



CLASP

Climate Change
Local Area
Support
Programme

Adaptation Resource Pack

Step-by-step guidance for
Local Authorities with case studies
from around the North West of England.

www.clasp-nw.info

February 2011

This pack is designed to help Local Authorities to tackle climate change adaptation.

Some have already made good progress and are ready to work on risk assessment of service areas so should start reading the **Accelerator Pack – Embedding Climate Change Adaptation into LA Processes**.

Other Local Authorities have just started work on adaptation and should read **Getting Started on Climate Change Adaptation** first.

Five Local Authorities worked with CLASP to help develop these briefings and their experiences are shared in five guides to adapting key service areas.

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Climate Change Adaptation Risk Assessment for:

-  **Planning & Development** Rossendale Borough Council
-  **Highways & Transport** Cheshire West and Chester Council
-  **Business Continuity** Pendle Borough Council
-  **Capital Assets** Wigan Council
-  **Emergency Services** Liverpool City Council



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**Why bother to do Climate Change
Adaptation without NI 188?**



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This pack is designed to help Local Authorities to tackle climate change adaptation. Some have already made good progress and are ready to work on risk assessment of service areas so should start reading the **Accelerator Pack – Embedding Climate Change Adaptation into LA Processes**. Other Local Authorities have just started work on adaptation and should read **Getting Started on Climate Change Adaptation** first. This short document makes the case for continuing work on climate change adaptation for Local Authorities despite the fact that the National Indicator set has been dropped.

Why Bother to do Climate Change Adaptation without NI 188?

The National Indicator on climate change adaptation NI188, provided a useful focus to:

- Assess a Local Authority’s preparedness for dealing with a weather-related emergency
- Consider actions that increase resilience, reducing the potential for the weather to cause an emergency.

The indicator has been removed, but the task of planning and embedding climate change adaptation in local areas has not.

The Climate Change Act 2008 not only set up emissions limits for the UK, but also established a Climate Change Adaptation Sub-Committee to advise the Committee for Climate Change on climate risks in the UK. This committee is currently carrying out a UK-wide Climate Change Risk Assessment. Defra’s Director of Climate Change Adaptation, Robin Mortimer, wrote to LA Chief Executives in November 2010 to explain that although the indicator has ended, local authorities still have an essential role to play in taking forward adaptation:

“... further consideration of adaptation is needed on delivering land use planning, providing local infrastructure, implementing building control, managing green space and coordinating emergency planning. These are areas where, without additional timely action, it may be too late effectively to manage the local impacts from a more challenging future climate.”

If you have to make a case in your Local Authority for why you should continue to tackle climate risks, or climate change adaptation, the information below should help you.

Why Bother to do Climate Change Adaptation without NI 188?

Duty to Respond to Weather-Related Emergencies

Local Authorities have a statutory duty to respond to emergencies under the Civil Contingencies Act. Together with their LSP partners, Authorities are expected to have an understanding of potential weather risks, their capacity to cope and a well thought out plan of action.

The Civil Contingencies Act sets out the statutory roles and responsibilities for those involved in emergency preparedness at a local level.

Category 1 organisations are those at the core of the response to most emergencies (e.g. emergency services, Local Authorities, NHS bodies). Category 1 responders are subject to the full set of civil protection duties. They are required to:

- Assess the risk of emergencies occurring and use this to inform contingency planning
- Put in place emergency plans
- Put in place Business Continuity Management arrangements
- Put in place arrangements to make information available to the public about civil protection matters and maintain arrangements to warn, inform and advise the public in the event of an emergency
- Share information with other local responders to enhance co-ordination
- Co-operate with other local responders to enhance co-ordination and efficiency
- Provide advice and assistance to businesses and voluntary organisations about business continuity management (Local Authorities only).

Category 2 organisations (e.g. Health and Safety Executive, transport and utility companies). These "co-operating bodies" are less likely to be involved in the heart of planning work but will be heavily involved in incidents that affect their sector. Category 2 responders have a lesser set of duties - co-operating and sharing relevant information with other Category 1 and 2 responders.

See: <http://www.cabinetoffice.gov.uk/ukresilience/preparedness/ccact.aspx>

So the loss of NI188 should not affect your emergency and business continuity planning, but may remove one of the mechanisms to scrutinise these procedures and make sure they are fit for purpose.

Work on NI188 has frequently shown up a number of gaps in Emergency and Business Continuity Plans, particularly:

- The ability to continue to provide services in a prolonged crisis
- The need to plan for the severe social, economic, health and mental health impacts on a community during a long-term recovery phase.

For information on how to embed climate change adaptation into Local Authority processes including **Emergency Planning** and **Business Continuity** see the other documents in this series.

Why Bother to do Climate Change Adaptation without NI 188?

Increasing Our Resilience

Through NI188 many Local Authorities and their partners have looked at how resilient their own operations are to climate change, and the impacts of weather. In this process key decisions have to be taken to assess the operational and financial implications of taking early preventative action against the cost of dealing with the aftermath of weather events.

Although the removal of NI188 takes away the process of checking our resilience, there are still many other drivers to help ensure adaptation is incorporated into long term planning. For example:

- The Flood and Water Management Act gives Local Authorities the lead role in reducing the risk of surface water flooding.
- Planning policy guidance on climate change and flood risk, together with the requirement for a Strategic Flood Risk Assessment as evidence for the Local Development Framework should ensure that new developments are located and built in such a way as to minimise flood risk to that development and not adversely affect other areas.
- Changes to the Building Regulations should ensure new developments are more resilient to future weather patterns.
- NHS Plans for heatwaves and extreme cold include communicating ways to reduce the risk of health problems from extreme weather. The transfer of public health responsibilities to Local Authorities gives an opportunity to look at the health impacts of climate change.
- Biodiversity Action Plans should incorporate the long term effects of climate change into habitat management plans.

But there will still be some important gaps that would have been addressed by the NI188 process, for example:

- Modifications to existing buildings to make them less susceptible to over-heating.
- Use of higher design specifications e.g. for building refurbishment or road surfaces to increase resilience to weather damage.
- Changes to maintenance regimes for roads, bridges, drainage, buildings and other capital assets to identify and manage changes in weather-related damage.
- Development of green infrastructure planning.
- Changes to maintenance of parks, trees and other green spaces to deal with different growing seasons and plant resilience.
- Helping communities and businesses become more resilient to climate change.

In some cases, there may be a sound business case for taking preventative action, where the cost of increasing resilience is less than the cost of dealing with a resulting emergency. In the 2007 floods, for example, Local Authorities bore costs of over £200 million, less than half of which was recoverable through insurance or national grants.



Why Bother to do Climate Change Adaptation without NI 188?

What to prioritise in climate change adaptation at the moment

At a time of shrinking local government budgets there is a very strong possibility that climate change work will fall down the agenda, but also that work carried out so far, and expertise gained, will be lost. It is perfectly valid that some climate change adaptation responses can be postponed until the current budget crisis is over and some financial recovery begins, which may not be for some years. But it is crucial that recommendations for future work are saved in such a way that they are not forgotten. It is also very important that some activities do continue.

A thorough and detailed risk assessment is one critical element in working out which actions should be prioritised, so it is essential that this is completed. The other important area for continuing work is in decisions that will have very long term implications such as investment in new developments and infrastructure.

Essential Actions To Do Now

1. Ensure that climate change is formally registered as a risk to the organisation, to service delivery and to the community on the Corporate and Community Risk Registers. Document the supporting narrative and make sure that Service Heads have a record of their own risks.
2. Ensure that statutory responsibilities for Civil Contingencies continue to be managed and take into account any data on increased risk emerging from both national climate change risk assessments and local flood risk management work.
3. Ensure that planning policy on climate change is properly implemented in local planning decisions.
4. Ensure that flood risk assessments and surface water management plans are completed and acted on.
5. Ensure that climate change is included as a criteria in decisions on capital assets.

Actions You May Park Until Later

1. Investment to mitigate a non-urgent risk.
2. Changes to operating procedures to deal with possible future risks (unless there is a clear cost saving).
3. Investment in or changes to services likely to close or significantly change.

Where recommendations for action need to be “parked” it is essential that these are well documented and that documentation is retained in the relevant service area.



Why Bother to do Climate Change Adaptation without NI 188?

For more information on what to do to manage climate change adaptation please see the accompanying documents produced for the CLASP Climate Change Adaptation Support Project.



Why bother to do Climate Change Adaptation without NI 188?



Getting Started on Climate Change Adaptation



Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

Climate Change Adaptation Risk Assessment for:



Planning & Development Rossendale Borough Council



Highways & Transport Cheshire West and Chester Council



Business Continuity Pendle Borough Council



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Resource Pack | Climate Change Adaptation

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Getting Started on Climate Change Adaptation

Our climate is expected to change throughout this century, and Local Authorities, together with the emergency services, are at the front line in dealing with the short term effects of severe weather, as well helping communities and businesses to recover afterwards. Research has shown that the most vulnerable members of society are most likely to be badly affected by severe weather, with knock-on effects in health, mental health, education and employment.

Climate change adaptation is a process to help ensure that an organisation can cope with these risks by putting in place measures to either reduce the risk or minimise the damage by having a well thought out response plan. In this way, it is no different to the usual risk management and emergency response procedures of any large organisation.

This document aims to help Local Authority officers to start the process of developing a climate change adaptation strategy, gain support for this work from others within the Authority and strategic partners, and document your progress.

This guidance has been produced by CLASP to help you to get started on the process of climate change adaptation. Further briefing documents provide more detailed guidance on integrating climate change adaptation into the following key service areas:

- **Planning & Development** Rossendale Borough Council
- **Highways & Transport** Cheshire West and Chester Council
- **Business Continuity** Pendle Borough Council
- **Capital Assets** Wigan Council
- **Emergency Services** Liverpool City Council

Our thanks to the following Local Authorities who acted as pilots for this process and who have helped to develop these briefings: Rossendale Borough Council, Pendle Borough Council, Wigan Council, Liverpool City Council, Cheshire West & Chester Council.



Getting Started on Climate Change Adaptation

Local Impacts of Climate Change

The UK Climate Impacts Programme (UKCIP) has developed a range of scenarios of likely changes to our climate for each area of the country (www.ukcip.org.uk). For NW England the general picture is likely to be:

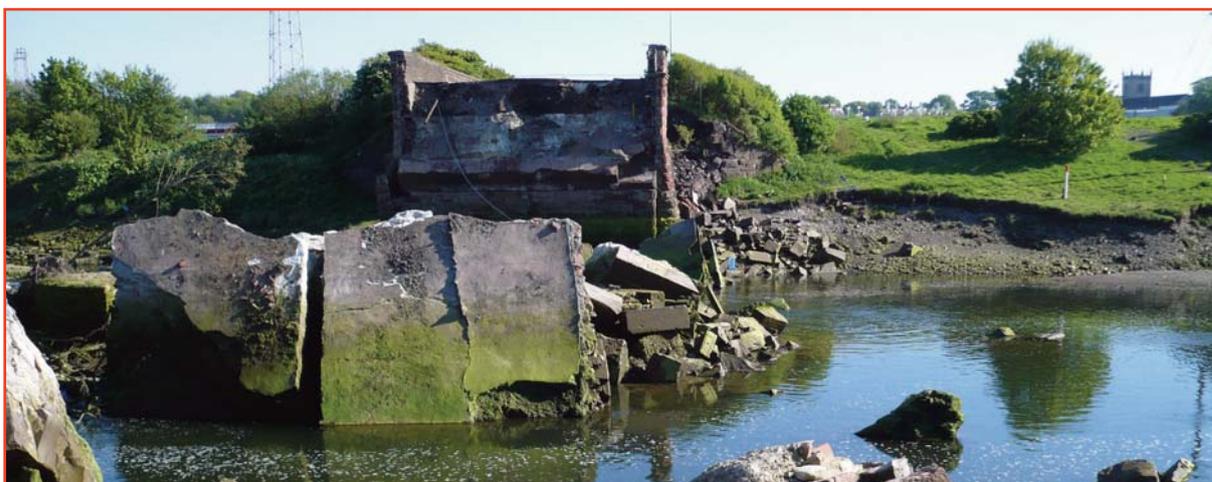
- Warmer, drier summers
- Milder, wetter winters
- More coastal erosion and a greater risk of coastal flooding
- More frequent severe weather events such as high winds, heavy rainfall and heatwaves.

