



Colchester Borough Council's Comprehensive Climate Risk Assessment



Contents

	Page
Introduction	3
Climate Projections for Colchester	3
Risks and Actions	10
Managing flood risks	11
Managing water resources	14
Managing heat risks	16
Managing ground conditions	18
Extreme weather events	19
Cross cutting issues	21
Opportunities	22
Local Strategic Partnership	22

Introduction

This report outlines the results of Colchester Borough Council's comprehensive climate risk based assessment. The report begins by outlining the climate change predictions for Colchester; it then identifies risks and looks at existing and potential actions to reduce risks. The purpose of this risk based assessment is to firstly understand the risks, secondly to assess the risks and finally to identify and take actions to address these risks.

This assessment principally looks at the likely changes to Colchester's climate over the short term and briefly refers to the medium and long term predictions. Future work could look at the medium and long term impacts in more detail.

This assessment will meet level 2 of NI188 and some of the criteria for level 3 of NI188. It forms an important part of Colchester Borough Council's climate change adaptation strategy. Adaptation is essential as carbon dioxide remains in the atmosphere for around 100 years and so even if carbon emissions were significantly reduced tomorrow we would still experience the effects of climate change. Colchester Borough Council has a responsibility to ensure that its services and infrastructure continue to function well in the face of climate change, and that residents and workers are protected.

The starting point for the assessment of risks was the questionnaires, which were completed by each department within the Council in 2009. The risks identified by each department were then supplemented with potential risks to the county identified by Essex County Council's Environmental Team in the Essex Climate Risks Register.

Climate Projections for Colchester

The figures in this section use data from UKCP09, which is specific to Colchester. UKCP09 is the working name for the UK climate projections. UKCP09 is funded by Defra and uses data from the Met Office Hadley Centre and the UK Climate Impacts Programme (UKCIP) to predict the future climate of the UK under three different emissions scenarios (high, medium and low). The three different scenarios are associated with different storylines about how the world may change and therefore how greenhouse gas emissions may change. It is good practice to consider all three scenarios, although differences between the scenarios do not start to become significant until around 2040. The figures look at the probability of various climate variables. The central estimate is the projected mid range change, i.e. there is a 50% probability of the change being exceeded, and a 50% probability of the change being lower (also called the 50% probability level). The higher probability shows the highest level of change likely to be experienced and the lower probability is the lowest level of change likely. The UKCP09 key findings and published material report cumulative probabilities at the 10% (very unlikely to be less than), 50% (central estimate), and 90% (very unlikely to be greater than) probability levels and so these probabilities have been highlighted for Colchester.

The short term climate change risks for Colchester are:

- Milder, wetter winters (central estimate shows an increase in mean winter temperature of 1.3°C and 6% increase in winter precipitation);
- Hotter, drier summers (central estimate shows an increase in mean summer temperature of 1.3°C and 7% decrease in summer precipitation);
- More frequent extreme high temperatures (central estimate shows an increase in the mean temperature of the warmest day of 0.9°C);
- More frequent downpours of rain (central estimate shows an increase of 5% precipitation on the wettest day);
- Significant decrease in soil moisture content in summer;
- Sea level rise and increases in storm surge height (central estimate for sea level rise in the East of England shows a 9.7cm increase under the medium emissions scenario and a 11.5cm increase under the high emissions scenario); and
- Possible higher wind speeds.

(see figures 1 – 7 for more detail about the projected climate change risks)

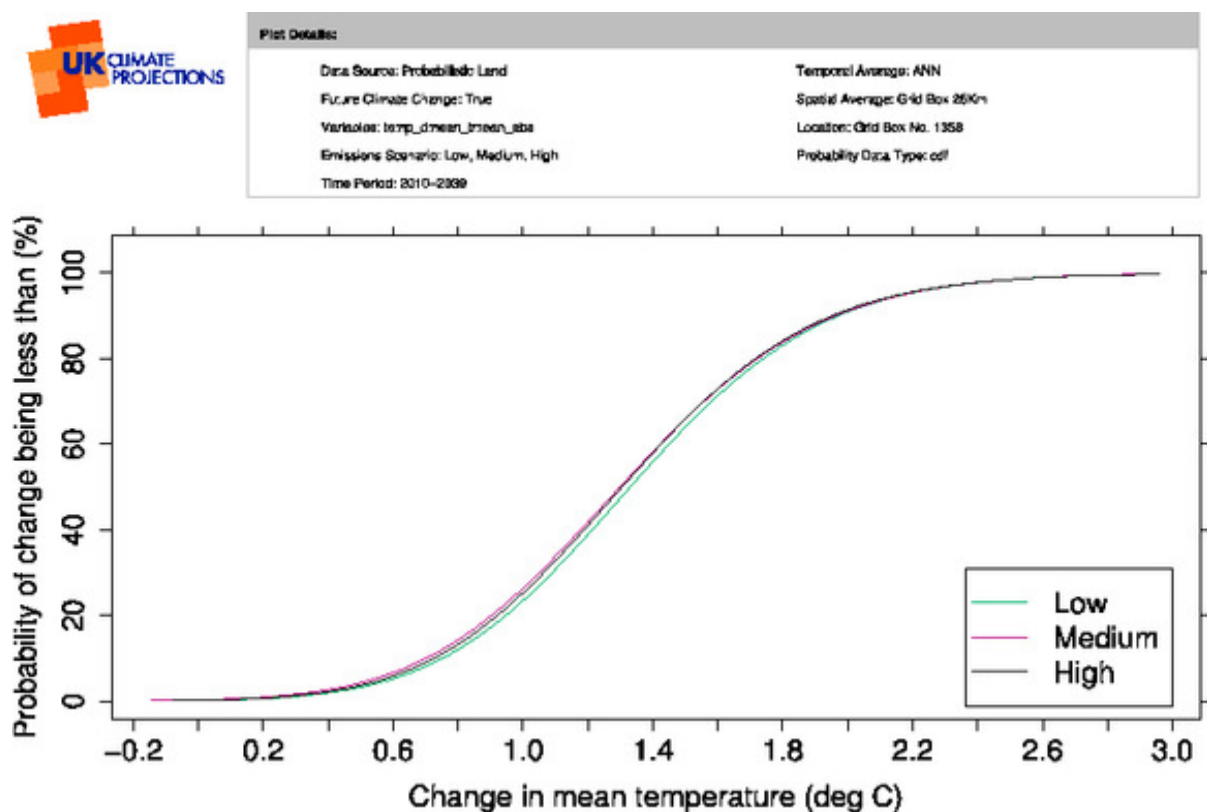


Figure 1. This graph shows the probability of change in mean temperature in Colchester under different scenarios in the short term. Mean temperature is likely to increase by around 1.3 °C, the increase in mean temperature is unlikely to be less than 0.7 °C and unlikely to be higher than 1.95 °C.

