.0 Introduction

- 1.1 This document sets out the findings of a **Document Review** of existing Wiltshire Council documents to consider how climate change adaptation is already being considered by the council. The work meets part of the requirements of National Indicator (NI) 188 “Planning to Adapt to Climate Change”.
- 1.2 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.
- 1.3 For the council and partner organisations, climate change adaptation means ensuring we can continue to deliver our services in the 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.
- 1.4 It is, therefore, very important for us to be prepared for the unavoidable consequences of climate change.
- 1.5 Preparing a Climate Change Adaptation Plan will ensure we meet our Local Area Agreement (LAA) target against Performance Indicator NI188. 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.
- 1.6 Progress against NI188 is broken down into five Levels, 0 to 4 and these are explained in the Local and Regional Partnership Board (LRAP) 2008 Guidance Notes for NI188. There are a number of specific requirements for each level and this document sets out the findings for **Level 0.4 - Identifying a Baseline**.
- 1.7 This **Document Review** of existing Wiltshire Council documents is intended as an initial stock take of key existing policies and plans to establish whether the authority and partners are already considering climate change adaptation.

## 2.0 Methodology

- 2.1 Progress against National Indicator (NI) 188 is broken down into five Levels, 0 to 4. There are a number of specific requirements for each level and we will need to demonstrate that these levels have been fully met.
- 2.2 One of the important requirements of **NI188 Level 0: Getting Started** is to complete a Document Review; this is referred to as Level 0.4. This 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.
- 2.3 The Local and Regional Partnership Board (LRAP) 2008 Guidance Notes for NI188 suggests the types of documents which can be considered within a Document Review. These include:
  - a. any corporate or business plans
  - b. corporate risk registers
  - c. core strategies (Local Development Framework)

- d. other sources of risk information (Community Risk Registers)
  - e. regional adaptation studies
  - f. sector specific documents (for example Flood Management Plans)
  - g. business continuity plans
  - h. insurance claims
  - i. planning reports
  - j. asset management plans
  - k. Sustainable Community Strategies.
- 2.4 Detailed research was undertaken to produce a reliable method for Wiltshire Council to carry out the Document Review. The chosen method takes into consideration current thinking, knowledge and best practice about climate change and adaptation. However, the LRAP guidance makes it clear that at this stage only an initial identification of broad areas is required. For this reason the method is also designed to be both realistic and achievable.
- 2.5 The language of climate change adaptation is new and unfamiliar and it is important that standard definitions are used in the Document Review to ensure the assessment is consistent. A glossary of key terms has been added to the front of this document setting out the difference between weather and climate and the concepts of vulnerability, impacts, consequences and adaptation. These are all taken from the LRAP guidance.

#### **Documents to be reviewed**

- 2.6 Clearly, Wiltshire Council publishes many hundreds of documents and assessing all of them would be unrealistic. The number of documents reviewed by other authorities for Level 0.4 of NI188 varies, from five documents reviewed by Islington Borough Council, to 70 reviewed by Dorset County Council.
- 2.7 Hertfordshire County Council selected a smaller number of key documents, 21, and reviewed them in detail. A similar approach was chosen for Wiltshire with 20 documents being selected. This is considered to be realistic and achievable and helps to provide a baseline understanding of what action the council is already taking on adaptation.
- 2.8 The documents selected for review are shown by Table 2.1. The majority of the documents chosen are regarded as either 'key statutory' or 'key non statutory' documents and cover all aspects of council activity. Some documents have been chosen as they have particular relevance to climate change adaptation.

**Table 2.1: Documents selected for the Document Review.**

No.	Document title	No.	Document title
1	A Sustainable Community Strategy for Wiltshire	11	West Wiltshire Leisure and Recreation DPD
2	Council Constitution	12	Workplace Transformation Programme
3	Major Incident Plan	13	Wiltshire Workspace and Employment Land Strategy
4	Business Continuity Plan	14	Wiltshire 2026 – Planning for Wiltshire's Future
5	Children and Young People's Plan	15	South Wiltshire Core Strategy
6	Homelessness Strategy	16	Commissioning Strategy Framework
7	Local Transport Plan 2	17	Community Safety Strategic Plan
8	Transport Asset Management Plan	18	Wiltshire and Swindon Structure Plan
9	Bus Information Strategy	19	Wiltshire and Swindon Waste Core Strategy
10	Parking Action Plan	20	Wiltshire and Swindon LRF Extreme Weather Protocol Assessment

### Assessment process

2.9 A Document Review template has been designed based on examples developed for other authorities (Table 2.2). The template is split into three components. The first outlines basic information about the document such as:

- a. timeframe
- b. author/ lead body/ contact
- c. document summary
- d. key council departments covered

2.10 The second and third components of the template assess the extent the document already addresses adaptation actions (Adaptation) and if suggestions for possible future adaptation actions are made (Adaptation Possibilities). All of these sections are assessed against four standard criteria:

- 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?
- d. what type of adaptive actions have already been delivered/ could be delivered?