It is important to understand the difference between weather and climate. Climate data is collected over a number of years (usually 30) to provide average conditions for a particular locality; weather is what we experience each day and, as we know, this can be very variable. This could be summed up as:

Climate is what you expect.

Weather is what you get!

Warmer drier summers would probably be very welcome and we may cope with a bit more rain in winter but more severe weather and flooding will bring about the main problems. The storm damage caused by recent gales and the devastating floods in Cumbria in 2010 are still fresh in everyone's minds. Even heatwaves, while welcomed by many, cause health problems for vulnerable groups such as young children and the elderly and the NHS is considering impacts of floods and heatwaves on health in its work on climate change adaptation.



The floods of 2009 caused serious damage to bridges and other highways infrastructure in Cumbria.

Such events not only cause misery for large numbers of people but it also costs enormous amounts of money to deal with the effects; for example the summer floods of 2007 are estimated to have cost over £3 billion across the UK.

Getting Started on Climate Change Adaptation

Responding to Climate Change and Weather

To help make your Authority and local area more resilient to severe weather and a changing climate it is useful to think of your response in two categories:

Dealing with weather-related emergencies

Emergency Response – making sure your staff are able to cope with the immediate emergency and that all the response organisations work effectively together.

Business Continuity – making sure you have plans in place to be able to continue to deliver critical services during and after an emergency, when your own staff are likely to be affected by that emergency.

Planning to reduce or avoid the risk of weather affecting your service

Identifying those parts of your service that may be affected by weather and looking at ways you may be able to make changes to your operations or facilities to reduce or minimise these effects. This includes looking at how longer term changes may need to be addressed now, for example through the Planning system.

Climate change doesn't only pose threats; there may also be opportunities. Warmer winters are likely to reduce the number of winter deaths. Changes in planting towards drought-resistant plants may lead to lower-maintenance parks. Supporting communities to become more resilient to weather crises may reduce dependence on public services at other times.

Getting Started on Adaptation

First of all, don't panic. Much of the work to deal with climate change impacts will have already been done or is underway, either locally, sub-regionally, regionally or nationally. Most authorities or sub-regions have carried out a Strategic Flood Risk Assessment (SFRA). Most Planning Authorities will be in the process of incorporating information from this into their Core Strategies. The NHS has a national Heat Plan to deal with heatwaves. The Environment Agency has flood warning systems in place. The utility companies have drought plans. Together with the Emergency Services, you will have emergency response plans to deal with a range of crises. You will also have a Corporate Risk Register to deal with a range of operational risks, and Business Continuity Plans for use during and after emergencies.

The key to effectively adapting to climate change is to use as much of this existing work as possible and persuade those people who are already responsible for managing risk and responding to emergencies, to include climate risks as well.

You should also think about the pace at which you want to go through this process. It takes time to get all the relevant people to understand the potential impacts for each department. There may be departments that you want to prioritise, or others where it may be sensible to delay to fit adaptation into an existing process such as a review of Business Continuity Plans, or the development of the Local Development Framework. If you've gone through a very consultative process on your climate change strategy then there may be sections of the



Getting Started on Climate Change Adaptation

process you can skip through quickly. If particular departments or areas have experienced a weather-related crisis then they may be able to complete sections faster. A lot of the work is about building the capacity to make adaptation a business-as-usual activity, making it sustainable by embedding it into the skills and routines of the departments.

Before starting to think about your response, it is important to understand how much and in what ways you might be affected by weather events and climate changes, how likely the risks are and how well you already deal with them.

Stage 1: Getting the Commitment

Many local authorities have publicly demonstrated a high-level commitment to tackling climate change through the Nottingham Declaration, the Covenant of Mayors, or similar. It may be supported by a published Cabinet Statement that the council has committed to, ensuring it adapts to the impacts of climate change. You may have a published Climate Change Strategy that has been developed in consultation with your partners and which includes adaptation as well as mitigation. This is a useful basis for taking forward your work on adaptation. However, if you have not got a climate change strategy or high-level commitment to tackle climate change, you can still build climate change adaptation into your policies and practice in order to build up resilience locally, for example, by ensuring that planning policy takes expected weather changes into account to reduce the risk of flooding or heatwaves.

Getting help from a Team

Who you'll need varies depending on the type of Authority (County, Unitary, District) and the services they are responsible for. You should expect to involve service heads from departments such as:

- Planning & Building Control
- Housing
- Transport
- Community Care
- Social Services
- Environmental Health
- Waste
- Parks & Gardens

Getting Started on Climate Change Adaptation

How do I get this on busy managers' agendas?

- Sefton's team got a slot in departmental meetings to introduce the topic before bringing everyone together in a workshop
- Speak to your risk manager to find out how they work with service heads and explain it's a new topic to include in that process
- Use examples that relate to the department's work and relate to cost, people they serve or staffing/workload

Fact Box:

Eg. Cumbria floods: Losses are estimated to exceed £450M; £250k emergency funding from Cumbria CC; Temporary road bridge £4.6M from DfT; EA spent £1.1M on recovery work; Rights of Way repair costs £3.5M; Allerdale BC Emergency Helpline – 20 staff, 24/7, 1,400 calls in 4 days

Eg. Lancashire County Council's review of impact of severe weather found that:

- | | |
|--|---|
| • %ge of Calls for Severe Weather events was up by approx. 70% (2009/10) | • Property Services Storm Damage (2003 – 2007) - £1,560,452 |
| • Blocked gullies/drainage problems – 2nd most common call type | • Alarm panels struck by lightning |
| • Highways spending on storm damage (2003-2006) – £735,785 | • Fence panels blown down |
| • Winter Maintenance (2003-2006) - £14,101,812 | • Damage to roofs |
| | • School closures due to weather events (2004-2007) – 359days |

A longer list of example impacts on service areas can be found in the **Business Continuity** section for this project on the CLASP website.

The UKCIP website includes information on the climate impacts and possible adaptation responses for the main service areas provided by Local Authorities.

It is useful to involve partner organisations at an early stage both to capture their knowledge and expertise and to ensure their support throughout the process. At a later stage when you risk assess your emergency and business continuity plans you will all need to work together to ensure your response plans are effective for both the short and long term changes we expect.

- | | |
|---|-----------------------|
| • Fire & Rescue | • Environment Agency |
| • Police | • Highways Agency |
| • Primary Care Trusts and Ambulance Service | • Transport Operators |
| • NHS Trusts | • Chamber of Commerce |

It is also worth speaking to neighbouring Authorities to find out what they are doing, as much of the work on, for example, flood risk, is being done at sub-regional level or in river catchment areas.

Getting Started on Climate Change Adaptation

Stage 2: Gathering Information

1. Finding out what's already going on

You will already have a number of policies and strategies that will include some response to climate change and weather. These should include:

- Climate Change Strategy (your own and/or a County-wide one)
- Strategic Flood Risk Assessment
- Local Development Framework documents
- Community Risk Register
- Corporate Risk Register
- Emergency Response Plans or Disaster Recovery Plans
- Business Continuity Plans for your key service areas

You may also have specific response plans in place for certain risks in some service areas such as how to deal with heatwaves in schools or social care buildings.

For this baseline, or information-gathering stage, you will need to list all of these documents and know who is responsible for managing or updating them.

You then need to check through them to assess how well they actually address climate change risks. However, whilst it is worth gaining an overall view on how well advanced this is, you will get much more information on how well the strategies and response plans work during the development of the LCLIP and risk assessment exercise, so don't spend too much time on it at this stage.

Getting help from the team – this is where you need to start involving people from all departments.

2. Finding out how you manage risk in your Authority

Although climate change adaptation is often the responsibility of Sustainability or Environmental Officers, it should not be viewed as any different to other risks the organisation faces, so it is essential that management of these risks becomes part of the usual business risk management procedures. If you can get this message across at the start, it will make your work a lot easier.

Find out who is responsible for managing the Corporate and Community Risk Registers and go and talk to them.

- What weather risks are already included in the Risk Registers and are there any important gaps?
- Are other risks included for which the response would be the same as for a climate/weather risk (e.g. transport or communications system disruption)?
- What is the timescale for corporate risks and are there any processes to deal with long-term risks?

Getting Started on Climate Change Adaptation

- What is the corporate attitude to risk and are certain service areas particularly risk averse?
- What is the process for adding new risks onto the Risk Registers?
- Who needs to be involved?

Discuss the process for managing business continuity.

- Who is responsible for maintaining Business Continuity Plans?
- Which are the critical services and what are their key risks?
- To what extent do these already deal with weather-related emergencies?
- Do they cover other emergencies where the response would be the same as for a weather/climate event?
- How frequently are Business Continuity Plans updated and what is the process for doing this?

Find out how they want to incorporate climate change adaptation into their work and how they can help you.

3. Working out the Impacts for Your Area - the Local Climate Impacts Profile (LCLIP)

This tells you:

- How you have been affected by weather in the past
- How you have responded to this

It may also tell you how neighbouring or similar authorities have been affected

Not all Local Authorities in the NW are subject to the same risks from severe weather and different communities can be more vulnerable than others to the effects of the same weather.

An LCLIP aims to assess the local vulnerability to recent and likely weather events rather than the longer term effects of climate change, by looking at how the weather has affected your Authority's ability to deliver its services. An LCLIP is a record of:

- The details and consequences of recent weather events;
- Which departments or agencies are affected by or responsible for managing the consequences and their preparedness for these events.

As well as contributing to the adaptation process, the LCLIP helps to demonstrate to others in the Authority some of the costs associated with dealing with weather, and may show how these could be reduced.



Getting Started on Climate Change Adaptation

What you need to do:

1. Collect information from local news reports from at least the last 5 – 10 years (longer if you have time) on severe weather and how this has affected the community and council services.
2. Talk to staff members in different departments to find out how they were affected, and what they did as a result.
3. Find out if you have any information on the additional burden placed on the service as a result e.g. extra staff, equipment and costs.
4. Ask if they have noticed any other changes related to the weather, e.g. more grass cutting, greater need to clear drains, changes in staff productivity in hot weather.
5. Record your information, usually in a table.

Many authorities have used student placements or trainees to collect this information.

How much detail do we need?

As much as you can get fairly easily, bearing in mind that this exercise will be very low down the priority list of the people you want to talk to, unless they have experienced a weather emergency in the recent past e.g. flooding or the last cold winter. This will limit it to extreme weather events that people remember, but will provide a starting point for further work. Don't worry if you feel you've only skimmed the surface at this stage – the risk assessment process will help to bring out more detail from each service area. The media coverage may focus on the negative impacts, so bear in mind opportunities presented by climate change too, such as warmer summer weather that can get more people to take advantage of sports and leisure facilities or outdoor events.

Who to involve

You should aim to talk to most service areas/departments as they will have different responses. For example, the recent cold winter may have caused:

- Waste Services to be unable to collect household waste
- Social Services to have difficulty in getting to vulnerable people
- Education to have to close schools
- Fleet managers to have been unable to get deliveries of fuel.



Getting Started on Climate Change Adaptation

Excerpt from Cheshire West and Chester Council's Local Climate Impact Profile

In the past 16 years Cheshire West and Chester Council has been affected by a total of 111 significant weather events.

The term 'significant weather event' is used in accordance with the UKCIP definition: a "weather event that has a consequence for the locality" (UKCIP, 2010).