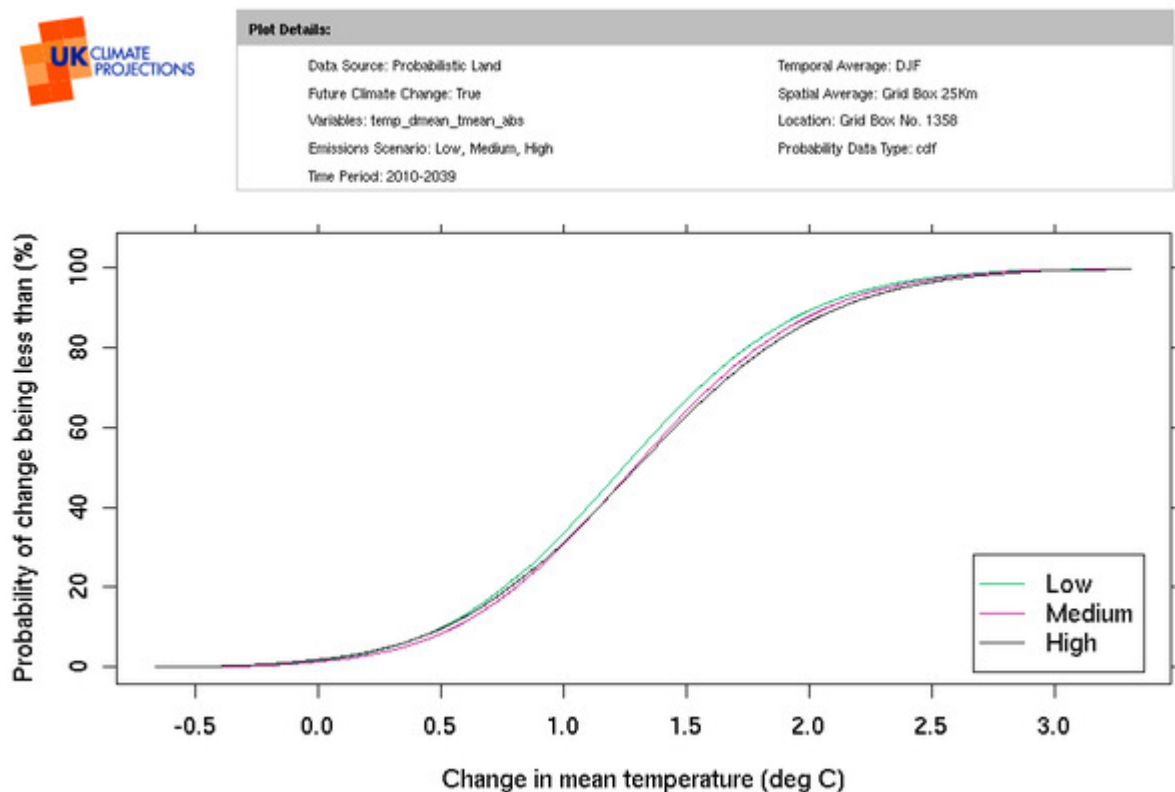


Figure 2. This graph shows the probability of change in mean winter temperature in Colchester under different scenarios in the short term. Mean winter temperature is likely to increase by around 1.3 °C, the increase in mean temperature is unlikely to be less than 0.6 °C and unlikely to be higher than 2.2 °C.

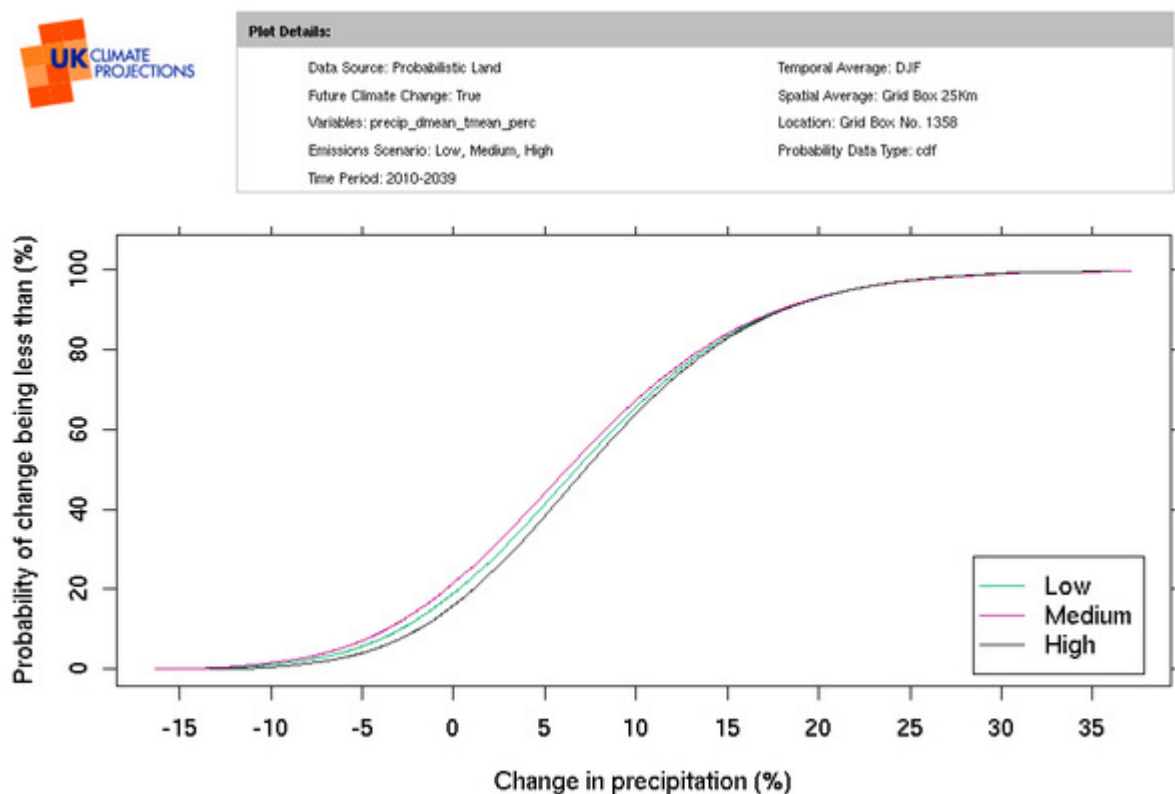


Figure 3. This graph shows the probability of change in mean winter precipitation in Colchester under different scenarios in the short term. Precipitation is likely to increase by

around 6%, the change in winter precipitation is unlikely to be less than a reduction of 4% and unlikely to be higher than an increase of 18%.