2.11 All documents were scored for both items a and b (above) separately. This process is set out in **Appendix 2.1**. The documents are scored against four adaptation levels which are:

<b>Not Started</b>	<b>Foundation</b>	<b>Intermediate</b>	<b>Advanced</b>
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The scoring criteria for each of these levels are set out in **Appendix 2.2**.

2.12 A range of potential adaptation suggestions is set out in **Appendix 2.3**.

- 2.13 A trial run of the methodology was undertaken assessing four documents, two from Wiltshire and two from outside Wiltshire. These were expected to be at an advanced level of adaptation according to the assessment methodology. This process helped to validate the methodology. The review templates for these documents are included in **Appendix 2.4**. These two documents were:

Adapting to Climate Change: A Strategy for Islington 2009-2012  
Climate Change and Wessex Water: Impacts and Current Action

- 2.14 Overall the methodology is considered to be reliable, will meet the requirements of the LRAP guidance, and is also repeatable. It will be possible for Wiltshire Council to undertake a review either of a larger range of documents, or to monitor how adaptation is being taken into account by documents published in the future.

**Table 2.2: Example Document Review Template - Adapting to Climate Change: A strategy for Islington 2009 - 2012**

<b>Document Title</b>	<b>Adapting to Climate Change: A strategy for Islington 2009 – 2012</b>		<b>Adaptation level</b>	Not Started	Foundation
				Intermediate	Advanced
<b>Timeframe</b>	2009 – 2012		<b>Author/lead body/WC contact</b>	Bevan Jones: Climate Change Adaptation Officer	
<b>Document summary</b>	This Climate Change Adaptation Strategy commits us to planning for the future by identifying and responding to climate change impacts on the council and on our services.				
<b>Key departments covered</b>	Children and Education	Community Services	Economic Development Planning and Housing	Policy, Research and Communications	
	Public Health	Resources	Transport, Environment and Leisure	Partnership Organisations	
<b>Adaptation</b>	<b>Evidence</b>				
1. Recognises changing weather patterns and extreme weather events	<ul style="list-style-type: none"> <li>• Summers in the UK will become warmer and drier with an increased number of heat waves and sustained periods of heat. Whilst there are benefits for the tourism and catering sectors there are significant risks associated with this development. P4</li> <li>• Winters in the UK are getting warmer. During the periods 1961-1990 and then 1991-2004 the UK experienced an increase in mean temperatures in both summer and winter. Whilst the benefits are clear as to a warmer winter climate, there are some potential negative impacts: • Potential increase in insect and parasite populations and infestations • Increased use of air conditioning – putting pressure on power demand • The longer growing period associated with a mild winter could increase maintenance costs. P4</li> <li>• Precipitation trends in London and the South East are expected to change dramatically as a result of climate change. Winters will become wetter; however, a fall in summer precipitation will cancel out any overall gains in winter months, with a trend towards increasing drought risk. P5</li> <li>• The UK has experienced a number of extreme weather events in the last 20 years, ranging from gales and tornados to the 2003 heat wave and the sudden snowfall of 2009. Whilst the causes of these extremes may or may not be attributable to climate change, the effect is that climate change will make events like these increasingly severe and frequent. The UK is expected to suffer from more storms, higher average wind speeds</li> </ul>				

	and greater unpredictability of weather.P6
2. Recognises projected climate change and possible impacts	<ul style="list-style-type: none"> <li>• It is predicted that by 2050 summers will be at least 3.5°C warmer than they are today. In dense urban areas such as Islington the presence of the urban heat island effect could mean temperatures increase by as much as 9°C. P2</li> <li>• The projections below have been developed by UKCIP and the Hadley Centre to enable organisations such as Islington Council to begin the process of integrating adaptation into everyday business. The latest projections have been developed using 12 climate models assessing their probability based on changes in historical climate. These are probable climate projections and must be treated as such; they are subject to modification as methods for data collection improve. The projections used for this strategy use a medium emissions scenario (MES) and compare the expected changes in the 2020's, 2050's and 2080's P3</li> <li>• Torrential downpours will characterise rainfall, rather than a consistent stream of precipitation needed for water supplies. Potentially, there will also be a drop in snowfall. Some of the impacts that could be seen are:             <ul style="list-style-type: none"> <li>• Increased incidence of surface water flooding as urban drainage systems fail to cope with sudden downpours</li> <li>• An impact on asset value as subsidence cases increase</li> <li>• Damage to the transport infrastructure due to flooding and line closures</li> <li>• Increased need for water conservation enforcement – hose pipe bans and water rationing. P5</li> </ul> </li> <li>• Increased frequency and severity of weather events could lead to the following:             <ul style="list-style-type: none"> <li>• Pressure on emergency services and on emergency planning/response as extreme weather events become more common</li> <li>• Increased costs to services and businesses having to take short term reactive solutions rather than long term risk management</li> <li>• A potential increase in excess deaths due to heat waves or other extreme weather</li> <li>• Negative impacts on local economies and business and their supply chains</li> <li>• Disruption to business continuity within the council</li> <li>• Damage to structures and street trees from storms and high winds. P7</li> </ul> </li> </ul>