Some 53 weather events that have had an impact upon the area were recorded in the local media. In addition, supplementary information from insurance data added a further 58 events.

Impacts ranged from storm damage to properties and roads, to drought conditions and fires due to high summer temperatures.

Case Study: Strong Winds Across Mid-Cheshire January 2007

Strong Winds Cause Chaos Across Mid-Cheshire

- Strong winds reaching up to 79mph
- Trees and branches blown down blocking roads and bringing neighbourhoods and traffic to a standstill whilst Police put up diversions to ensure the safety of drivers
- Damage caused to roofs and buildings. Schools were closed
- Power cables brought down
- Fire and Rescue Services received 424 emergency 999 calls in a 5 hour period and dealt with patients suffering from head injuries, lacerations and bruising caused by falls, collapsed roofing and scaffolding.
- The roof of the Asda supermarket in Winsford was ripped off resulting in the store and surrounding road being closed
- The M56 Weaver viaduct was closed around junction 12 with one lane open eastbound to allow standing traffic to clear. The M6 was closed at junctions 20/21 at the Thelwall viaduct, in both directions and the A49 and M62 were also affected

Costs

Damage to council property and clean up operations were expected to cost at least £150,000.

Action

25 team members from Vale Royal Borough Council worked across the area dealing with more than 700 trees that had been brought down by the winds and the significant number of roads that were blocked as a result.

Getting Started on Climate Change Adaptation

Reducing the workload

If you have not already completed an LCLIP, see if one has been completed for the county or sub-region, or in neighbouring authorities, and add your local information to this rather than starting from scratch.

Holding an introductory workshop

Many Authorities have found it useful to arrange an introductory workshop to discuss adaptation issues with partners at this stage in the process. This is a quick way of involving the right people, finding out what they already know, what plans already exist to deal with weather events and what they think the key issues are. It also helps to discuss how adaptation links to other key service issues for the Authority and LSP partners such as

- Maintaining service delivery
- Supporting vulnerable groups
- Exploiting business opportunities
- Avoiding unnecessary expenditure.

The workshop is also a good mechanism for getting climate change adaptation on the agenda and can be used to gather support for moving onto more detailed risk assessment of service areas because the right people will be in place to develop the Risk Assessment and Action Plan.

The UKCIP website has detailed information on how to prepare an LCLIP, including a spreadsheet model that helps to organise the information gathered. www.ukcip.org.uk



Getting Started on Climate Change Adaptation

Stage 3: Pulling it Together

Summarising the Information

By this stage you will have collected a lot of information and should be able to pull together a report to share with your senior management, colleagues and partners on your progress. This should include:

- A summary of how weather has affected your services in the past
- A summary of the likely climate changes expected in your area and which may be the most significant
- A summary of policies and plans that do or should incorporate a response to climate change
- A list of people who are already involved in the process (or should be) and their roles
- A plan for the next stages.

Local Climate Impact Profile for Warrington

Rachel Waggett, Climate Change Manager at Warrington Borough Council has written a 6-page narrative document partly to collect the data evidence from the LCLIP into a form that she could easily explain to others, and partly so that she could check that her understanding of the background matched that of others who actually experienced these weather events. By reading this, colleagues can check that she has understood the context properly.

“The fact that the document is only 6 sides long really helped with getting others to read and comment on it.”

Rachel wrote in a plain English style and limited it strictly to LCLIP items - she did not speculate about future changes to weather as this will be her next step.

Rachel has fully referenced the document – as an internal document it is important to reference when the data was obtained and from where. “From a resilience point of view, I am the only person drawing all of these issues together and if I was to disappear, it would help the person who picked this up immensely. I have also got a hyperlinked version of the document which shortcuts to the relevant excel files and weather records, so that the source data can be viewed without searching through endless files.”



Getting Started on Climate Change Adaptation

Assessing Your Preparedness

You may want to summarise how different departments or services are progressing with adaptation by completing the Adaptation Checklist.

- We have a climate change commitment (eg Nottingham Declaration, Cabinet Statement, or climate change strategy).
- We know in general terms what climate changes are expected in our area.
- We have policies and strategies that include some responses to climate risks
E.g. Local Development Framework, Strategic Flood Risk Assessment, Community Risk Register, Corporate Risk Register, Emergency Response Plans, Disaster Recovery plans, Business Continuity Plans, Heatwave Plan.
- We have done a quick review of whether these policies actually do tackle climate risks and where potential gaps are.
- We have spoken to our partners (LSP) about climate change risks and what they are doing on adaptation.
- We know what our neighbouring authorities are doing on flood risk, river catchment area management and we know what is happening at a sub-regional level.
- We have met the Risk Manager/s to understand how our Local Authority manages risk and to discuss how this process deals with weather-related emergencies and longer term climate changes.
- The Risk Manager/s are willing to incorporate climate risks as an external factor in the risk management process.
- We have conducted a Local Climate Impacts Profile (LCLIP) which tells us how weather has affected/is affecting our service delivery and impacts on staffing, equipment, costs etc. This has engaged many of our staff in reflecting on climate impacts on their service area. We know what our climate vulnerabilities are at the moment.
- We have held a workshop on climate change adaptation to look at the future impacts of climate risks and weather events on our service delivery.
- We have summarised the information collected and have a plan for more detailed risk assessment and action planning with each service area.

The next steps to take are the risk assessment workshops outlined in the **Accelerator Pack - Embedding Climate Change Adaptation into LA processes.**

Getting Started on Climate Change Adaptation

Further Sources of Information

There is a wealth of information on adaptation in Local Authorities available to help you. Amongst the most useful are:

The **LG Improvement and Development** (formerly IDEA) website has useful information on adaptation including case studies such as the Liverpool City Council case study on developing a Climate Change Adaptation Strategy. The site also has good information on understanding the data in climate change projections.

<http://www.idea.gov.uk/idk/core/page.do?pagelId=13524862>

The **UK Climate Impacts Programme** has all the information on climate change adaptation including projections, information on LCLIPs and case studies (you have to log in to access these) and a range of tools and wizards.

<http://www.ukcip.org.uk/>

Climate Change North West has useful information on how the northwest region is adapting to climate change, including sector briefings covering local authorities and key industry sectors.

<http://www.climatechangenorthwest.co.uk/1611/adaptation.html>

Information on the Energy Saving Trust website on climate change adaptation, this still refers to the NI188 Indicator and the five levels but has information on risk assessment for different business areas and case studies.

<http://www.energysavingtrust.org.uk/nottingham/Nottingham-Declaration/Events-resources/Adaptation-extras>

Local and Regional Partnership Board (LRAP) Adapting to Climate Change - Guidance Notes for NI 188 is a useful guide to the entire adaptation process. It includes good questions to ask on priority action areas and on including the LSP.

<http://www.lga.gov.uk/lga/aio/1382855>



Getting Started on Climate Change Adaptation

For more information on what to do to manage climate change adaptation please see the accompanying documents produced for the CLASP Climate Change Adaptation Support Project.



Why bother to do Climate Change Adaptation without NI 188?



Getting Started on Climate Change Adaptation



Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

Climate Change Adaptation Risk Assessment for:



Planning & Development Rossendale Borough Council



Highways & Transport Cheshire West and Chester Council



Business Continuity Pendle Borough Council



Capital Assets Wigan Council



Emergency Services Liverpool City Council



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Climate Change
Local Area
Support
Programme

Adaptation Resource Pack

Step-by-step guidance for
Local Authorities with case studies
from around the North West of England.

**Accelerator Pack – Embedding Climate
Change Adaptation into LA Processes**



www.clasp-nw.info

February 2011

This pack is designed to help Local Authorities to tackle climate change adaptation. Some have already made good progress and are ready to work on risk assessment of service areas so should start reading this Accelerator pack. Other Local Authorities have just started work on adaptation and should read the **Getting Started on Climate Change Adaptation** first.

Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

Brief Description

Our climate is expected to change throughout this century, and Local Authorities, together with the emergency services, are at the front line in dealing with the short term effects of severe weather, as well helping communities and businesses to recover afterwards. Research has shown that the most vulnerable members of society are most likely to be badly affected by severe weather, with knock-on effects in health, mental health, education and employment.

Climate change adaptation is a process to help ensure that an organisation can cope with these risks by putting in place measures to either reduce the risk or minimise the damage through having a well thought out response plan. In this way, it is no different to the usual risk management and emergency response procedures of any large organisation.

This document aims to help Local Authority officers to look in detail at what measures are already in place to manage the risks presented by climate change and weather events on their services through risk assessment and how to follow up on key vulnerabilities identified, or how to 'park' non-urgent issues but return to them in the future.

Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

This guidance has been produced by CLASP to help you to get started on the process of climate change adaptation. Further briefing documents provide more detailed guidance on integrating climate change adaptation into the following key service areas:

■ Planning & Development	Rossendale Borough Council
■ Highways & Transport	Cheshire West and Chester Council
■ Business Continuity	Pendle Borough Council
■ Capital Assets	Wigan Council
■ Emergency Services	Liverpool City Council

Our thanks to the following Local Authorities who acted as pilots for this process and who have helped to develop these briefings: Rossendale Borough Council, Pendle Borough Council, Wigan Council, Liverpool City Council, Cheshire West & Chester Council.

See also **Why Bother to do Climate Change Adaptation without NI 188?** which outlines other drivers for Local Authorities to manage climate risk including the Civil Contingencies Act, Flood and Water Management Act and the forthcoming transfer of Public Health responsibilities to Local Authorities. [Internal-link](#)

Getting Climate Change into the Risk Management Process

You should already have an understanding of how risk management, emergency planning and business continuity processes are carried out in your local authority (see Getting Started on Climate Change Adaptation) and what policies and risk registers you have in place that you need to include in the risk management process. Your LCLIP (Local Climate Impacts Profile) will have told you how your local area has been affected by weather in the past and how you have responded to this.

Now you need to check that your existing plans and processes respond adequately to the risks presented by weather and climate change. This process will help you identify your high risk areas and vulnerabilities, and issues that you need to keep an eye on to deal with in the future. The exercise also helps you build awareness of climate change into forward planning, getting related risks into existing risk management processes, building resilience into your local authority.

You have two options:

- a) You go round each service area (or partner) and conduct a risk assessment meeting with them to assess the risks and vulnerabilities and agree on resulting actions needed.
- b) You run a series of workshops and work through the risks, measures in place to manage these, and identify vulnerabilities and actions needed together and then hold individual follow-up meetings to get more detail and discuss possible actions.

Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

We strongly recommend bringing people together in groups to work on this at some stage. Because your services are interlinked and interdependent the results will take into account different perspectives, you'll build greater awareness across a group and you'll be more likely to act on the risks that are not currently adequately managed.

For Example: In one of the pilots the team doing the surface water management plan had not considered the impact on social care of staff not being able to get to vulnerable people and in considering that it put a different light on the relative risks.

Who Do We Need To Involve?

You need to work through each service area for your local authority to assess how the service is affected by weather and climate; how well existing plans and policies manage the risks and where action is needed to address vulnerabilities.

You will need the support of your **Risk Manager, Emergency Planning Manager** and probably your **Business Continuity Manager** in planning, delivery and follow up for this process. If you are not in a policy role, you'll also need to speak to your **Policy Officer/s** to ensure that climate change risk is taken on board in policy making over the long term.

It is important to work at a senior level, with **Heads of Service** as well as key people with critical practical local knowledge and information such as your **Planners, Facilities Managers, Drainage Engineers, Highways Assets Managers, Contract Managers etc.**

This is an iterative process, even with a list of service areas and key people you need to involve. After each meeting or workshop you need to think about who you need to go back to for more information, such as **HR** or **IT**, or other people such as head teachers or external partners, or those who use certain buildings or provide mobile services, such as community transport. Be ready to be flexible.