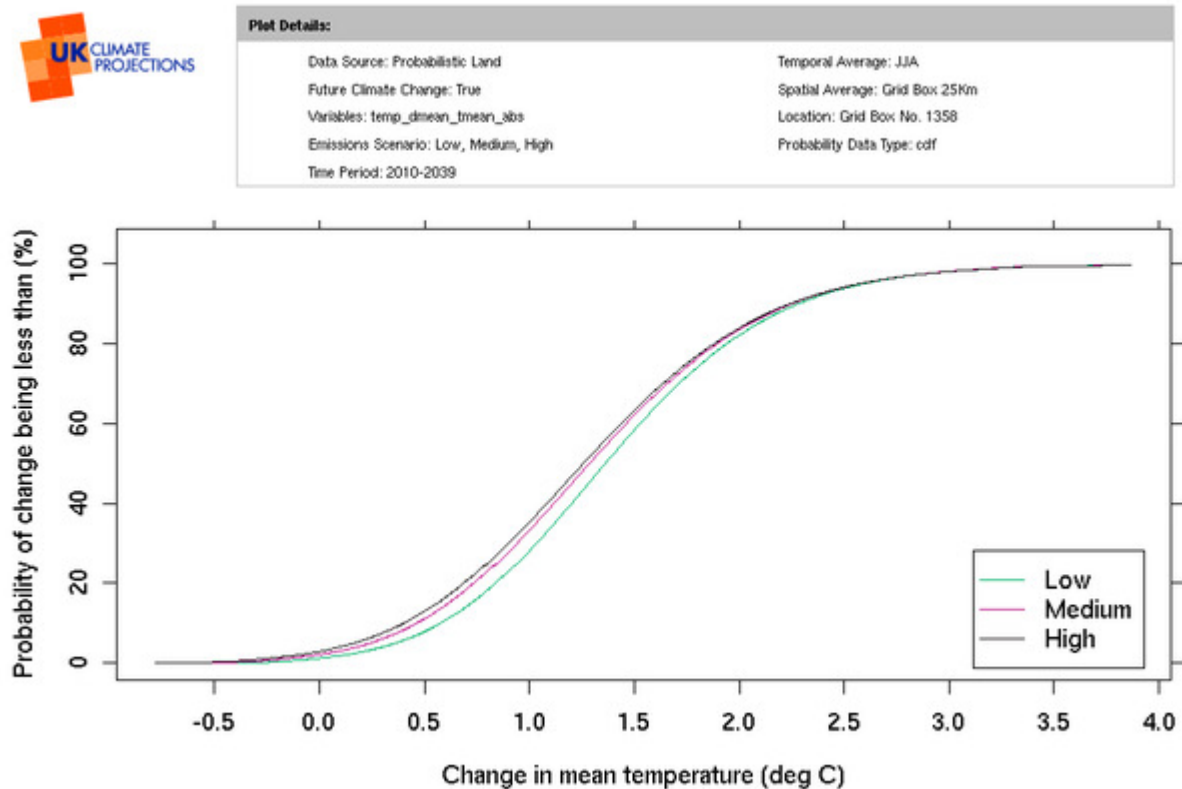


Figure 4. This graph shows the probability of change in mean summer temperature in Colchester under different scenarios in the short term. Mean temperature is likely to increase by around 1.3 °C, the increase in mean summer temperature is unlikely to be less than 0.4 °C and unlikely to be higher than 2.3 °C.

Plot Details:

Data Source: Probabilistic Land
 Future Climate Change: True
 Variables: precip_dmean_tmean_perc
 Emissions Scenario: Low, Medium, High
 Time Period: 2010-2039

Temporal Average: JJA
 Spatial Average: Grid Box 25Km
 Location: Grid Box No. 1358
 Probability Data Type: cdf

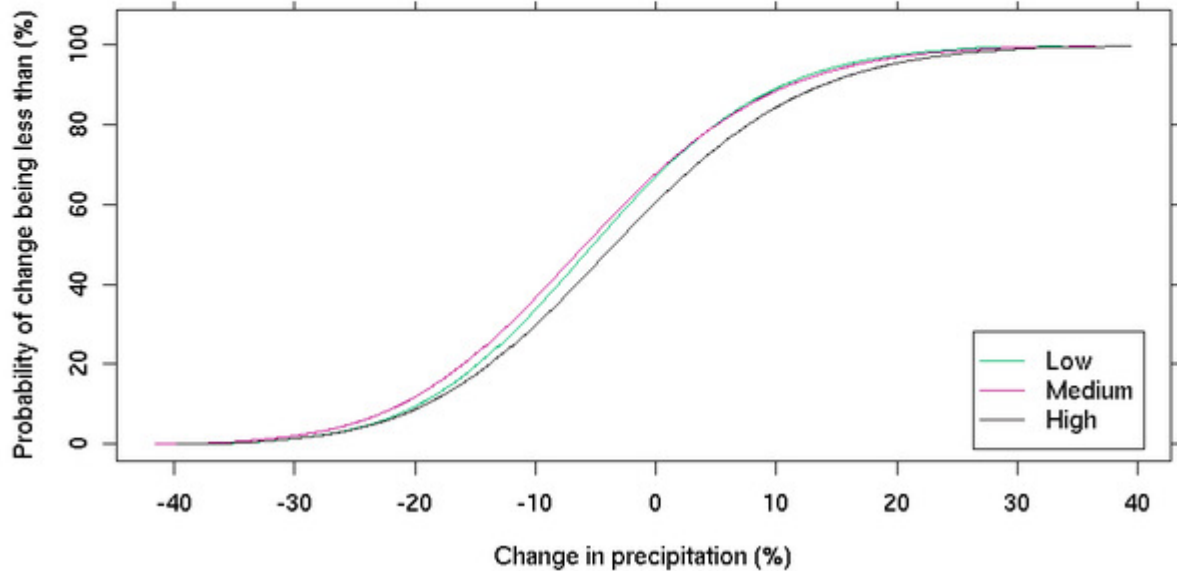


Figure 5. This graph shows the probability of change in mean summer precipitation in Colchester under different scenarios in the short term. Precipitation is likely to decrease by around 7%, the change in summer precipitation is unlikely to decrease by more than 22% and is unlikely to increase by more than 12%.