	<p><b>Summary of Key Climate Projections</b></p> <p>The table below compares different climate projections from the 2020's, 2050's and 2080's. The section that follows also outlines some of the expected changes to the climate in the UK up to the 2080's. These projections are based around a Medium Emissions Scenario (MES) for the London region using the UK Climate Projections 2009 (UKCP09).</p> <table border="1" data-bbox="629 459 1335 692"> <thead> <tr> <th></th> <th>2020's</th> <th>2050's</th> <th>2080's</th> </tr> </thead> <tbody> <tr> <td colspan="4"><b>Temperature (°C)</b></td> </tr> <tr> <td>Winter</td> <td>+1.3°C</td> <td>+2.2°C</td> <td>+3.0°C</td> </tr> <tr> <td>Summer</td> <td>+1.6°C</td> <td>+2.7°C</td> <td>+3.9°C</td> </tr> <tr> <td colspan="4"><b>Precipitation (%)</b></td> </tr> <tr> <td>Winter</td> <td>+6</td> <td>+14</td> <td>+19</td> </tr> <tr> <td>Summer</td> <td>-7</td> <td>-19</td> <td>-23</td> </tr> </tbody> </table> <p style="text-align: right;">P19</p>			2020's	2050's	2080's	<b>Temperature (°C)</b>				Winter	+1.3°C	+2.2°C	+3.0°C	Summer	+1.6°C	+2.7°C	+3.9°C	<b>Precipitation (%)</b>				Winter	+6	+14	+19	Summer	-7	-19	-23
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<p>3. What type of adaptive capacity has already been built?</p>	<p>a. Creating information</p>	<p>We have produced good practice guides:</p> <ul style="list-style-type: none"> <li>• Good Practice Guide 1: Green Roofs and Walls</li> <li>• Good Practice Guide 2: Sustainable Drainage Systems</li> <li>• Good Practice Guide 3: Climate Change Adaptation</li> <li>• Good Practice Guide 4: Biodiversity in the Built Environment. P20</li> </ul>																												
	<p>b. Supportive social structures</p>	<ul style="list-style-type: none"> <li>• Awareness raising presentations and workshops have been undertaken with the ISP, the Islington Climate Change Partnership, Homes for Islington, Registered Social Landlords (RSLs), several staff conferences and a wide range of voluntary organisations and other partners. These have also included presentations to external groups such as DEFRA and other local authorities. P11</li> <li>• In May 2009 Islington launched its Adaptation Fund, 'Preparing for a Changing Climate' aimed at supporting community organisations in developing capital adaptation projects. The aim was not only to enable physical adaptations to climate change within the borough, but to raise the profile of climate change adaptation within communities. In the medium term projects will be a demonstrable example of the range of adaptations that are effective, affordable and that can be replicated elsewhere. P12</li> <li>• We are currently working to develop a partnership with UKCIP to engage with businesses and</li> </ul>																												

		<p>we have worked closely with DEFRA to develop a suite of case studies that can demonstrate how replicable and accessible adaptation solutions can be. P11</p>
	<p>c. Supportive governance</p>	<ul style="list-style-type: none"> <li>• The Climate Change Adaptation Project Board was set up early in 2009, with the purpose of overseeing and challenging the council’s work on adaptation. The project board has also played a key role in developing the action plan for this strategy and will continue to review adaptive response across council services.P11</li> <li>• Islington’s Strategic Partnership has included National Indicator 188: Planning to adapt to climate change within the latest Local Area Agreement.P11</li> <li>• The ISP has committed to the council to stretching targets around the indicator with the achievement of Level 2 in the first year. In support of this funding has been provided for the recruitment of the partnership’s own Climate Change Adaptation Officer. P11</li> <li>• 1. A bi-annual scrutiny will take place to review performance and ensure that departments remain on target and problem areas are identified. 2. The Climate Change Adaptation Strategy will be reviewed annually by the Climate Change Adaptation Project Board to ensure that it is in line with current climate trends, updated climate change predictions and Technological advancements. 3. Every three years, the strategy will have a comprehensive redrafting, with an extension of deadlines to ensure that we are always planning for a minimum of forty years ahead. This will be led by the Islington Strategic Partnership Environment Theme Group. P18</li> </ul>
<p>4. What type of adaptive action has already been delivered?</p>	<p>a. Offsetting losses by spreading/ sharing risks or losses</p>	<p>Not addressed in this document</p>
	<p>b. Preventing effects or reducing risks</p>	<ul style="list-style-type: none"> <li>• Sustainable Urban Drainage Systems (SUDS) are seen as a solution to preventing flooding from surface water runoff in urban areas. Islington looks to promote SUDS where possible in new and existing developments. SUDS can reduce flood risk, but also act to clean surface water, thus improving the quality of water entering London’s rivers. Furthermore it provides opportunities to use surface water to create amenity and Biodiversity value, which is crucially important in an inner-city area such as Islington. The council has installed areas of permeable paving within landscape schemes, both outside its Town Hall and as part of street redesigns in the south of the borough. These areas will act as demonstration projects to communicate the benefits of permeable paving to a range of audiences, including council officers, councillors, partner organisations, developers and residents. P12</li> </ul>