In some of the CLASP project workshops we had external experts on hand, for example, it's useful to invite someone from the **Environment Agency** or **United Utilities** to get an understanding of what they are doing on flood risk and drainage. It might be useful to consider health impacts with your **NHS** (or **PCT** until their roles change) or to invite someone from the **Highways Agency** or other relevant experts to give an external view. Your **Local Resilience Forum** is also an important resource and centre for Emergency Planning and links into partners.

Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

Where to Start?

You might have identified some key service areas that face particular risks through your LCLIP or through general workshops or meetings you've held already on climate change adaptation. Or you might have experienced a severe weather event such as a flood or storms that highlighted gaps in your plans, and help identify good places to start.

If you don't have an obvious starting place, then **Business Continuity** is a very good way to engage people in the process and to build awareness for follow up work on longer term impacts.

If you tackle Business Continuity, you're likely to end up looking at how your **Emergency Plans** pick up on climate change risks too. It will also give you an indication of which services might be best tackled next.

Looking at physical infrastructure like **Highways & Transport** or **Buildings** or impacts like flooding, that people can relate to easily are good entry points to start discussing risk assessment and climate change, and can then lead onto people-based services and cross-cutting services like **Human Resources** and **IT**.

All authorities are likely to need to take a good look at Flood Risk – we have found that knowledge of flood risks often lies within Planning and with Drainage Engineers. It is important that the emergency planners, risk managers and other service heads have seen the most up to date flood risk assessment maps and in light of recent updates, examined whether emergency, business continuity and service management plans take flood risk into account. You will need to gain a good understanding of what is in place to manage flood risk now and through Planning and Land Use policy in the future. New Local Authority duties under the Flood and Water Management Act 2010 mean that bringing people together to discuss this is timely since they will need to be working together on flooding and surface water management soon if they are not doing so already.

Thinking about Long Term Risks

This risk assessment process identifies the risks presented by future climate change such as warmer, wetter winters or hotter, drier summers. But it can be hard to identify what needs to happen now to reduce the impacts of longer term change because people tend to focus on more immediate risks. Risk assessment with **Planning and Development, Highways and Transport, Capital Assets** and **Policy Units** are important because these service areas are making policy, decisions and investments that will last well into the future and need to be resilient to future climate impacts.

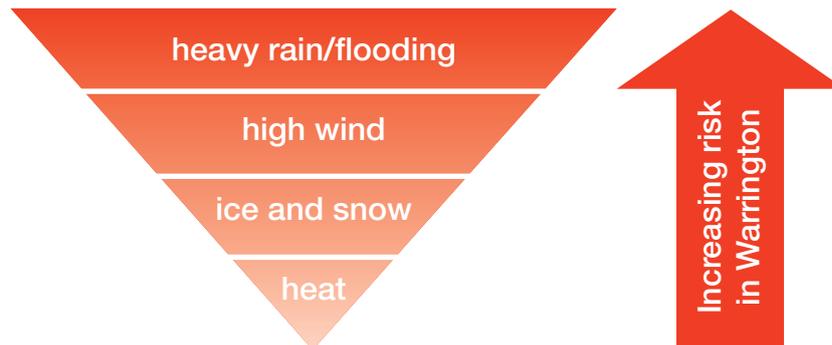
By referring to your Local Climate Impacts Profile you'll know what weather and climate conditions you are currently most vulnerable to. By looking at the information on predicted climate change you'll be able to see where these vulnerabilities are likely to get worse.



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The Local Climate Impact Profile for Warrington shows this clearly in a diagram:

On the basis of the Climate Profile, Warrington is most vulnerable to heavy rain and flooding, followed by high winds. Ice and snow, and hot temperatures do occur in Warrington and need to be taken into account, but these represent a lower risk at present.



It is vital to get Climate Change into your entire risk assessment process as an external factor that should be taken into account by everyone undertaking the risk assessment. That way you can ensure that new information on climate risks for your area is taken into account.

Your Local Authority's Approach to Risk Assessment

Different Local Authorities have slightly different approaches to risk assessment. But they are all common in having:

- A risk assessment form or risk control form
- A risk matrix to calculate a risk score
- Risk criteria which define impact and likelihood

You need to get these and understand them, ideally from your Risk Manager.

Carrying out a Risk Assessment

Conducting a risk assessment with a group is an important way of:

- Engaging and building awareness of everyone
- Making the most of the knowledge in the Local Authority in detail
- Highlighting the risks and actions in place already
- Getting buy in
- Showing people how their jobs/service areas interrelate
- Giving you something very concrete to work with

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During CLASP’s work with the five pilot authorities we found a risk assessment is best introduced using a worked example.

Outline the process you’ll be following, explaining the chosen format clearly.

Break up the process into two stages:

1. Risk Identification / What might happen?
2. Assessing Existing Plans / How well you already manage or reduce risks?

1. Risk Identification

For the first stage of **Risk Identification** introduce some of the possible risks and consequences and give an example of this on your risk assessment form. Explain how risk scoring works in your local authority (see below) then ask your participants to discuss, record and quantify the impact on their services of both severe weather and changing weather trends, such as:

- Warmer, wetter winters
- Hotter, drier summers
- High winds and storms
- Flooding
- Excessive summer heat
- Ice & snow

In identifying the risks, you should try to be as specific as possible about the impacts. “Flooding” may be an overall risk to the authority or the local area, but the risk to a service area as a result may be “Staff unable to get to work” or “Damage to road surfaces” or “Loss of archived material”.

Risk Scoring

The risk score is usually the multiple of how severe the Impact of the event could be and the Likelihood of it happening.

Score = Severity x Likelihood

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Fact Box: Scoring risks

Different organisations use different methods for scoring, but it is frequently a matrix e.g. 3x3, 4x4 or 5x5. You should also have a definition of the criteria used in assessing both the impact and likelihood. For example, for a 4x4 matrix:

Likelihood

Factor	Score	Measure
Very Unlikely	1	Has rarely/never happened
Unlikely	2	May happen once every 3 years, or longer
Likely	3	Likely to happen at some point in the next 1 – 2 years
Very Likely	4	Regular occurrence

Impact

Factor	Score	Service Delivery	Reputation	Failure to provide statutory duties	Personal safety	Financial
Minor	1	Service disruption for 1 day	Some complaints, contained within the section/dept	Litigation/ claim/ fine (£12k to £25k)	Minor injury or discomfort	Cost less than £50,000. Up to 10% of budget
Significant	2	Service disruption for up to 5 days	Adverse local press/ public awareness	Litigation/ claim/ fine (£25k to £50k)	Severe injury	Cost between £50,000 and £250,000. Up to 25% of budget
Serious	3	Significant service disruption for more than 5 days	Adverse local publicity of a persistent nature	Litigation/ claim/ fine (£50k to £250k)	Major injury	Cost between £250,000 and £500,000. Up to 50% of budget
Major	4	Total loss of service for more than 5 days	Adverse and persistent national media coverage	Litigation/ claim/ fine (>£250k)	Death	Cost more than £500,000. Up to 75% of budget

You should use your Authority's usual risk scoring mechanism and criteria so that your assessment will fit with the assessment of other corporate and service area risks.

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Example from Cheshire West and Chester Council - Transport

NATURE OF IMPACT - Description (Assumed as a threat, unless stated)	SERVICES AFFECTED	RISK SCORE:		
		Impact score: 1-4 (A)	Likelihood score 1-4 (B)	RISK SCORE: Impact X Likelihood (A x B)
Increased risk of flooding (all types) could potentially submerge infrastructure, impact on all modes/movements and access to services/employment etc. Potential for wider impact on service delivery, utilities, communications and Emergency Services.	Highways & Transportation	4	3	12
Increased potential for blockages in gullies and drains will require increased maintenance regimes.	Highways & Transportation	3	3	9
Increased river flows leading to accelerated scour/erosion of bridges/embankments.	Highways & Transportation	3	3	9
Risk to public safety/life caused by flash flooding.	Highways & Transportation	4	1	4

2. Assessing Existing Risk Management Plans and Activities

You should already have plans in place to manage the impact of a severe weather event, and may also have identified or be working on ways to reduce the likelihood of weather causing you problems, such as flood defences.

For each risk identified, particularly those with a high score, ask your group to detail existing plans, projects and policies that help manage the risks or impacts and then re-score what risk remains – the residual risk. This helps you to test and identify whether existing plans are adequate now and perhaps in the future given changes expected in the climate/weather.

Test this too by asking: Have these plans worked well in the past? Does everyone know what to do? Are they dependent on other services working? What if the power or communications are down?

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Example: Pendle Borough Council, Business Continuity – using a 3x3 matrix

Description of Risk SEVERE STORMS AND HIGH WINDS	Inherent Risk Score	Mitigating Action/ Controls already in place to address risk	Residual Risk Score	Adequacy of action/ control to address risk
All services Power supply down	8	Emergency Plan. Send staff home. Likely to be able to cope for 1-2 days in most service areas.	8	Inadequate. Not included in Business Continuity Plans. May be significant issue with ability to contact staff, emergency services and public.
Operational Services Injury to front line outdoor staff	6	H&S training adequate & staff have adequate PPE. In extreme conditions would withdraw staff from non-essential outside duties and send out in teams for essential work.	1	Adequate
Operational Services Closure of tip and waste transfer station	6	Reciprocal arrangements in place to use other facilities if accessible. If not, would stop waste collection service temporarily and catch up with workload on overtime in following days. Need to ensure good communication with public.	1	Adequate but resource implications. Reputational impact high if communications inadequate.

Running a Risk Assessment Workshop or Meeting

If you have chosen to conduct your climate change adaptation risk assessments through a workshop based approach, rather than through more individual meetings, the information below helps you run an effective workshop. It would also be useful to read this through to help you prepare meetings if that is your chosen method to engage with your colleagues.

Either way, having chosen the service area or topic for your first risk assessment and met up with your Risk Manager you'll need buy in from Senior Manager/s to get all the right people to your workshop session/meeting. If you are running a stand-alone workshop, invite participants with plenty of notice, maybe speak at a departmental meeting to ensure their buy in, or get scheduled into an existing team meeting, but make sure you get enough time. Use case studies or examples that show them why this is relevant to their role and area.

In Pendle, a presentation on climate change adaptation to the Management Group got buy in, and a time slot in a pre-scheduled meeting. The invitation to the workshop included a list of service areas and possible climate risks.

Discuss the agenda and approach with your Risk Manager, including how best to conduct a risk assessment. Your local authority will have a risk control form or risk assessment form that is used to log and assess risk. This form will be accompanied by risk criteria for impact/severity and for likelihood/probability which help you with risk scoring. If your form is very complicated you could use the form given in the Climate Change Adaptation Support Project and transfer information over in follow up meetings or after the workshop.

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Think about whether you need external support to challenge internal assumptions or outside expertise in the subject (you might be able to ask for peer support from a neighbouring local authority in return for your support to them).

At this stage discuss with your own manager or Risk Manager what process will be followed to act on risks identified.

Remember you won't complete everything in one session. You need to plan your follow up and work with other departments or service areas.

You will need two – three hours for a workshop.

Your sample agenda might look like this:

- Introduction to workshop
- Introduction to climate change adaptation (make sure people understand the implications, costs, benefits, use real examples including costs)
- Warm up exercise (impacts on services, policy discussion)
- Explanation of risk assessment process
- Risk assessment exercise
- Outline next steps

What worked best in the CLASP Climate Change Adaptation Support Project?

Five local authorities worked on developing risk assessment on five service areas as follows:

Pendle Borough Council	– Business Continuity
Rossendale Borough Council	– Planning & Development
Liverpool City Council	– Emergency Services
Cheshire West and Chester Council	– Highways & Transport
Wigan Council	– Capital Assets

Detailed information on risk assessment in each service area is available with this briefing, however, key lessons are provided below which may be useful in helping you to plan your approach to the process of risk assessment on climate change in your area.