Plot Details:

Data Source: Probabilistic Land
 Future Climate Change: True
 Variables: temp_dmax_199_abs
 Emissions Scenario: Low, Medium, High
 Time Period: 2010-2039

Temporal Average: JJA
 Spatial Average: Grid Box 25Km
 Location: Grid Box No. 1358
 Probability Data Type: cdf

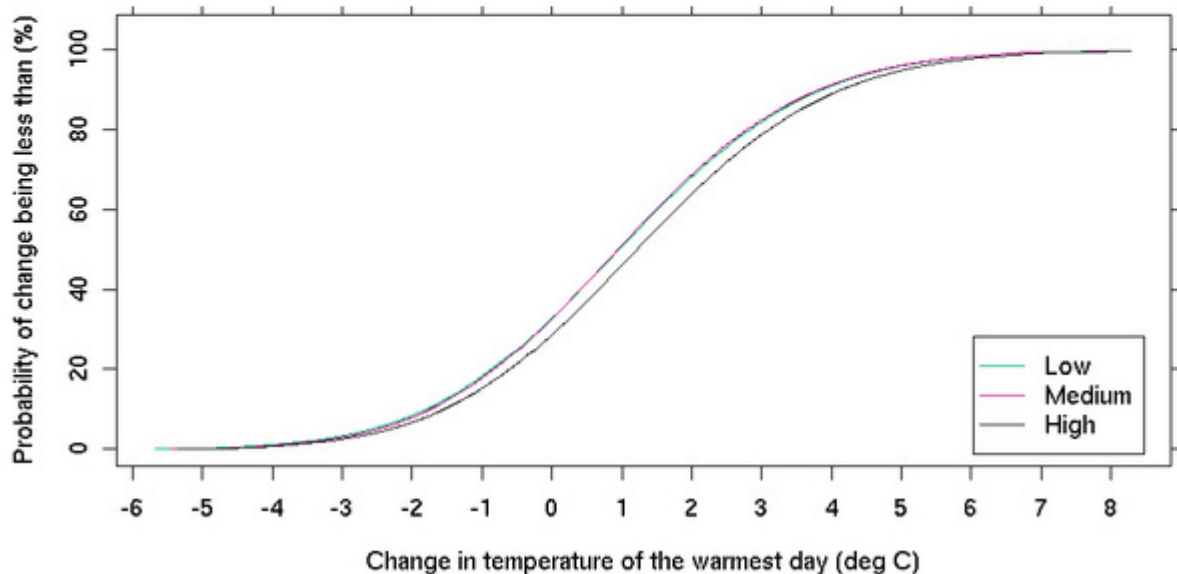
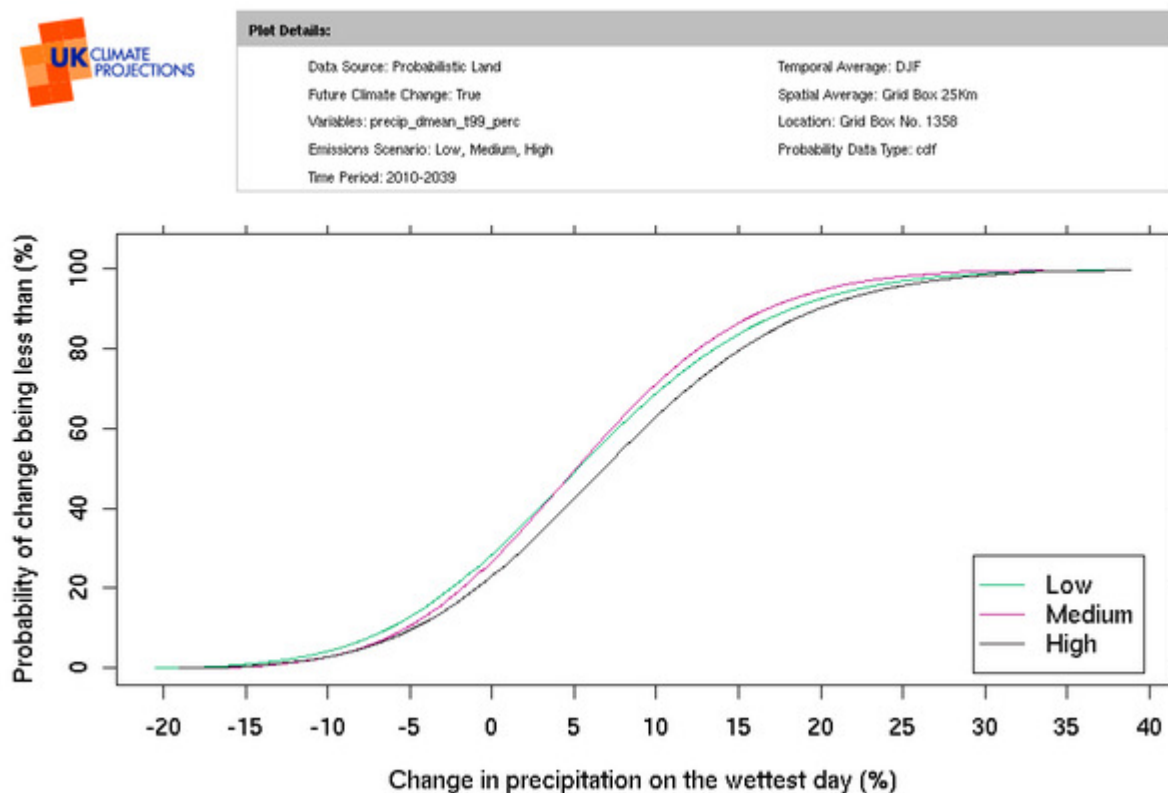


Figure 6. This graph shows the probability of change in temperature of the warmest day in Colchester under different scenarios in the short term. The temperature of the warmest day is likely to increase by around 0.9 °C, the change in temperature is unlikely to be less than a decrease of 1.8 °C and unlikely to be higher than 3.8 °C.



The predicted changes in the medium-long term are more significant than the short term and there are marked differences between the low, medium and high emissions scenarios. Winter precipitation is predicted to increase by 12% under the low emissions scenario, 15% under the medium emissions scenario and 18% under the high emissions scenario (central estimate for the period 2040 – 2069). Mean winter temperature is predicted to increase by 1.8°C under the low emissions scenario, 2.1°C under the medium emissions scenario and 2.4°C under the high emissions scenario (central estimate for the period 2040 – 2069). Summer precipitation is predicted to decrease by 10% under the low emissions scenario and decrease by 15% under the medium and high emissions scenarios (central estimate for the period 2040 – 2069). Mean summer temperature is predicted to increase by 2°C under the low emissions scenario, 2.2°C under the medium emissions scenario and 2.5°C under the high emissions scenario (central estimate for the period 2040 – 2069). The temperature of the warmest day in summer is predicted to increase by 1.8 °C under the low and medium emissions scenarios and 2.3 °C under the high emissions scenario (central estimate for the period 2040 – 2069).