		<ul style="list-style-type: none"> <li>Proactively adapting Islington’s green spaces and their management to ensure they are sustainable and resilient to the diverse challenges of climate change, is key to their continued success. Islington has taken a number of steps: <ul style="list-style-type: none"> <li>Islington has reduced the amount of bedding plants that are high maintenance and water thirsty.</li> <li>Drought tolerant plant species are being selected to further decrease reliance on water and increase resilience to climate change.</li> <li>Different grass types and grass alternatives such as clover are being trialled.</li> <li>Changing mowing maintenance regimes in selected areas and letting grass to grow longer, allows for increased biodiversity and resilience.P13</li> </ul> </li> </ul>
	c. Exploiting positive opportunities	Not addressed in this document
	d. Accepting the impacts and bearing the losses	Not addressed in this document
<b>Adaptation possibilities</b>		<b>Evidence</b>
1. Recognises changing weather patterns and extreme weather events		<ul style="list-style-type: none"> <li>Continue with best practice</li> </ul>
2. Recognises projected climate change and possible impacts		<ul style="list-style-type: none"> <li>More local hotspots of possible impacts could be identified.</li> </ul>
3. Possible adaptive capacity that could be built	a. Creating information	<ul style="list-style-type: none"> <li>Identifying and promoting successful adaptation initiatives – lessons learned.</li> </ul>
	b. Supportive social structures	No suggestion as yet
	c. Supportive governance	No suggestion as yet
4. Possible adaptive action that could be delivered	a. Offsetting losses by spreading/sharing risks or losses	<ul style="list-style-type: none"> <li>Lease capital goods rather than buying them, and maintenance/service contracts.</li> </ul>
	b. Preventing effects or	<ul style="list-style-type: none"> <li><b>Emergency planning and business continuity:</b> The safety of the local community is dependent on comprehensive emergency planning strategies. A proactive response to changes</li> </ul>

	reducing risks	in climate, as well as ensuring that businesses are prepared for the risks, will minimise the effects on business continuity and our local economy as a whole. Working closely with the council's Emergency Planning Unit will be key in delivering comprehensive responses to climate events and ensuring that services can still be delivered in the event of an extreme weather event.P17
	c. Exploiting positive opportunities	<ul style="list-style-type: none"> <li>• <b>Cost savings:</b> Our future climate presents the council and its partners with a range of opportunities to reduce costs. Increased overall temperatures could lead to reduced heating costs in the winter. Maintenance regimes that have been changed to adapt to climate change may lead to cost savings in service delivery.P14</li> <li>• <b>Health and wellbeing:</b> Whilst there are significant risks associated with climate change, over all warmer temperatures may lead to increased outdoor physical and social recreation. This has both physical health and community cohesion benefits.P14</li> <li>• <b>Promoting the Low Carbon Economy:</b> The UK's growing green sector provides Islington with an opportunity to place itself at the forefront of environmental technology and practice innovation. Through attracting new businesses and enabling existing businesses to adapt to new demand brought about by climate change, the council and its partners would ensure economic resilience as well as tackling 'worklessness' and developing new skills for its workforce. There are a number of potential opportunities from climate change that the council will investigate:             <ul style="list-style-type: none"> <li>• A potential decrease in winter fuel poverty because of warmer winter temperatures;</li> <li>• Economic diversification – as lifestyles change to deal with the climate new business opportunities will arise;</li> <li>• An opportunity to trial new tree planting techniques.P14</li> </ul> </li> </ul>
	d. Accepting the impacts and bearing the losses	<ul style="list-style-type: none"> <li>• Accept losses (habitats, species or coastal lands) where there are no other 'acceptable' or feasible options – implications for biodiversity, recreation, fishing and hunting.</li> <li>• Allow lawns and gardens (domestic, commercial and parklands) to deteriorate.</li> <li>• Accept that parks may no longer be able to deliver their primary mandate (conservation or protection of particular species and/or habitat.</li> </ul>

### 3.0 Results

3.1 Fifteen of the 20 documents reviewed achieved the 'not started' score and none reached the 'advanced' score. Two documents achieved the 'foundation' score and three the 'intermediate' level (Table 3.1).