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Preparation Through Awareness-Raising in Pendle

Meeting with the Risk Manager and then giving a short presentation on climate change adaptation to the Management Group helped to gain support to make time available for a workshop on risk assessment within a pre-scheduled Management Group meeting, despite pressures to address urgent budget issues.

Using External Speakers

Cheshire West and Chester Council focussed on Highways and Transport. At their workshop an external speaker from the Highways Agency provided a useful insight into how the Agency is tackling adaptation across the whole of the region. A lesson from the workshop was that a representative of United Utilities would be useful at similar events.

Pendle was looking at Business Continuity. A Risk Manager from Lancashire County Council attended the workshop and spoke about the work the County is doing on adaptation and what gaps could be identified in Pendle's Business Continuity Plans.

Using Case Studies

Rosendale focussed on Planning and Development. In the workshop, participants worked through four real examples of sites that might or have come forward for development. This helped everyone to really understand the practical issues likely to be faced and therefore what policies needed to be developed and what training would also be required.

Over-complicating the Assessment

In one of the earlier workshops in the project, a quite complex risk assessment form was used, which people working in groups found difficult to use. The approach outlined above and used in subsequent workshops was simpler for participants to understand quickly and use effectively. If you need to gather more complex information, this can be done in follow up meetings or as 'homework' following the workshop.

Bringing People Together in a Workshop

Mixing up people from different service areas in workshop groups is very useful because it shows how services interrelate and rely on each other. Emergency Services relies heavily on Highways to deliver its services, so has a big stake in helping in a risk assessment process for Highways and Transport. Bringing people together also shows up cross-cutting issues and policies such as communications, IT and Human Resources.

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Emergency Services – working across a large number of organisations

Liverpool found it very difficult to get in touch with the right people in some of the key emergency organisations. Often if you mention you are working on climate change adaptation you'll be put in touch with the lead officer for sustainability or climate change, when you really need an emergency planner or risk manager. In this project, individual meetings or mini-workshops were held with each organisation to complete the risk assessment process.

“If we had to do this again, we'd start with a presentation at the Local Resilience Forum to give information on what we were doing as a Local Authority. We'd then get to the right people quicker in the Emergency Services, and hold the individual meetings with people in each service. Meeting individually meant we got to meet more people and get more information.”

Summary of Overall Findings from the Workshops with Local Authorities

This summary is based on the experiences of five Local Authorities involved in the CLASP Climate Change Adaptation Support Project but also reflects work the consultants have done with other local authorities. Defra has commented to CLASP that many local authorities across the country have reported similar gaps/challenges, especially on planning and making the economic case for adaptation.

What we found

- Emergency response is well-planned
- Business continuity planning is in place but has gaps in some cases
- Recovery phase planning is not generally well understood or developed
- Prevention is only really considered for serious risks e.g. flooding, and in some new developments - “We are very good at managing failure”

Where are the gaps? Long-term thinking beyond normal planning horizons:

- Green space planning
- Surface water management - communication
- Implementation of planning policy
- Reducing the effect of excessive heat
- Assessment of budget implications of prevention vs dealing with the event
- Roads maintenance, tree maintenance, social care, housing
- Maximising community involvement

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What Next

If you have had a lot of people working on risk assessment you will need to moderate the risk scores with the Risk Manager to ensure that they have been accurately assessed against your Local Authority's risk criteria.

Service Heads and others involved in the risk assessment process will need to regroup to discuss how to respond to the risks identified. This should take place within the corporate approach to risk management.

Are you going to do anything about the risk? Depending on the level of risk you can:

- **Tolerate:** Accept the risk and take no further action (you should continue to monitor this risk in case it changes)
- **Treat:** Take action to bring the risk to an acceptable level
- **Transfer:** Reduce your responsibility for the risk, mainly through insurance or making sure your suppliers are able to manage their part of the risk (through procurement and contract management) or sharing the risk between organisations
- **Terminate:** Stop doing the risky activity, either permanently or during the weather event.

If you decide to treat the risk there are different ways to think about your options which you may find helpful – you might want to take a step back from some 'traditional' actions so you can either save money, create wider benefits to the community or keep your options open for later. Cost benefit information on the costs of acting now rather than paying the costs of handling an emergency or making retrospective changes to service plans or investments will be useful at this stage, but this information may not be readily available. The four types of option for action are:

Low Regrets

- Relatively low cost action but large benefits in the future when climate change impacts occur

e.g. restricting development in flood-prone areas through Planning Policy or Land Use Policy

Flexible

- Incremental actions when both the risks of inaction and uncertainties of impacts are high
- Takes account of evolving science, impacts and technologies

e.g. not investing a large amount but trying something cheaper to see if it works, and something that allows for other options to be used later –
i.e. not locking yourself into one solution.

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Win-Win

- Actions that take account of climate change but also have other benefits (e.g. social, environmental) and that do not have additional costs

e.g. Flood management measures that can be combined with biodiversity projects

e.g. Parks planting schemes that are cheaper to maintain and that the public like better

e.g. Building a swale, rather than a drain

No Regrets

- Benefits exceed costs whatever the long term climate change impacts

e.g. siting new electrical sub-stations and server rooms at higher level to avoid flooding

You really must act now to ensure your Planning and Development policies are in place to lay the foundations of a well adapted and resilient local area since these policies are being implemented now, and will have a very big influence well into the future. Putting in place future-proof developments and infrastructure is critical.

The risk assessments should then feed into your Corporate Risk Management Processes which will involve an annual review and updating process.

Try to ensure that within the overall Risk Management Process for your local authority, changes to climate and weather are included as an external risk factor so that new information that comes from climate change experts, such as UKCIP, are fed into ongoing risk assessment work. Changes may alter the adequacy of existing plans that manage existing conditions adequately, but may not manage significantly changed weather patterns over the coming years.

If you are writing a Climate Change Adaptation Strategy, the risk assessment process will form part of that document and inform any related action plans.



Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

Useful Resources

The **LG Improvement and Development** (formerly IDEA) website has useful information on adaptation including case studies such as the Liverpool City Council case study on developing a Climate Change Adaptation Strategy. The site also has good information on understanding the data in climate change projections.

<http://www.idea.gov.uk/idk/core/page.do?pagelId=13524862>

The **UK Climate Impacts Programme** has all the information on climate change adaptation including projections, information on LCLIPs and case studies (you have to log in to access these) and a range of tools and wizards.

<http://www.ukcip.org.uk/>

Climate Change North West has useful information on how the northwest region is adapting to climate change, including sector briefings covering local authorities and key industry sectors.

<http://www.climatechangenorthwest.co.uk/1611/adaptation.html>

Information on the **Energy Saving Trust** website on climate change adaptation, this still refers to the NI188 Indicator and the five levels but has information on risk assessment for different business areas and case studies.

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<http://www.lga.gov.uk/lga/aio/1382855>



Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

For more information on what to do to manage climate change adaptation please see the accompanying documents produced for the CLASP Climate Change Adaptation Support Project.



Why bother to do Climate Change Adaptation without NI 188?



Getting Started on Climate Change Adaptation



Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

Climate Change Adaptation Risk Assessment for:



Planning & Development Rossendale Borough Council



Highways & Transport Cheshire West and Chester Council



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Climate Change Adaptation Risk Assessment in Detail
Service Area: **Planning & Development**
Example: **Rossendale Borough Council**

www.clasp-nw.info

February 2011

Planning & Development Rossendale Borough Council

Background

In this CLASP Climate Change Adaptation support project a consultant worked with the local authority to prepare a risk assessment workshop for the key service area. This short document details the process, key lessons and outcomes for Rossendale's work on embedding climate change adaptation into the Planning process.

Timeframe

- July 2010 local authority's application to CLASP for support
- July first meeting with Principal Planning Officer to discuss background and what they hoped to get from the process
- Gathered up background documents
- September planned the workshop and invited audience
- October workshop held
- November action plan developed

Challenges Before Workshop & How They Were Tackled

<p><i>How to make sure people came</i></p>	<p>The Planning team persuaded people to attend by highlighting the benefits to their departments of working with the Planning department on adaptation issues e.g. could save them work as Planning already holds a large amount of information and expertise which they can call on.</p> <p>Secured executive-level support for the workshop and encouraged corporate responsibility to attend. Used contacts from the corporate Green Team.</p>
<p><i>How to make the workshop relevant</i></p>	<p>The format agreed was to use four local case studies of potential development sites, and to work through the adaptation issues that would be relevant to each. To facilitate this, the Planning team brought copies of aerial photographs, site plans and flood risk maps for each site, to be given to each workshop group.</p>



Planning & Development Rossendale Borough Council

Initial Questions Asked and Documents Reviewed

- *What is the aim of the process?* Rossendale were about to go to consultation on the Core Strategy and were planning to develop a Sustainable Energy and Design SPD. At the same time the council was receiving support from The Energy Saving Trust (EST) to develop a Climate Change Action Plan. The aim was to help provide guidance on how to incorporate climate change adaptation into the Planning documents and facilitate co-operation between departments to reduce climate risks.
- *Who does what?* The Green Team co-ordinates activity on climate change and sustainability across the council. We had a discussion about which factors would be important to persuade senior executives and Members to support work on adaptation.
- *How does Rossendale work with Lancashire County Council?* In a two-tier system there are two authorities involved in emergency planning, business continuity and climate change adaptation, although planning policy is the responsibility of the District Authority. Rossendale have been closely involved in the Lancashire Climate Change Adaptation Group.
- *What are the biggest risks from weather/climate?* The most likely risk was thought to be from an increase in flooding. Although only 2.4% of the borough is in flood risk areas, these are mainly the populated valley floor areas. The borough suffered a serious flood in 1964 and has recently seen flooding in smaller areas. A further risk of degradation of large areas of peat bog and the resultant loss of biodiversity was also considered likely. For future development, overheating in buildings might also be a problem.
- *What plans are in place now?* The Strategic Flood Risk Assessment (SFRA) had just been completed as part of the evidence for planning policy. The Core Strategy contains policies which specifically address climate change adaptation (Policy 1: “*General Development Locations and Principles*”, Policy 17: “*Rossendale’s Green Infrastructure*”, Policy 19: “*Climate Change and Low and Zero-Carbon Sources of Energy*” and Policy 24 “*Planning Application Requirements*”). The Flood and Water Management Act will also place new responsibilities on Local Authorities.



Planning & Development Rossendale Borough Council

Flood and Water Management Act 2010

This new Act gives unitary and county councils the lead role in managing the risk of all local floods, specific responsibility for managing surface water flooding, and a duty to develop flood management plans in consultation with other authorities.

It gives the Environment Agency overall responsibility for managing all flood risk in England.

It encourages the uptake of Sustainable Urban Drainage Systems (SUDS) and removes the automatic right to connect to sewers. It provides for unitary and county councils to adopt SUDS for new developments and redevelopments. It is anticipated that these measures will be fully implemented in April 2012.

The Act also introduces an improved risk based approach to reservoir safety.

<http://www.defra.gov.uk/environment/flooding/policy/fwmb/>

The Workshop Design

The major risks facing new developments had been identified by the Planning officers prior to the workshop based on evidence from the Strategic Flood Risk Assessment which showed areas at risk from flooding, so the purpose of the workshop was to identify the best ways to deal with these risks.

The workshop was designed to cover three issues;

- Increase understanding of climate change risks and the adaptation process relevant to Planning & Development
- Discuss the issues likely to be faced by addressing climate change adaptation in planning policies and development in Rossendale
- Agree a plan to ensure adaptation is incorporated into planning decisions

Invitees were mainly senior officers, who could subsequently brief their respective departments on the findings of the workshop. 12 people attended, from the following Council departments:

- Forward (Strategic) Planning
- Development Management
- Building Control
- Drainage Engineering
- Property Management
- Housing and Public Health
- Emergency Planning

Planning & Development Rossendale Borough Council

- 10 There is a danger that in an area that is not affluent, additional conditions will threaten the economic viability of the scheme, so the area could lose developments to other boroughs. Where there is a conflict between jobs and the environment, jobs win.