It is clear that the climate of Colchester is very likely to change in the short term, with more significant changes likely in the longer term. Colchester currently has one of the highest average temperature and lowest rainfall in the East of England as can be seen in figures 8 and 9, below. It is likely that Colchester will be more affected than other areas of the region and country by a changing climate and it is therefore essential that adaptation measures are put in place to reduce Colchester's vulnerability to climate change.

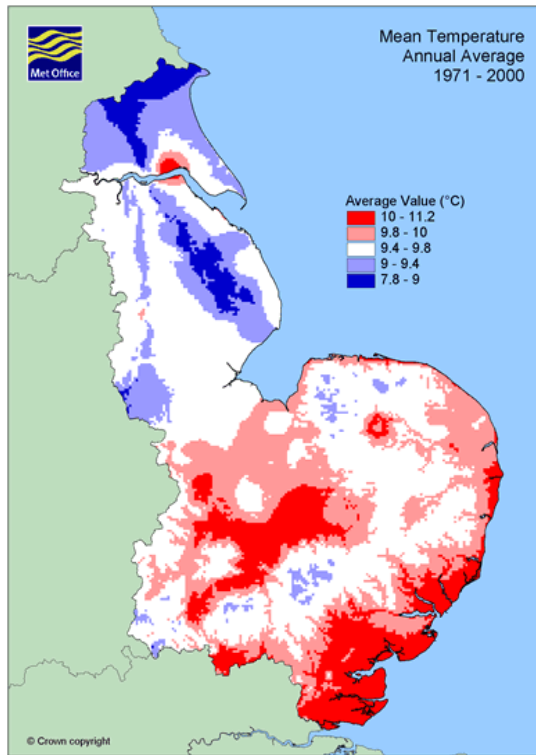


Figure 8. Data from the Met Office, which shows that the mean temperature annual average for Colchester 1971 – 2000 is 10 – 11.2°C.

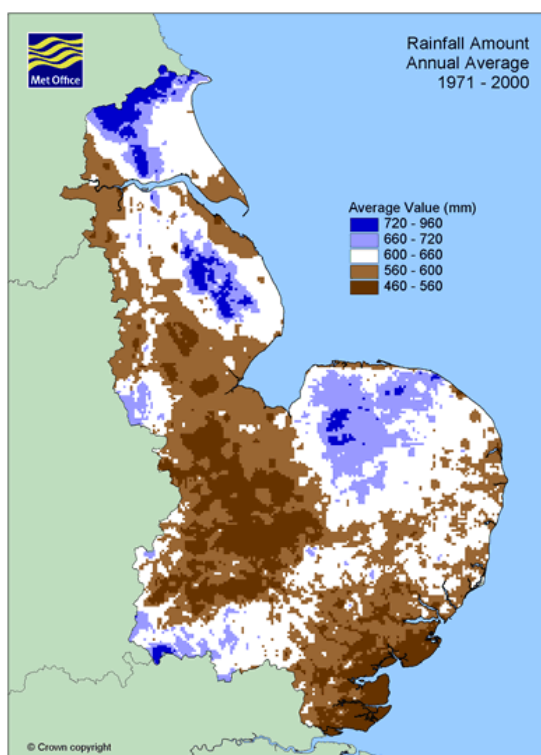


Figure 9. Data from the Met Office, which shows that the rainfall amount annual average for Colchester 1971 – 2000 is 460 – 600 mm.

Risks and Actions

In order to assess risks in a comprehensive manner climate risks have been split into the following categories: managing flood risks, managing water resources, managing heat risks, managing ground conditions, extreme weather events and cross cutting issues.

Each risk is colour coded to highlight whether the risk relates to service delivery, economy, infrastructure, natural environment, health or local communities (see below).

Service delivery
Economy
Infrastructure
Natural environment
Health
Local communities

The significance of each risk has also been identified and is highlighted as follows:

Very high risk
High risk
Medium risk
Low risk

The risk assessment table in the HM Government document 'Emergency Preparedness' has been used to identify the degree of risk.

Managing flood risks

Why act now?

Climate change is increasing the magnitude and frequency of intense rainfall events that cause flooding and the risk of flooding from the River Colne is also heightened by increased winter precipitation. Under the medium emissions scenario the central estimate is for a 5% increase in winter precipitation in the short term (2020) and under the medium emissions scenario the central estimate is for a 15% increase in the medium-long term (2050).

Colchester has grown up around the River Colne and there is a risk of flooding from a number of sources; fluvial, tidal and surface water. The River Colne is fluvial in the upper reaches and tidally influenced in the lower reaches, extending as far upstream as East Mill. There are four major tributaries and many creeks and brooks in the tidally influenced region of the river. Tidal flood risk is concentrated along the coastal frontage adjacent to Mersea Island, which is low lying. Tidal flood sources are the most dominant in Colchester and tidal flooding can result from a storm surge, high spring tides or both events combined over defended and undefended land.

The main pathway of fluvial flooding is from high river flows resulting in out of bank flows. Flood defences and control structures could potentially fail and actually increase flood risk. Fluvial flooding was recorded by the Environment Agency as occurring in 1903, 1939, 1947, 1959, 1979, 1987, 2000 and 2001. These events were of various scale and severity and were mostly caused by high rainfall events.

The flood risk areas in the Borough are shown in figure 10, below. The purple indicates flood zone 3, high flood risk, and the light blue indicated flood zone 2, medium flood risk.