**Table 3.1: Overall scores 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

3.2 Nine out of the 20 documents reviewed contain some information on weather or projected climate change and possible impacts. In particular, extreme weather and flooding or flood risk, are mentioned the most. However, the majority of documents do not make any reference to any of these matters.

3.3 There are also twice as many references in the documents reviewed on Building Adaptive Capacities (BAC) compared to Delivering Adaptive Actions (DAC). This may reflect where Wiltshire has reached in relation to the process of preparing an Adaptation Plan. As the NI188 work moves forward, more opportunities to deliver adaptive actions should be identified.

3.4 It is also the case that although some documents refer to possible climate change impacts, few discuss opportunities. Wider research demonstrates that possible benefits of climate change are rarely discussed and this may need further consideration in Wiltshire.

3.5 It is clear that climate change adaptation is not well integrated into existing Wiltshire Council documents. However, this is a new area, particularly to local authorities, and much work is needed to raise awareness of the topic. The

Document Review does provide a useful baseline which can be repeated in the future to monitor how much progress has been made in this area.

- 3.6 It is the case that many council services are already affected by weather and that a great deal of activity within the council is already focused at dealing with weather impacts. However, what is needed is some process to better join up these actions and raise awareness of how these areas may be impacted by climate change in the future.
- 3.7 Work to prepare a Wiltshire Climate Adaptation Plan will help in this process. For example, the preparation of a Local Climate Impacts Profile (LCLIP), the consideration of likely future climate change in Wiltshire, identifying risks associated with climate change and undertaking training and awareness raising, will all help to improve the way climate change adaptation is addressed by the council.
- 3.8 A future action, perhaps for inclusion in the Adaptation Plan, may be to consider how climate change adaptation can be embedded more successfully into future plans and policies produced by the council.

## Appendix 2.1: Assessment criteria

Recognising ‘changing weather patterns’ and ‘extreme weather events’

Level of practice	Evidence from document required to support the level
<b>Below basic practice</b>	Non-existent or incomplete evidence for basic practice.
<b>Basic practice</b>	Writing (ideally) within the executive summary or introduction of a document a statement that the writers of the document recognise changing weather patterns and extreme weather events.
<b>Good practice</b>	Basic practice plus, information about potential changing weather patterns and extreme weather events appropriate to the location that the document encompasses. This must be accessed from a reputable organisation e.g. UKCP
<b>Best practice</b>	Basic and good practice plus, stating that there is a degree of uncertainty in any future weather pattern projections and how the document will address the extremes of changing weather patterns and extreme weather events within the scope and timeframe of the document.

Recognising ‘projected climate change’ and ‘possible impacts’

Level of practice	Evidence from document required to support the level
<b>Below basic practice</b>	Non-existent or incomplete evidence for basic practice.
<b>Basic practice</b>	Writing (ideally) within the executive summary or introduction of a document a statement that the writers of the document recognise changing weather patterns and extreme weather events.
<b>Good practice</b>	Basic practice plus, information about potential changing weather patterns and extreme weather events appropriate to the location that the document encompasses. This must be accessed from a reputable organisation e.g. UKCP
<b>Best practice</b>	Basic and good practice plus, stating that there is a degree of uncertainty in any future weather pattern projections and how the document will address the extremes of changing weather patterns and extreme weather events within the scope and timeframe of the document.

## Appendix 2.2: Overall scoring criteria

Adaptation level	Evidence from document required to support the adaptation level
<b>Not started</b>	Incomplete evidence at basic practice for recognising <ul style="list-style-type: none"> <li>• ‘changing weather patterns’ and ‘extreme weather events’</li> <li>• ‘projected climate change’ and ‘possible impacts’</li> </ul> A document cannot be scored above ‘not started’ until there is basic practice in both. There may be evidence for actual or aspirational BAC and/or DAA.
<b>Foundation</b>	Evidence of <b>basic</b> practice for recognising <ul style="list-style-type: none"> <li>• ‘changing weather patterns’ and ‘extreme weather events’</li> <li>• ‘projected climate change’ and ‘possible impacts’</li> </ul> <b>Plus</b> evidence for 0 – 2 BACs <b>and/or</b> DAAs
<b>Intermediate</b>	Evidence of both <b>basic and good practice</b> for recognising <ul style="list-style-type: none"> <li>• ‘changing weather patterns’ and ‘extreme weather events’</li> <li>• ‘projected climate change’ and ‘possible impacts’</li> </ul> <b>Plus</b> evidence for $\geq 3$ BACs <b>and/or</b> DAAs
<b>Advanced</b>	Evidence of <b>basic, good and best practice</b> for recognising <ul style="list-style-type: none"> <li>• ‘changing weather patterns’ and ‘extreme weather events’</li> <li>• ‘projected climate change’ and ‘possible impacts’</li> </ul> <b>Plus</b> evidence for 3 or > BACs <b>as well as</b> 3 or > DAAs