Developing the Action Plan

Following the workshop the Planning team developed a plan to address the majority of issues identified, parts of which are now being addressed by the Council's 'Green Team' – a cross-departmental working group which meets every six weeks to facilitate progress on environmental and climate change projects. This includes the following points:

1. Agree whether to prioritise work on Land Allocations or Design Guidance, and develop a project plan for production of these documents.
2. Develop a matrix of standard guidance for different types of development and situations in which it will be required, setting out minimum and desired standards.
3. Work with the key infrastructure providers for water supply and drainage to develop a plan to assess the current systems and identify improvements. Investigate the practical issues of responsibility for maintenance of SUDS and liability for open water.
4. Develop a programme of projects to use commuted sums for flood attenuation and adaptation work in open spaces. Develop a formula to calculate the sums to be paid and demonstrate where it will be spent.
5. Investigate what information is available on the costs and benefits of different adaptation measures, including non-climate change benefits such as increasing business value.
6. Provide or promote training for Members, developers, planning agents, private building control businesses and the business community, to help them understand the issues, options and costs involved. This is critical to getting any policy successfully adopted.
7. Push for adaptation and other sustainability issues to be fully taken into account in new council-funded developments.

Further Adaptation Work for Rossendale Borough Council

The workshop covered only part of the climate change adaptation process. The council still needs to ensure that climate change risks have been taken into account in Emergency Planning and Business Continuity for all departments, as well as identifying any further practices or policies that might reduce the risk of weather-related emergencies happening. The Planning Department holds a lot of information, for example on flood risks that might affect other council services, and will need to be involved in supporting other departments through this process.



Planning & Development Rossendale Borough Council

It was useful to have a Drainage Engineer, Development Control Officers and the Planning Policy Officers discussing the issue of flooding together, so that each could gain an understanding of the practical issues faced by the others in having to develop and implement policies.

The workshop was held in a relatively small venue (meeting room), and was laid out quite informally with a round table arrangement to facilitate discussion. The room was too hot and difficult to ventilate, but that helped to raise issues of heat adaptation!

For more on the practicalities of running the workshop and conducting risk assessment see the **Accelerator Pack – Embedding Climate Change Adaptation into LA Processes**.

Some of the Key Implementation Issues Discussed

1. The existing policy is sufficient to deal with proposed development in flood risk areas as the Environment Agency can require flood risk assessments or recommend refusal.
2. Building design standards are not sufficiently detailed to ensure that adaptation measures are taken into account, and there is no local design guidance. It is also difficult to monitor compliance with latest Building Regulation requirements when Building Control is carried out by an external organisation.
3. There is insufficient detailed knowledge of the current infrastructure and how it copes/would cope with heavier rainfall.
4. Whether it would be possible to finance off-site adaptation projects in at-risk areas through the use of commuted sums (such as the Community Infrastructure Levy).
5. The council does not yet have a plan to deliver projects in Open Space or for Flood Attenuation, which could be used as evidence for the requirement for commuted sums.
6. Lack of space for SUDS may be a problem due to the area's topography and the many small infill developments. Responsibility for ongoing maintenance and liability for SUDS needs to be agreed.
7. Projects financed by the council need to be seen to be working to higher standards and incorporating SUDS.
8. There is insufficient knowledge of the costs of adaptation measures and what financial benefits these improvements might provide in the longer term.
9. Local builders and developers need to understand the reasons and requirements for adaptation. It would be helpful to have more discussion about adaptation issues with developers at the pre-application stage.

Planning & Development Rossendale Borough Council

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Useful resources:

CABE Sustainable Places gives expert advice on planning, designing and managing a sustainable place
www.cabe.org.uk/sustainable-places

The **RTPI's Climate Change Compendium** includes case studies and local policies and strategies as well as national, regional and city strategies and guidance on climate change adaptation
www.rtpi.org.uk/item/2993&ap=1

Climate Change Adaptation by Design is a planners and developers design guide
www.tcpa.org.uk/pages/climate-change-adaptation-by-design.html

The **Planning Advisory Service** report – Using supplementary planning documents to address climate change locally
www.pas.gov.uk/pas/core/page.do?pagelId=552515



Planning & Development Rossendale Borough Council

For more information on what to do to manage climate change adaptation please see the accompanying documents produced for the CLASP Climate Change Adaptation Support Project.



Why bother to do Climate Change Adaptation without NI 188?



Getting Started on Climate Change Adaptation



Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

Climate Change Adaptation Risk Assessment for:



Planning & Development Rossendale Borough Council



Highways & Transport Cheshire West and Chester Council



Business Continuity Pendle Borough Council



Capital Assets Wigan Council



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Climate Change Adaptation Risk Assessment in Detail
Service Area: **Highways and Transport**
Example: **Cheshire West and Chester Council**

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February 2011

Highways and Transport - Cheshire West and Chester Council

Background

In this CLASP Climate Change Adaptation support project a consultant worked with the local authority to prepare a risk assessment workshop for the key service areas. This short document details the process, key lessons and outcomes for Cheshire West and Chester Council's (CWAC) work on understanding how well prepared it is in terms of risk assessments and business continuity plans for changes in climate on its Highways and Transport service area (covering infrastructure, service provision and street lighting).

Timeframe

- May 2010 – NI188 self assessment for 2009/10 submitted – achieved Level 1 but many Level 2 objectives already achieved
- July - CWAC application to CLASP for support
- July – Consultant meeting with CWAC to establish position with regard to NI 188 and agree next steps
- August – September – Data gathering/review
- October– Workshop preparation involving key staff in Highways and Street Lighting Meetings with Audit and Risk Manager to understand council procedures on risk reporting
- November – Risk Assessment workshop held
- December - presentation on climate change adaptation to Management Group
- January 2011 - Findings from the workshop to reported to the Departmental Management Team and Director

Challenges Before Workshop & How They Were Tackled

<i>Securing senior officer buy in</i>	Highway maintenance and street lighting are key areas of interest to senior officers and Council Members, being high on the agenda and involving the Authority's largest assets.
<i>Risk management buy in</i>	The LCLIP identified the main threats and past impacts to services of weather events. The Sustainability Manager worked with the Risk Managers to identify a priority list that need risk assessing in order to develop adaptation plans for these areas.
<i>Attendance at workshop</i>	Prior work with Service Heads on service implications to our changing climate plus links to Cheshire Resilience Forum and Emergency Planning Teams meant that there was good understanding of the importance of climate change adaptation and buy in from senior officers to send staff to the workshop.



Highways and Transport - Cheshire West and Chester Council

Initial Questions Asked and Documents Reviewed

- *What is the aim of the process?* As a new unitary authority, CWAC had drawn together all functions from the previous two tier authorities, including Highways and Street Lighting. They were working on standardising reporting and data collection for a range of major roads to housing estates and from large urban centres to remote rural areas. CWAC were also developing a Highways Asset Management Plan, a Sustainability Facilities Management Plan and already had in place a replacement programme for Street Lighting stock. In response to the Flood and Water Management Act they were also looking at strategies for flood risk management. So it was timely in light of so much change and new strategy development to carry out risk assessment of Highways and Transport in order to build adaptation into new strategies and workstreams.
- *How does CWAC work with neighbouring authorities?* CWAC are working with Cheshire East and Warrington Councils and other partners through the newly created Climate Change and Sustainability Commission and Adaptation is one of the commission's three priorities.
- *What are the biggest risks from weather/climate?* In collaboration with the University of Chester, Cheshire West & Chester Council completed a Local Climate Impact Profile for the borough. This found that the North West is experiencing the type of generic changes in the climate that are being witnessed across the rest of the UK. Past impacts on service delivery have included:
 - Diversion of staff from other responsibilities to deal with weather events.
 - Loss of infrastructure.
 - Reduced and/or failure of service delivery.
 - Unforeseen revenue and capital costs.
- *What plans are in place now?* CWAC collated existing plans, such as the Transport Asset Management Plan and the Local Transport Plan.
- *What risk assessment process is used?* In CWAC, a Risk Control Form is used with a '4x4' risk impact/likelihood matrix.

Transport Planning Society – Local Transport: Adapting to Climate Change (September 2009)

This useful report outlines an approach for local authorities and partners in understanding their network vulnerability, how to strengthen resilience in a number of ways including managing severe weather and disruption, taking low to medium cost measures, looking at major schemes and supporting climate change mitigation.

http://www.climatesoutheast.org.uk/images/uploads/Local_transport_adapting_to_climate_change_briefing.pdf

Highways and Transport - Cheshire West and Chester Council

The Risk Assessment Workshop

The workshop was attended by 20 people with representation from Highways, Street Lighting, Local Transport Plan team, Emergency Planning and Risk Management. In addition, external representation was provided by the Environment Agency and the Highways Agency.

The aims of the workshop were:

- To increase understanding of climate change risks, the risk management process and the adaptation actions required for Highways & Transport.
- To have worked through the process to reach a detailed risk assessment and management plan for the most significant risks.

The workshop was structured into 3 sessions: -

- Session 1: Identifying and quantifying the risks
- Session 2: Assessing Existing Risk Management Plans
- Session 3: Identifying Risk Management Options.

Staff were invited to mix up into smaller break-out groups to ensure a cross-fertilisation of ideas.

Mixing up people from different service areas in workshop groups is very useful because it shows how services inter-relate and rely on each other. It also shows up cross-cutting issues and policies such as communications, IT and Human Resources.



Highways and Transport - Cheshire West and Chester Council

Session 1: Identifying & Quantifying the Risks

The first session aimed to consider the impact of each of the main climate change risks on Highways & Transport for CWAC, using a Risk Assessment matrix.

Risks for Highways & Transport

- **Increase in average/max. daily temperatures**
 - Damage to road surface/asset deterioration
 - Driver/passenger discomfort
 - Changes in traffic flows/patterns linked to tourism
 - Increased verge/embankment maintenance associated with longer growing seasons
 - Ground shrinkage, subsidence, landslides etc caused by drought and lower water tables
 - Expansion of rails leading to buckling



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Cheshire West and Chester

Risks for Highways & Transport

- **Increase in winter precipitation/more extreme events**
 - Flooding of roads, rail lines, tunnels and stations
 - Localised flooding caused by inadequate gullies/drainage
 - Increased accident potential owing to reduced visibility/aquaplaning
 - Flash flooding has potential for network failure and diversions
 - Erosion/scour of structures caused by increased river flows



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Risks for Highways & Transport

- **Increase in high winds and storms**
 - Road closures/operational constraints and diversions
 - Fallen trees and associated debris
 - Potential for damage to structures, gantries, power lines/utilities
 - Vulnerability of exposed structures/bridges

DISRUPTION and SAFETY IMPLICATIONS



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Risks for Highways & Transport

- **Sea Level rise/coastal erosion and storm surges**
 - Periodic flooding of infrastructure
 - Permanent asset loss
 - Road closures/diversions
 - Realignment of routes
 - Severance



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These were logged onto an adapted matrix, which uses a '4x4' matrix, with scores for 'likelihood' and 'impact'.

Some of the higher risks identified included:

- Enhanced deterioration of highway/footway asset from extreme temperatures and hot-cold cycles
- Snow/ ice resulting in road closures causing impact on general service delivery and access to essential goods and services
- Increased risk of surface flooding affecting infrastructure, impact on all transport movements and access to services
- Increased river flows resulting in accelerated scour/erosion of bridges/embankments
- Risk of river and tidal flooding in low-lying areas causing flooding /severance of critical infrastructure (e.g. roads/rail)
- Impact on service delivery during extended 'cold weather' events
- Erosion of coast causing a loss of infrastructure/amenity
- Increased impact of interacting events, such as dry summer coupled with wet winter causing cumulative stress (ice/heat weakening road surfaces for example).