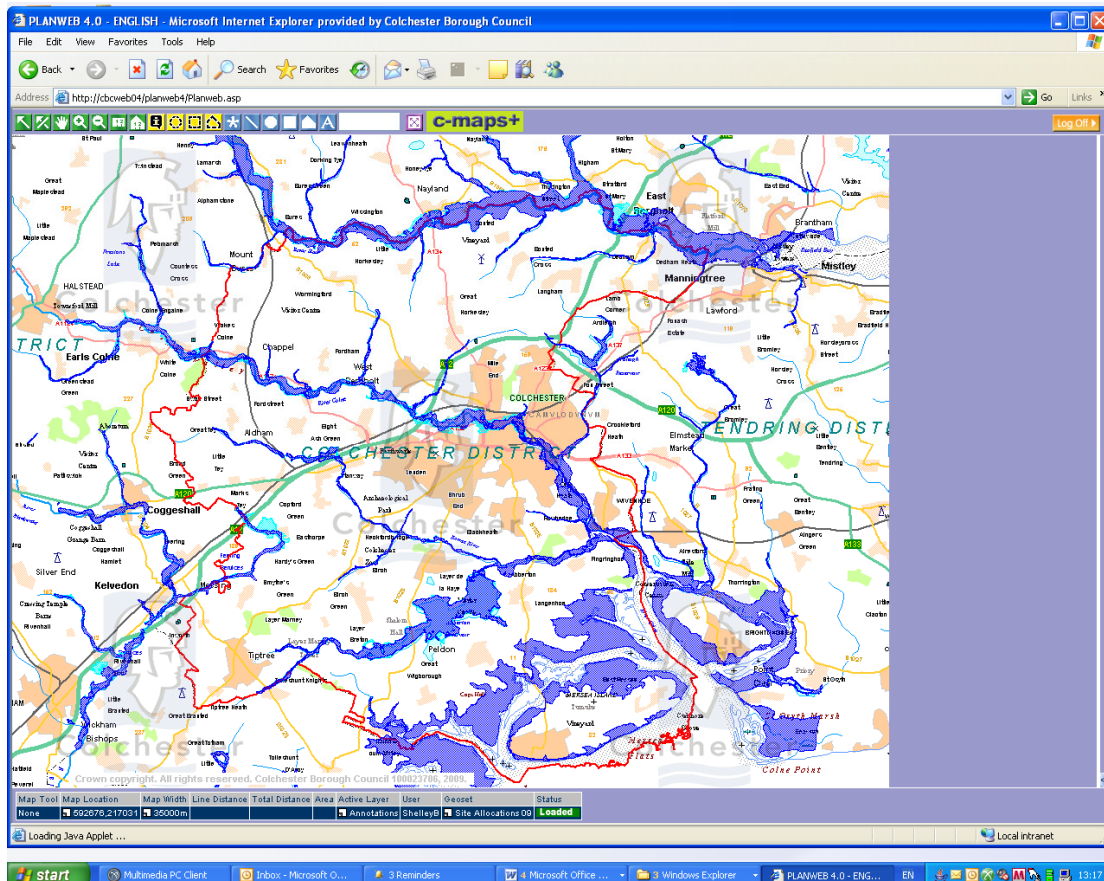


Figure 10. Flood risk areas within Colchester Borough.

Surface water flooding can occur as a result of severe storms, which create run-off volumes that temporarily exceed the natural or urbanised sewer and drainage capacities, creating flash flooding. This is likely to increase as a result of higher intensity rainfall, more frequent winter storms and increased urban development.¹

As just three examples of how heavy rain has affected Colchester in recent years; heavy rain in February 2010 caused congestion around Colchester with the Gazette reporting severe delays on the A12, water poured into Hollytrees Museum in July 2009 affecting some of the artefacts and the Hospital Radios fun day had to be cancelled in 2007 and 2008 due to heavy rain.

What are the risks?

Seven potential impacts relating to flooding have been identified. Three of these are high risk and four are medium risk.

Impact/Risk	Consequence of	Climate trend	Service(s) affected	Other agencies affected	Significance
Homelessness	flooding	milder, wetter winters & more frequent downpours of rain	Housing Needs & Options, Community	Registered Social Landlords, Fire Service	

¹ Colchester Borough Council Strategic Flood Risk Assessment, February 2008, Scott Wilson.

			Operations, Corporate Facilities		
Damage to property	flooding	milder wetter winters & more frequent downpours of heavy rain	Regeneration	Registered Social Landlords, Fire Service	
Operation of Leisure World affected	flooding	milder wetter winters & more frequent downpours of heavy rain	Sport & Leisure		
Relieving drainage problems	flooding	milder, wetter winters & more frequent downpours of heavy rain	Community Operations, Corporate Facilities	Anglian Water Services	
Damage to footpaths	flooding	milder, wetter winters & more frequent downpours of heavy rain	Parks & Recreation	Highways Authority	
Damage to allotments soft verges & access tracks	flooding	milder wetter winters & more frequent downpours of heavy rain	Parks & Recreation	Highways Authority	
Loss of income owing to cancelled sports pitches	heavy rain	milder wetter winters & more frequent downpours of heavy rain & hotter, drier summers	Parks & Recreation, Sport & Leisure		

What actions are already underway?

Planning Policy Statement 25 strengthens planning policy in relation to flood risk and makes it a requirement for development to avoid flood risk areas. Where development is proposed in flood risk areas it will only be acceptable if it passes a sequential test and for the most vulnerable types of development an exception test also. All development proposals over 1 hectare have to submit a Flood Risk Assessment as part of the planning application process.

As part of Colchester Borough Council's Site Allocations Development Plan Document a flood risk sequential test was carried out, which has ensured that housing and employment allocations in the Borough are not located in areas of flood risk.

Policy DP20 of the Submitted Development Policies Development Plan Document requires sustainable drainage systems as part of development. This will reduce the risk of surface water flooding, which is likely to be an issue as a result of more frequent incidences of heavy rainfall.

In March 2010 £72,000 was provided by Defra towards tackling excess water on Cowdray Avenue

What further actions are recommended?

The Flood and Water Management Bill gained Royal Assent in April 2010. The Act implements some of the recommendations in the Pitt Review of the floods of 2007. It includes:

- New statutory responsibilities for managing flood risk, including the requirement for county councils to bring together relevant stakeholders to develop local strategies for managing local flood risk.
- Protection of assets which help manage flood risk, e.g., putting a gate in a wall that is helping protect an area could increase the risk of flooding.
- Powers to manage water levels to deliver leisure, habitat and other environmental benefits.
- New National Standards to help manage and reduce the flow of surface water from all new development into the sewerage system.
- New sewer standards.
- Reservoir safety.
- Protection measures for water company customers.
- Wider powers for water companies to control non-essential domestic uses of water in times of drought.

It is important that the Council has an active role in developing the county strategy for managing flood risk.

Planning should ensure that planning permission is not granted for development unless drainage systems have capacity to cope with development. This is set out in the Site Allocations DPD, but will need to be implemented through ongoing consultation with Anglian Water and the cumulative impact of smaller development must be taken into account.

Whilst the requirement for development to incorporate sustainable drainage systems is set out in a Development Plan Document the update to the Sustainable Construction Supplementary Planning Document should set out detailed information about sustainable drainage systems to ensure that developers, development control officers and planning committee members have sufficient knowledge of these to ensure that they are secured as part of development.