**Appendix 2.3: Possible adaptation suggestions**

Adaptation criteria	Adaptation sub-criteria	Potential adaptation suggestions
1. Recognising changing weather patterns and extreme weather events (essential)	None for this criteria	<ul style="list-style-type: none"> <li>• <b>Basic practice:</b> writing within the executive summary or introduction of a document a statement that the writers of the document recognise changing weather patterns and extreme weather events.</li> <li>• <b>Good practice:</b> basic practice plus, information about potential changing weather patterns and extreme weather events appropriate to the location that the document encompasses. This must be accessed from a reputable organisation e.g. WC, UKCP.</li> <li>• <b>Best practice:</b> basic and good practice plus, stating that there is a degree of uncertainty in any future weather pattern projections and how the document will address the extremes of changing weather patterns and extreme weather events within the scope and timeframe of the document.</li> </ul>
2. Recognising projected Climate change and possible impacts (essential)	None for this criteria	<ul style="list-style-type: none"> <li>• <b>Basic practice:</b> writing within the executive summary or introduction of a document that the writers of the document recognise climate change as a scientific fact and recognise that climate change will have impacts.</li> <li>• <b>Good practice:</b> basic practice plus, acknowledging projected climate change and the broad potential impacts of climate change related to the document and the location that it encompasses.</li> <li>• <b>Best practice:</b> basic and good practice plus, listing detailed potential impacts, linked to potential extremes of climate/weather, related to the scope and timeframe of the document. Local hotspots of possible impacts identified.</li> </ul>
3. Potential adaptive capacity that could be built	a. Creating information	<ul style="list-style-type: none"> <li>• Scoping studies to identify the nature of climate risks, vulnerabilities and opportunities associated with current climate and projected changes, including identifying these risks in the context of non-climatic risks.</li> <li>• Conducting risk-based assessments to evaluate current and future climate and non climate risks and opportunities.</li> <li>• Increased understanding of climate and climate change, including through climate and socio-economic scenario development.</li> <li>• Developing and testing improved decision support tools, and adaptation options and technologies.</li> <li>• Undertaking technical/quantitative impact and adaptation assessments.</li> <li>• Phenological observations.</li> </ul>

		<ul style="list-style-type: none"> <li>• Monitoring systems or components thereof that are at risk – understanding the nature of your vulnerabilities or opportunities.</li> <li>• Monitoring the impacts of observed climate, including extreme events.</li> <li>• Monitoring effectiveness of existing (newly implemented) adaptation measures and learning lessons.</li> <li>• Education and training (formal and informal), including integration into curriculum and targeted programmes or activities.</li> <li>• Promoting conservation and efficiencies in the use of resources (eg water and energy).</li> <li>• Capacity building programmes, including communication programmes.</li> <li>• Identifying and promoting successful adaptation initiatives – lessons learned.</li> <li>• Conferences, events and publications.</li> </ul>
	<p>b. Supportive social structures</p>	<ul style="list-style-type: none"> <li>• Training and individual development programmes – targeted capacity building to include identifying and evaluating climate risks.</li> <li>• Senior management and community leader buy-in.</li> <li>• Identifying climate change champion(s).</li> <li>• Integrating climate risk and adaptation assessments into business and community planning.</li> <li>• Mobilising and building consistencies and capacity for developing and implementing adaptation measures. Includes promoting working in partnership to address climate risks and adaptation.</li> <li>• Undertaking risk and adaptation assessments (and response implementation) through sectoral partnerships.</li> <li>• Undertaking risk and adaptation assessments (and response implementation) through locality-based partnerships.</li> <li>• Promoting the integration of climate risks and adaptation into existing and emerging policy and planning frameworks and strategies in key socio-economical and environmental areas.</li> <li>• Undertaking risk and adaptation assessments involving linked but cross-disciplinary partnerships.</li> </ul>
	<p>c. Supportive governance</p>	<ul style="list-style-type: none"> <li>• National and international regulations and statutes that recognise climate risks and adaptation.</li> <li>• National codes and standards, best practices guidelines that recognise climate risks and adaptation.</li> <li>• National, regional and local policies and plans that recognise climate risks and opportunities and adaptation.</li> <li>• Resource allocation that recognise the need for investment in understanding and addressing</li> </ul>