Session 2: Assessing Existing Risk Management Plans

Following identification of the major risks, the groups were then asked to identify how well existing plans and activities addressed the risks identified in the first session. The purpose of this exercise was to identify gaps in coverage of existing plans and help to assess what actions are required going forward.

Session 3: Identifying Risk Management Options

The final stage of the workshop was to develop an action plan for taking forward the key gaps in coverage, with named responsibilities and a timescale for implementation.

A number of required actions were identified:

- mapping assets against existing geotechnical maps to identify subsidence risks
- including a performance specification in maintenance regimes for urban areas
- mapping flood areas on assets
- mapping drains/culverts on GIS
- Surface Water Management Plan will be required by 2011 with the new responsibilities of Flood and Water Management Act.

The group achieved a lot in the short time period of the workshop, gaining a better understanding of likely risk from climate change events now and in the future. They also improved their understanding of the risk assessment process used in CWAC and identified the biggest risks to Highways and Transport. Even where plans are fit for purpose in relation to climate change, such as the Transport Asset Management Plan (TAMP) they will need scrutinising. The group also identified people to lead on action for areas where there were gaps in coverage.

Next Steps

A case study from the workshop was used for a member training session on Risk Management in December.

Following the Risk Assessment workshop, a 'mini-workshop' was held with key staff from Climate Change/Sustainability, Highways and Street Lighting. The purpose of this session was to complete the gaps in the risk register and identify ownership of the key actions identified.

The next steps are as follows:

- Analysis of existing plans for their 'fitness for purpose' in relation to climate change adaptation.
- Identification and consideration of good practice from other authorities.
- Integration of climate change adaptation risk management into service planning for 2011/12.
- Identification of current and future budget implications.



Highways and Transport - Cheshire West and Chester Council

- Preparation of business cases for short/medium/long-term investment that takes into account long-term changes in climate.
- Review of process during Autumn 2011 and planning for 2012/13.
- Establishment of a 'Task and Finish' group to oversee this work.

A summary report was produced for consideration by the Departmental Management Team, with a view to recommending that Adaptation to Climate Change is considered as a corporate risk.

With the withdrawal of the National Indicator set (NI188) there is a danger of this work not being seen as important. However, working with Risk Management and Business Continuity colleagues, CWAC is ensuring that this work is taken forward.

With the current local authority budget situation, this work will need to focus on the strong business case for early preventative actions, rather than reactive (and thereby more expensive) actions.

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Useful Resources:

Publications

- The Resilience of England's Transport Systems in December 2010 - An Independent Audit by David Quarmby CBE, December 2010 (DfT).
- Local Transport: Adapting to Climate Change, September 2009 (Transport Planning Society).
- Guidance on Local Transport Plans, July 2009 (DfT).
- Climate Change section of the Local Transport Plan Policies and Good Practice Handbook, (DfT).



Highways and Transport - Cheshire West and Chester Council

- Climate Change Adaptation Strategy and Framework, November 2009 (Highways Agency).
- DfT Local and Regional Climate Change Research, Final Report, May 2010 (Atkins).
- Building Resilience to Climate Change: An Adaptation Plan for Transport 2010-2012, March 2010 (DfT).
- Maintaining pavements in a changing climate, 2008, TRL.
- The Effects of Climate Change on Highway Pavements and How to Minimise Them: Technical Report, 2008, TRL.

Websites

- Highways Term Maintenance Association - www.htma.co.uk
- Nottingham Declaration – www.nottinghamdeclaration.org.uk
- UK Climate Impacts Programme (UKCIP) – www.ukcip.org.uk
- Defra reports on Climate Risks identified by national authorities including the Highways Agency, Network Rail, Water Authorities etc - ww2.defra.gov.uk/environment/climate/sectors/reporting-authorities/

Reports

- Resilience of Transport Infrastructure in the North West: Stage 1 Report – Evidence Base, Working Draft, June 2010 (Atkins).

Example Strategies/Risk Assessment

- The Draft Climate Change Adaptation Strategy for London, Public Consultation Draft, February 2010.
- Derbyshire, Leicestershire and Nottinghamshire County Councils (3 Counties Alliance Partnership) – Climate Change Adaptation Plan. The 3 CAP project is looking at the current and likely future impact on climate change on the Highway Network Policies and Standards for the three counties.



Highways and Transport - Cheshire West and Chester Council

For more information on what to do to manage climate change adaptation please see the accompanying documents produced for the CLASP Climate Change Adaptation Support Project.



Why bother to do Climate Change Adaptation without NI 188?



Getting Started on Climate Change Adaptation



Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

Climate Change Adaptation Risk Assessment for:



Planning & Development Rossendale Borough Council



Highways & Transport Cheshire West and Chester Council



Business Continuity Pendle Borough Council



Capital Assets Wigan Council



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Climate Change Adaptation Risk Assessment in Detail
Service Area: **Business Continuity**
Example: Pendle Borough Council

www.clasp-nw.info

February 2011

Business Continuity Pendle Borough Council

Background

In this CLASP Climate Change Adaptation support project a consultant worked with the local authority to prepare a risk assessment workshop for the key service area. This short document details the process, key lessons and outcomes for Pendle's work on embedding climate change adaptation into business continuity plans.

Timeframe

- May 2010 - NI 188 self assessment for 2009/10 submitted - achieved Level 1
- June – agreed approach with Members and Service Managers to embed adaptation into business continuity plans and processes.
- July local authority application to CLASP for support
- September first meeting with Principal Policy Officer in the Chief Executive's Policy Unit
- Gathered up background documents
- October- Pendle agreed to keep a local indicator on climate change adaptation, despite the abolition of the National Indicator set in its current form
- October met Audit & Risk Manager, Financial Services
- October presentation on climate change adaptation to Management Group
- 16 November risk assessment workshop held
- December onwards - Findings from the workshop and the Business Continuity to be considered by the Business Continuity group.

Embedding adaptation into the Business Continuity planning process took approximately 7 months.

Challenges Before Workshop & How They Were Tackled

<i>Securing senior officer buy in</i>	Presentation to Management Group secured buy in.
<i>Securing Lancashire County Council support</i>	Spoke to Business Continuity Manager at LCC who was conducting Business Continuity peer review.
<i>Risk management buy in</i>	Meeting with Audit & Risk Manager to discuss implications of climate change impacts, how these might increase in future and cumulative impacts affecting ability to respond.
<i>Short term/ crisis management vs longer term recovery</i>	Severe winter conditions in the previous year focused minds on short term impacts in council and LSP, and was a useful hook to get people to think ahead to other climate impacts.

Business Continuity Pendle Borough Council

Initial Questions Asked and Documents Reviewed

- *What is the aim of the process?* In Pendle's case it was to embed climate change adaptation into business continuity plans, but also into emergency plans and longer-term service area planning. Pendle Council are also working with the LSP Climate Change Adaptation Group, which is looking at how to improve winter plans, but we decided not to try to include the whole LSP in the risk assessment process, but to focus on the council first.
- *Who does what? Who is in charge of risk assessment and business continuity? How does the process work? What is on the current corporate risk register/operational risk register/community risk assessment? How do new risks get put on the register? How are service heads involved in the process?*
- *How does Pendle work with Lancashire County Council?* In a two-tier system there are two authorities involved in emergency planning, business continuity and climate change adaptation. It was important to involve the county council in the workshop.
- *What are the biggest risks from weather/climate?* For Pendle initial risks were thought to be flooding in particular areas, surface water flooding (including sewage), severe weather cutting off rural areas and cold and winter deaths and fuel poverty.
- *What plans are in place now?* We collated existing plans, such as the Flood Response Plan, and service area business continuity plans along with disaster response plans for background information. These tended to focus on a very short timeframe (not beyond 2 weeks of disruption).
- *What risk assessment process is used?* In Pendle a Risk Control Form is used with a 3x3 risk impact/likelihood matrix. We used this form in the workshop.



Business Continuity Pendle Borough Council

Management Group Presentation

This short presentation outlined predicted changes to climate and weather at a top level and also included photographs. This was key in securing buy in from senior managers:

Climate Variables

Long Term Weather Changes

- Hotter, drier summers
- Wetter, warmer winters

Increased Frequency of Adverse Weather

- Flooding
- High winds and storms
- Heatwave and drought
- Ice and snow

CLASP. CLIMATE CHANGE LOCAL LEADERSHIP SUPPORT PROGRAMME 

Is Do Nothing an Option? Social Impacts

“Deprivation increases vulnerability to climate change and climate change increase deprivation.”



Differential Social impacts of Climate Change in the UK, Jan 2009 - report by CAG for Scottish and Northern Ireland Forum for Environmental Research

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CLASP. CLIMATE CHANGE LOCAL LEADERSHIP SUPPORT PROGRAMME 

Highest Risk Communities

- Places at risk
 - Susceptible to heat, flooding, storms
- Disempowered
 - Unable to understand or respond to advice
- Socially Deprived
 - More likely to live in places at risk
 - More susceptible due to poor health & housing
 - Less able to retreat
 - Less able to buy their way out of risk
 - Less able to recover quickly
 - More affected by disruption to basic goods and services, health, education, employment



CLASP. CLIMATE CHANGE LOCAL LEADERSHIP SUPPORT PROGRAMME 

We asked – Why is this important for Pendle? Is Pendle ready for this? And asked everyone to attend the workshop.

The Risk Assessment Workshop

The workshop included all the management group plus additional people including the drainage engineer and audit and risk management.

For more on the practicalities of running the workshop and conducting risk assessment see the Accelerator Pack – Embedding Climate Change Adaptation into LA Processes.

As a warm-up participants outlined the impacts of different weather/climate scenarios on service areas, and what plans were in place to address these, and where there were gaps.

Business Continuity Pendle Borough Council

Some of the main risks identified are included in the summary chart below. Some show that current actions are not adequate to address the risk, while other risks are well addressed: NB these scores have not yet been moderated.

Description of Risk SEVERE STORMS AND HIGH WINDS	Inherent Risk Score	Mitigating Action/ Controls already in place to address risk	Residual Risk Score	Adequacy of action/ control to address risk
All services Power supply down	8	Emergency Plan. Send staff home. Likely to be able to cope for 1-2 days in most service areas.	8	Inadequate. Not included in Business Continuity Plans. May be significant issue with ability to contact staff, emergency services and public.
All Services Loss of IT systems	6	Uninterruptible power supply for IT centre – reduces likelihood of power loss. Disaster Recovery Plan - systems in place to recover data. Most services able to cope without IT for up to 2 days.	1	Data safety adequate. Problems possible if loss due to power failure – inability to shut down and transfer data. Plans inadequate to cope with loss of systems for > 2 days. Some areas may have significant problems e.g. payroll. Unclear if access to Emergency & Business Continuity Plans and critical communications are IT dependent.
Loss of mobile phone signal	5	Not covered in Emergency Plan	5	Inadequate (risks higher if combined with power loss – raising risk and residual risk to 8).
Operational Services Closure of tip and waste transfer station	6	Reciprocal arrangements in place to use other facilities if accessible. If not, would stop waste collection service temporarily and catch up with workload on overtime in following days. Need to ensure good communication with public.	1	Adequate but resource implications. Reputational impact high if communications inadequate.