The Council should consider installing sustainable drainage systems within Council owned assets to reduce the risk of flooding and to lead by example.

Managing water resources

Why act now?

Climate change is leading to more frequent droughts, with consequent reduced water availability. Under the medium emissions scenario the central estimate is for a 7% decrease in summer precipitation in the short term (2020) and under the medium emissions scenario the central estimate is for a 15% decrease in the medium-long term (2050). In addition to a reduction in summer precipitation changing precipitation patterns, in particular more

frequent downpours of heavy rain will affect the capture of rainwater and therefore the availability of water resources.

The Environment Agency has identified that the catchment area of Anglian Water Services, which provides water (and wastewater treatment) to the Borough, is seriously water stressed. Furthermore, work carried out by the Environment Agency showed that there will be a significant impact on average river flows across England and Wales by the 2050s as a result of climate change. By 2050 river flows in winter may increase by 10 – 15% but with lower flows in most rivers from April to December. River flows in the late summer and early autumn could fall by over 50% and by as much as 80% in some catchments.²

In the short term there are unlikely to be issues with water supply for Colchester provided that demand management measures (leakage control, household metering and the promotion of water efficiency) are implemented, the public are educated around reduced usage, supply networks from external sources are increased and transfer schemes take place.³

What are the risks?

Two potential impacts relating to water resources have been identified. Both of these are very high risk.

Impact/Risk	Consequence of	Climate trend	Service(s) affected	Other agencies affected	Significance
Water quality deterioration	reduced river flow increases concentrations of pollutants	hotter, drier summers		Environment Agency, Anglian Water Services	
Water shortages	less summer rainfall and increased evaporation	hotter, drier summers		Environment Agency, Anglian Water Services	

What actions are already underway?

Anglian Water Services has produced a Water Resource Management Plan, which shows that water can be provided for Colchester up until the end of the plan period (2035). As highlighted above this assumption is based upon the implementation of a number of measures.

In terms of what the Council can do to contribute to these measures Policy DP20 of the Submitted Development Policies DPD requires improved water conservation as part of development proposals.

What further actions are recommended?

² Environment Agency, Water resources in England and Wales – current state and future pressures, December 2008.

³ Royal Haskoning, Haven Gateway Water Cycle Study Phase 2, December 2009.

The code for sustainable homes and BREEAM⁴ require water efficiency standards in excess of Building Regulations. If the Council requires all residential development to achieve a minimum of level 3 of the code for sustainable homes and non-residential development to achieve a minimum BREEAM rating of 'very good' per capita water consumption will reduce. The average daily water consumption per person in Colchester is 145 litres⁵ and level 3 of the code for sustainable homes requires an average daily water consumption of 105 litres; a reduction of 40 litres⁶.

The Council could work with Waterwise East, which is the regional centre of excellence for water efficiency in the East of England and aims to reduce water wastage in the region to promote good practice.

Anglian Water Services has identified the need to educate people about the need for reduced water usage. The Council could assist with this by carrying out an awareness raising campaign aimed at residents and businesses in Colchester and by encouraging drought resistant landscaping schemes and low water gardens.

Managing heat risks

Why act now?

Climate change is leading to higher average temperatures and more extremely hot days. Research by the Met Office has demonstrated that temperatures experienced in the summer 2003 heatwave will be about average by the 2040s and will be considered cool by the 2060s.⁷

The modified land surface in towns and cities affects heat transfers and so towns and cities are generally warmer than surrounding rural areas. This is known as the urban heat island effect. In addition to heat transfers the urban heat island effect may also be affected by changes in water runoff, pollution and aerosols.⁸

What are the risks?

Fourteen potential impacts relating to heat risks and air pollution have been identified. One of these is very high risk, six are high risk, six are medium risk and one is low risk.

⁴ Building Research Establishment Environmental Assessment Method

⁵ OFWAT, 2004

⁶ Code for sustainable homes: a step change in sustainable home building practice, December 2006.

⁷ The Met Office Hadley Centre, Climate change and the greenhouse gas effect, December 2005.

⁸ IPCC Fourth Assessment Report, Working Group 1: The Physical Science Basis, 2007.

Impact/Risk	Consequence of	Climate trend	Service(s) affected	Other agencies affected	Significance
Increase risk of skin cancer from warmer weather leading to increase time spent outdoors (Higher UK exposure)	high temperatures	hotter, drier summers & extreme high temperatures		NHS	
Health problems for people & animals	high temperatures	hotter, drier summers & extreme high temperatures		NHS	
Illness caused by contamination of food due to warm weather	high temperatures	hotter, drier summers & extreme high temperatures	Environmental Health	NHS	
Increase in dust in the air and on the ground will be a risk to those suffering from respiratory diseases	less summer rainfall & high temperatures	hotter, drier summers		NHS	
Increase in crime rates as warmer weather results in windows and doors being left open	high temperatures	hotter, drier summers & extreme high temperatures		Essex Police	
Trees and vegetation dying in parks and open spaces reducing shade and cooling potential	less summer rainfall	hotter, drier summers	Parks & Recreation		
Transport disruption and road closures due to road surfaces melting	high temperatures	hotter, drier summers		Highways Authority	
Growth patterns of vegetation leading to different maintenance requirements	extreme temperatures and rainfall	hotter, drier summers	Parks & Recreation		
High temperatures cause discomfort in the office	high temperatures	hotter, drier summers & more frequent extreme high temperatures	All		
Temporary closure of Activity Centres	high temperatures	hotter, drier summers & more frequent extreme high temperatures	Community Partnerships		

Potential civil disturbance - increase in urban temperatures linked to episodes on riots and demonstrations (e.g. Paris Summer 2007)	high temperatures	hotter, drier summers & extreme high temperatures		Essex Police	
Increase use of outdoor facilities places pressure on existing open spaces	high temperatures	hotter, drier summers & extreme high temperatures	Parks & Recreation		
Rubbish decaying more rapidly in warmer weather encourages pest species	high temperatures	hotter, drier summers & extreme high temperatures	Strategic Waste		
Increase in benefits claims	expenditure affected by extreme temperatures	more frequent extreme high temperatures	Benefits		

What actions are already underway?

The Met Office issue heatwave warnings and Primary Care Trusts have plans for their local area.

What further actions are recommended?

The urban heat island effect can be mitigated through the use of green roofs, trees and the use of lighter-colored surfaces in urban areas, which reflect more sunlight and absorb less heat.