		<p>climate risks and opportunities, as well as adaptations.</p> <ul style="list-style-type: none"> <li>• Protected Landscape Management Plans that seek to achieve an integrated approach to conservation and enhancement; clarity about the existing state of the area and provide a clear vision of how it might be in the future, including considering the implications of a changing climate.</li> <li>• Enforcement of regulations and standards.</li> </ul>
4. Potential adaptive action that could be delivered	a. Offsetting losses by spreading/sharing risks or losses	<ul style="list-style-type: none"> <li>• Invest in insurance to cover unavoidable risks yet retain incentives to adapt.</li> <li>• Use other financial mechanisms that delay, share or lay-off risks (e.g subsidies to offset increased operational costs).</li> <li>• Lease capital goods rather than buying them, and maintenance/service contracts.</li> <li>• Broaden the response community through sharing the responsibility for adaptation (eg basin wide flood management and managing water resource on a regional or national scale, creating a financial reserve through housing, agriculture or other associations).</li> <li>• Diversify business activity, market, sources of income, location, etc. as a means of spreading the risks (reducing overall exposure to risk).</li> </ul>
	b. Preventing effects or reducing risks	<ul style="list-style-type: none"> <li>• Implement improved technical standards and use of climate-appropriate technologies (e.g. SUDS, ventilation, insulation, building materials, etc).</li> <li>• Reduce pressure on systems or areas at risk (eg introduce alternative land cover and garden species, reduce the number of fishing/hunting licenses, reduce the number using trails, etc).</li> <li>• Introduce multiple land use strategies that account for climate risks. This includes raised buildings with less critical functions (eg parking, parkland) at ground level in flood prone areas, natural conservation areas that double as flood management areas, etc.</li> <li>• Climate proof or increase resilience of new and existing infrastructure and systems, including through introduction of behavioural change. This includes managing flood risk, increasing water supply and pumping capacities, improve supply chain management, more efficient use of resources (eg water, energy, raw materials), and dredging of waterways to enhance flows.</li> <li>• Provide incentives that promote risk adverse behaviour (e.g. development and buying). This would include linking financial terms and conditions to climate risk, and subsidising technologies that are consistent with contributing to avoiding or reducing climate risks.</li> <li>• Increase the range of climate under which systems and activities remain viable. This includes initiatives directed at increasing food security; increasing the climate range over which capital stock remains viable, including through considering options and retrofits; etc.</li> </ul>

		<ul style="list-style-type: none"> <li>• Change location (ie move away from high risk areas), including measures such as relocating recreation facilities, relocating away from flood/erosion prone areas, relocating conservation efforts, relocating farming of particular crops (agriculture and forestry).</li> <li>• Implement emergency, contingency and disaster planning that address climate risks (eg drought contingency plans, contingency plans to minimise impacts of disruption of services and supplies, emergency plans to deal with flooding and wild land and urban fire, etc).</li> </ul>
	<p>c. Exploiting positive opportunities</p>	<ul style="list-style-type: none"> <li>• Exploit new markets and social opportunities emerging as a consequence of climate change both locally and globally.</li> <li>• Replace capital stock more frequently while considering the need for more appropriate capital stock.</li> <li>• Cultivate new agricultural crops and develop alternative land use consistent with climate (current and projected).</li> </ul>
	<p>d. Accepting the impacts and bearing the losses</p>	<ul style="list-style-type: none"> <li>• Accept losses (habitats, species or coastal lands) where there are no other 'acceptable' or feasible options – implications for biodiversity, recreation, fishing and hunting.</li> <li>• Allow lawns and gardens (domestic, commercial and parklands) to deteriorate.</li> <li>• Accept that parks may no longer be able to deliver their primary mandate (conservation or protection of particular species and/or habitat.</li> <li>• Close access to recreation areas, marinas, hiking trails and other areas, including temporary loss of land during and following extreme events.</li> <li>• Adjust pricing to account for increased losses (eg insurance companies accept some losses as part of business and set their premiums accordingly).</li> <li>• Based on an assessment of the risks, decide that, beyond a commitment for a subsequent re-assessment, no further adaptation measures are required at this time.</li> </ul>

**Appendix 2.4: Summary of document review scores**

Document title and year of writing	1. Recognises changing weather patterns and extreme weather events: Level of Practice	2. Recognises projected climate change and possible impacts: Level of Practice	3. What type of adaptive capacity has already been built?			Total number of adaptive capacities built	4. What type of adaptive action has already been delivered?				Total number of adaptive actions delivered	Adaptation score
			a. Creating information	b. Supportive social structures	c. Supportive governance		a. Offsetting losses by spreading/sharing risks or losses	b. Preventing effects or reducing risks	c. Exploiting positive opportunities	d. Accepting the impacts and bearing the losses		
A Sustainable Community Strategy for Wiltshire (2007) <b>Key Statutory</b>	Basic	Basic	0	0	0	0	0	0	0	0	0	Foundation
Council Constitution (2009) <b>Key Statutory</b>	Below basic	Below basic	0	0	2	2	0	1	0	0	1	Not started
Major Incident Plan (2009) <b>Key Statutory</b>	Basic	Below basic	0	0	0	0	0	0	0	0	0	Not started
Business Continuity Plan (2010) <b>Key Statutory</b>	Basic	Below basic	0	0	0	0	0	0	0	0	0	Not started
Children and Young People's Plan (2008) <b>Key Statutory</b>	Below basic	Below basic	0	0	0	0	0	0	0	0	0	Not started

Document title and year of writing	1. Recognises changing weather patterns and extreme weather events: Level of Practice	2. Recognises projected climate change and possible impacts: Level of Practice	3. What type of adaptive capacity has already been built?			Total number of adaptive capacities built	4. What type of adaptive action has already been delivered?				Total number of adaptive actions delivered	Adaptation score
			a. Creating information	b. Supportive social structures	c. Supportive governance		a. Offsetting losses by spreading/sharing risks or losses	b. Preventing effects or reducing risks	c. Exploiting positive opportunities	d. Accepting the impacts and bearing the losses		
Homelessness Strategy (2010) <b>Key Statutory</b>	Below basic	Below basic	0	0	0	0	0	0	0	0	0	Not started
Local Transport Plan 2 (2006/7) <b>Key Statutory</b>	Good	Good	1	1	11	13	0	0	0	0	0	Intermediate
Wiltshire Transport Asset Management Plan: DRAFT (2009) <b>Key Statutory</b>	Basic	Below basic	0	0	0	0	0	0	0	0	0	Not started
Bus Information Strategy (2003) <b>Key Statutory</b>	Below basic	Below basic	0	0	0	0	0	0	0	0	0	Not started
Parking Action Plan (No Date) <b>Key Non Statutory</b>	Below basic	Below basic	0	0	0	0	0	0	0	0	0	Not started

Document title and year of writing	1. Recognises changing weather patterns and extreme weather events: Level of Practice	2. Recognises projected climate change and possible impacts: Level of Practice	3. What type of adaptive capacity has already been built?			Total number of adaptive capacities built	4. What type of adaptive action has already been delivered?				Total number of adaptive actions delivered	Adaptation score
			a. Creating information	b. Supportive social structures	c. Supportive governance		a. Offsetting losses by spreading/sharing risks or losses	b. Preventing effects or reducing risks	c. Exploiting positive opportunities	d. Accepting the impacts and bearing the losses		
West Wiltshire Leisure and Recreation Development Plan (2009) <b>Key Non Statutory</b>	Below basic	Basic	0	0	0	0	0	0	0	0	0	Not started
Workplace Transformation Programme (2009) <b>Key Non Statutory</b>	Below basic	Basic	0	0	0	0	0	1	0	0	1	Not started
Wiltshire Workspace and Employment Land Strategy (2009)	Below basic	Below basic	0	0	0	0	0	0	0	0	0	Not started
Wiltshire 2026: Planning for Wiltshire's future: Consultation document to inform the Wiltshire Core Strategy (2009) <b>Key Non Statutory</b>	Basic	Good	0	0	2	2	0	0	0	0	0	Foundation

Document title and year of writing	1. Recognises changing weather patterns and extreme weather events: Level of Practice	2. Recognises projected climate change and possible impacts: Level of Practice	3. What type of adaptive capacity has already been built?			Total number of adaptive capacities built	4. What type of adaptive action has already been delivered?				Total number of adaptive actions delivered	Adaptation score
			a. Creating information	b. Supportive social structures	c. Supportive governance		a. Offsetting losses by spreading/sharing risks or losses	b. Preventing effects or reducing risks	c. Exploiting positive opportunities	d. Accepting the impacts and bearing the losses		
Commissioning Strategy Framework (2009)	Below basic	Below basic	0	0	0	0	0	0	0	0	0	Not started
South Wiltshire Core Strategy - Proposed submission document (2009) <b>Key Non Statutory</b>	Good	Good	1	0	0	1	1	7	0	0	8	Intermediate
Community Safety Strategic Plan 2009-2011 (2009)	Below basic	Below basic	0	0	0	0	0	0	0	0	0	NS
Wiltshire and Swindon Structure Plan 2016 (2009)	Below basic	Below basic	0	0	0	0	0	0	0	0	0	NS
Wiltshire and Swindon Waste Core Strategy (2009)	Below basic	Basic	0	0	0	0	0	0	0	0	0	NS
Wiltshire and Swindon LRF extreme weather protocol assessment (2007)	Good	Good	1	4	4	9	0	0	0	0	0	I

Document title and year of writing	1. Recognises changing weather patterns and extreme weather events: Level of Practice	2. Recognises projected climate change and possible impacts: Level of Practice	3. What type of adaptive capacity has already been built?			Total number of adaptive capacities built	4. What type of adaptive action has already been delivered?				Total number of adaptive actions delivered	Adaptation score
			a. Creating information	b. Supportive social structures	c. Supportive governance		a. Offsetting losses by spreading/sharing risks or losses	b. Preventing effects or reducing risks	c. Exploiting positive opportunities	d. Accepting the impacts and bearing the losses		
Climate Change and Wessex Water: Potential Impacts and Current Action:V3 (2009)	Best practice	Best practice	21	16	3	40	0	15	3	0	18	A
Adapting to Climate change: A strategy for Islington 2009 – 2012 (2009)	Best practice	Best practice	4	3	4	11	0	5	0	0	5	A