The Council could investigate the risks of heat stress to Council owned property. Any changes made to Council owned property could be promoted to others as good practice.

Managing ground conditions

Why act now?

Subsidence and heave are already problems in parts of Colchester and will increase due to climate change. The major cause of subsidence is clay shrinkage, which happens as the ground dries as summers get hotter and drier. It can be exacerbated by tree roots sucking moisture out of the soil. Heave occurs when soil absorbs water and swell, causing ground movements.

What are the risks?

Four potential impacts relating to ground conditions have been identified. One of these is high risk and three are medium risk.

Impact/Risk	Consequence of	Climate trend	Service(s) affected	Other agencies affected	Significance
Ground subsidence leading to structural damage to buildings	changing soil conditions caused by less summer rainfall	hotter, drier summers	Planning, Spatial Policy, Regeneration		
Property damage from trees falling down	wet, windy conditions affect tree stability	milder, wetter winters & more frequent downpours of heavy rain & higher wind speeds	Parks & Recreation		
Increase in tree root claims	dry weather	hotter, drier summers & decrease in soil moisture	Audit & Governance		
Construction work halted due to frozen ground	freezing temperatures		Regeneration		

What actions are already underway?

In 2004 Building Regulations were upgraded to require new buildings on clay soils to have foundations to a depth of 0.75 metres, revised from 0.5 metres previously.

What further actions are recommended?

Colchester Borough Council could review its assets to determine which are most at risk from subsidence and heave.

Landscaping schemes should consider types of trees and their proximity to buildings.

Extreme weather events

Why act now?

There are many examples of extreme weather events in recent years and the incidence of extreme weather events is likely to increase as the climate changes. The floods and storms of 2007 resulted in the flooding of nearly 7,000 UK firms with total damage to UK business estimated at £1.3 billion. Many of those affected had never flooded before.⁹

⁹ Environment Agency, The costs of the summer 2007 floods in England, January 2010.

At the local level fruit farmers in Essex have been affected by extreme weather in recent years and bird numbers in Hamford Water have reduced owing to extreme weather conditions in particularly heavy, intense rainfall.

What are the risks?

Seven potential impacts relating to extreme weather events have been identified. Four of these are high risk, two are medium risk and one is low risk.

Impact/Risk	Consequence of	Climate trend	Service(s) affected	Other agencies affected	Significance
Damage to property	high winds	higher wind speeds	Regeneration		
Increase in number of dangerous structures	high winds	higher wind speeds	Building Control, Regeneration		
Reduced visitor numbers	adverse weather	milder, wetter winters & more frequent heavy downpours of rain	Tourism		
Suspended or reduced refuse collection service	snow & high winds	higher wind speeds	Street Care & Recycling		
Students unable to go to school due to extreme weather	snow, flooding, high temperatures	more extreme high temperatures & more frequent downpours of heavy rain	All (if parents have to stay at home with children)	ECC Schools Service	
Street cleaning suspended	snow		Street Care & Recycling		
Difficult for staff to travel into the office	snow, storms, flooding, heat	milder, wetter winters & more frequent downpours of rain & higher wind speeds & hotter, drier summers	All		

What actions are already underway?

Colchester Borough Council responds to major incidents that have the potential to either affect members of the community directly or the day to day services it provides through Emergency Planning and Business Continuity. Emergency Planning deals with planning for emergencies that could affect the community and the response it will take in supporting the emergency services and actions conducted during the recovery phase. Business Continuity deals with the planning and response the Borough Council will take to ensure the day to day services provided by the Borough Council are maintained.

Cross cutting issues

Why act now?

As highlighted through this report climate change will have many impacts on Colchester and whilst these have been split into discrete categories there are many that will affect a number of categories.

What are the risks?

Seven potential cross cutting impacts have been identified. Two of these are high risk, four are medium risk and one is low risk.

Impact/Risk	Consequence of	Climate trend	Service(s) affected	Other agencies affected	Sig.	Cross cutting issue
Infrastructure disrupted	flooding & storms	milder wetter winters & more frequent downpours of rain & higher wind speeds	Emergency Planning	Infrastructure providers		Cross cutting - Managing flood risks & extreme weather events
Increased likelihood of dampness, condensation, mould growth	wetter winters	milder, wetter winters	Housing, Planning	Registered Social Landlords		
Demand on Council to provide grants/ loans to improve thermal comfort of private sector housing	extreme temperatures	hotter, drier summers & more frequent extreme high temperatures	Housing Needs & Options			Cross cutting - Managing heat risks & extreme weather events
Computers, including network, & safety at work affected	power cut	more frequent extreme high temperatures, higher wind speeds	All			Cross cutting - Managing heat risks & extreme weather events
Increase in claims from structural damage	flooding & storms	milder, wetter winters & more frequent downpours of rain & higher wind speeds	Audit & Governance			Cross cutting - Managing flood risks & extreme weather events
Increased demand for allotment space	fears over food shortages	hotter, drier summers & more frequent downpours of heavy rain	Parks & Recreation			Cross cutting - Managing ground conditions & managing heat risks

Change in ways of life or leisure activities that are influenced by weather	high temperatures	hotter, drier summers & extreme high temperatures	Tourism		Cross cutting - Managing heat risks & air pollution & an Opportunity
---	-------------------	---	---------	--	--

What actions are already underway?

The Council has set up a climate change adaptation group, which will be responsible for identifying adaptive actions and monitoring the implementation of these actions. This risk based assessment will be an important piece of evidence for the group.

What further actions are recommended?

Developers should explain as part of planning applications how climate change has been considered as part of the design of the development. This will help to ensure that cross-cutting issues have been addressed and incorporated into the design of development.

The Council could also require 'climate change implications' to be added to all report templates. This will ensure that every Council action/decision will consider the impacts of climate change. Officers should be advised to consider the climate change risks and opportunities, both individually and cumulatively, and the potential for mitigation and adaptation.

Opportunities

Whilst climate change risks have been presented in this report climate change does offer some opportunities for Colchester. The principal opportunity is an increase in tourism, which the Council should explore.

Local Strategic Partnership

Colchester Borough Council has begun to liaise with Colchester's Local Strategic Partnership (LSP) in regards to climate change mitigation and adaptation. In 2008 the LSP laid down a Carbon Challenge to the people of Colchester. The LSP is encouraging residents, organisations and businesses within the Borough to reduce their CO₂ emissions by 30% by 2020.

It is intended that this risk based assessment will form the basis for further discussions with the LSP in order to embed climate change adaptation across Colchester Borough. It could potentially lead to the creation of an adaptation action plan for the whole LSP, rather than solely the Borough Council.