Description of Risk FLOODING	Inherent Risk Score	Mitigating Action/ Controls already in place to address risk	Residual Risk Score	Adequacy of action/ control to address risk
Bereavement Services Staff unable to carry out burials	8	Body storage with PCT and funeral directors	8	Inadequate Ability to store and catch up not in place. Sensitivities with Muslim community which requires prompt burials. Problems with registration.
Engineering Services unable to access affected locations	9	Staff currently able to borrow 4x4 from contractors to access affected sites	6	Adequate Ad hoc arrangement seem to be working for now.
Engineering Services unable to collect equipment from depot	5	Sand bags in stock and back up stock with contractor in other area (out of Borough)	5	Adequate provided roads into Borough enables alternative plan to be in place and in place prior to any actual realtime flood.
Engineering Services inability to deal with volume of incidents	5	There is currently not a plan in place to deal with a large volume of flood related incidents	5	Inadequate due to small team

Next Steps

The next steps following the workshop are to:

- Moderate risk scores to ensure they have been assessed consistently (this is very important especially in a workshop context to ensure that scores are in line with the risk assessment criteria and because a wide range of people have been scoring)
- Feedback on Pendle Borough Council's peer review of Business Continuity plans
- Business Continuity plans revised accordingly to pick up findings from the workshop
- Each service area to act on their minimising their risks
- Ensure actions to reduce risks are captured in future service plans.

Longer term the service planning process will be used to capture those actions that will help reduce the risk of weather-related emergencies happening in the first place. This will be facilitated by the Chief Executive's Policy Unit.

In light of the budget cuts, Pendle is aiming to revise the service planning process prior to the implementation of the council's new structure which is due to commence in April 2011. This will help mainstream climate change adaptation with the view that it can still be supported within the reduced capacity of the Policy Unit.

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Useful Resources

The **Hull Floods Project** and Lancaster University Report After the Rain is a very useful report that highlights the social, economic and health impacts of flooding and the 'recovery gap'.

www.lec.lancs.ac.uk/cswm/Hull%20Floods%20Project/HFP_%20outputs.php

The **UKCIP website** has information on business continuity and a case study from the Worcester floods

www.ukcip.org.uk/government/local-authorities/service-areas/emergency-planning/



Business Continuity Pendle Borough Council

For more information on what to do to manage climate change adaptation please see the accompanying documents produced for the CLASP Climate Change Adaptation Support Project.



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Service Area: **Capital Assets**
Example: Wigan Council

www.clasp-nw.info

February 2011

Capital Assets - Wigan Council

Background

In this CLASP Climate Change Adaptation support project a consultant worked with the local authority to prepare a risk assessment workshop for the key service area. This short document details the process, key lessons and outcomes for Wigan's work on considering climate change adaptation within the context of Wigan's capital assets.

Timeframe

- July 2010: Local authority application to CLASP for support
- August: Initial meeting with Sustainability Manager at Wigan Council to review existing work and issues and collate background documentation
- October: Follow up meeting with Sustainability Manager at Wigan Council to prepare for risk register workshop
- November: Risk assessment workshop held at Wigan Council
- December: CLASP Climate Change Adaptation regional workshop
- January 2011: Compilation of workshop risk register and lessons learned from the process to be disseminated to Wigan Council
- January: Consultation on Climate Change Strategy
- Ongoing: Sustainability group to meet to bring together issues on climate change
- Local Planning Strategy to take account of climate change and adaptation including use of Sustainability Appraisals and planner training on climate change adaptation

Initial Questions Asked and Documents Reviewed

- *What is the aim of the process?* The aim for Wigan was to assist in developing the Council's aspiration to achieve a step change in their adaptation response (moving from NI188 Level 1 to Level 3). The aim was also to directly embed climate change adaptation into activities affecting capital assets, rather than having adaptation as an added extra to other priorities.
- *What risk assessment process is used currently?* A risk register has been developed by the Sustainability Team. The risk managers do not produce any climate change risk registers. Civil Contingencies work comes under the responsibility of the Business Continuity team. The Sustainability Manager would like them to start to incorporate climate change work. Wigan Council has so far mapped energy consumption, flooding and flood hot spots.



Capital Assets - Wigan Council

- *Does an action plan exist?* An existing climate change plan contains around 30 actions – some are mitigation and some are adaptation.
- *What has been done so far to raise awareness of capital assets?* Wigan is a Capital Assets Pathfinder so these are an important issue for the Council and its partners. Meetings had already been held with the engineers and the building managers, raising the issues of adaptation with them. The approach was to illustrate that some actions they are already doing contribute to adaptation, and then to think about future activities and actions.
- Documents initially reviewed:
 - o Flood and Water Risk Management (Strategic Flood Risk Assessment)
 - o PESTLE¹ analysis for climate change
 - o Study of Potential for Low Carbon Energy

The Risk Assessment Workshop

The workshop included personnel from a number of Council teams, including: sustainability, planning, asset management, conservation, highways, civil contingencies and procurement. Other teams had been invited but could not attend.

For more on the practicalities of running the workshop and conducting risk assessment see the Accelerator Pack – **Embedding Climate Change Adaptation into LA Processes.**

The workshop aimed to consider the challenges climate change presents to Wigan's Capital Assets – its buildings, highways and other capital purchases. By assessing these risks to Capital Assets, appropriate actions can be prioritised and incorporated into business planning for investment and maintenance.

Participants were split into four mixed groups to ensure a spread of officers from different service areas in each group. Each group was given a building/asset to consider. The buildings were selected to reflect different types (old heritage; old; new build etc) and different functions (admin; public access; school etc).

- Town Hall – admin building – housing the Chief Executive's Office, Library, Catering, HR, Legal, Library - Heritage Building
- Robin Park Leisure area
- Westwood – admin building - housing Education, Community Protection, Social Services - new building
- Schools – The Deanery and Rosebridge School – both comprising old buildings

The groups looked at the following risks for the building they were given:

- Insufficient capacity in drains and sewers to cope with heavy and prolonged rain (surface water flooding)
- Inability of river and open water courses to cope with increased influx of water and heavy / prolonged rainfall (river flooding)

¹ PESTLE: Political, Economic, Social, Technological, Legal and Environmental

Capital Assets - Wigan Council

- Inability of the built environment to withstand extreme storms and high winds
- Built environment becoming affected by extreme or prolonged periods of hot weather
- Built environment becoming affected by extreme or prolonged periods of dry weather

They had to look at what might happen to the building and what impact that would have on services, who was responsible for the contingency and what possible actions could be taken. The model used for risk assessment also looked at who was responsible for managing prevention and what the contributing factors were. The groups discussed likely risks and the impacts of these on services, but did not reach a point of scoring the likelihood and impact on the assessment forms.

This model was rather complex, and a simpler approach has been outlined in the **Accelerator Pack: Embedding Climate Change Adaptation into LA Processes**. We also strongly recommend you use your local authority's own risk control form or risk assessment forms. A lesson learned was to keep it simple and ensure the whole process is not too repetitive.

Before using scenarios it is important to make sure these are realistic i.e. which buildings are in or near the flood risk areas (using knowledge of Drainage Engineers or the Flood Risk Assessment map), which are vulnerable to heat (by speaking to Facilities Managers or Heads of Service using these buildings).

Examples of some of the risks and impacts identified during the workshop include:

Surface water flooding to Town Hall – flooding basement and ground floor:

- Loss of Council services based at the Town Hall. Chief Exec; Legal; HR; Catering; Security monitoring & Emergency Response
- Loss of power; access denial; building closed
- Library - Stock damage; closure of library
- Closure of function rooms (registry and weddings)
- Interruption/Suspension of Committees meetings and Cabinet meetings
- Archive - damage to documents and records

The impacts caused by flooding should be covered by Emergency Planning, Disaster Recovery and Business Continuity Planning. As part of the adaptation planning process, these plans should be checked to ensure that they are adequate to handle any increased risk, and that they are reviewed in the light of new information on flood risk.

Options to reduce the risk or impact of surface water flooding in Council assets should be identified in the Surface Water Management Plan.

Extreme/Prolonged Heat impact on Robin Park Leisure Centre would cause:

- Increased need for irrigation of playing fields
- Problems with thermal comfort of building occupants
- Subsidence risk
- Grass fires
- Increased costs due to air-conditioning/refrigeration

Capital Assets - Wigan Council

The primary impact of the above would be:

- Loss of revenue to Leisure Services
- Increased energy costs
- Possible building closure - reduced service provision

Heat impact on old school buildings would cause pupil and teacher discomfort and might result in:

- Absenteeism
- Lack of concentration, and academic attainment
- Hygiene issues - waste and kitchens

Measures that could be taken to tackle this include:

- Change in dress code
- Landscape design
- Shutters/Blinds/Brise soleil
- Change hours of curriculum/term times (in the longer term)

Some local areas, especially urban ones, are looking at the Heat Island Effect whereby built up areas super-heat in prolonged hot weather, causing very high temperatures in city centres. Extreme heat can cause power-outages and have severe health impacts on vulnerable people. The NHS has heatwave plans and Greater Manchester has been working on the heat island effect through the Scorchio Project

<http://www.sed.manchester.ac.uk/research/cure/research/scorchio/background/>

At a time of reduced budgets and constricting council operations, decisions will be made about which buildings to keep and which to get rid of. Operating costs such as energy bills are not usually a deciding factor in whether to keep a council building or not, as land values, proximity to service users etc are more important. But it is worth checking how well buildings stand up to increasingly wet, windy or hot weather in order to choose more resilient buildings over those that may cost significantly more to run or maintain in the future. New buildings must also be designed to take into account flood risk and should consider how to manage heat (without relying on high energy consuming air conditioning) and high winds.

Options for Action

After risk assessing buildings, options for action may be limited by lack of resources. In Wigan this was a major issue for schools, where there is a multi-million pound maintenance budget and massive backlog of maintenance which needs doing. The current maintenance schedule would only pick up very obvious dangers. However, where simple low cost or free measures such as changes to dress codes or some tree planting might be carried out, these may be worth doing for buildings with high/medium risk from heat.

For more on options for action, see the **Accelerator Pack**

Capital Assets - Wigan Council

Wigan wanted to secure more buy in to the adaptation process across the authority, to include adaptation considerations as part of everyday operational and strategic planning activity; to dispel myths about adaptation being too difficult or expensive and to improve the overall corporate approach to adaptation. Not all of this was feasible in a single workshop but important steps were taken – not the least ensuring that the issue of adaptation began to be considered by a number of different sections rather than just those with a sustainability role.

What we learned:

Capital Assets need to be risk assessed for each asset, rather than for the assets as a whole. We would recommend:

- get the list of buildings and other capital assets (from Assets Registers)
- list the buildings and what functions they serve and what services they house
- look at the Flood Risk Assessment and check which buildings are in the flood risk areas
- talk to building users/facilities managers to check how the buildings are currently coping with heat, cold, wind
- check if any buildings are facing a major change of use or likely to be sold off or vacated
- check if there are buildings due for investment/improvement
- check what major plant and equipment is housed in particular locations and include in your risk assessment exercise
- risk assess each building (including major plant/equipment) against the expected weather events/climate change impacts to see how resilient they are; to check impacts on services and to check that emergency/business continuity and other plans are adequate to manage any risks identified
- where plans are not sufficient to reduce the risk to an acceptable level, identify actions that should be taken for each asset.

Next Steps

The next steps following the workshop are to:

- Complete the Climate Change Strategy consultation
- Encourage planners to attend training on climate change adaptation offered through the CLASP Climate Change Skills Fund training programme
- Ensure that the Local Planning Strategy takes account of adaptation
- Bring together people from across the Council working on sustainability issues

Adaptation needs to be considered in both the short and the long term. This means that whilst current authority budget constraints may limit immediate action in some areas, the principles of 'invest to save' and ensuring you are preparing for the future, remain important. Investment now may avoid costs in the future.

Capital Assets - Wigan Council

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Capital Assets - Wigan Council

For more information on what to do to manage climate change adaptation please see the accompanying documents produced for the CLASP Climate Change Adaptation Support Project.



Why bother to do Climate Change Adaptation without NI 188?



Getting Started on Climate Change Adaptation



Accelerator Pack – Embedding Climate Change Adaptation into LA Processes

Climate Change Adaptation Risk Assessment for:



Planning & Development Rossendale Borough Council



Highways & Transport Cheshire West and Chester Council



Business Continuity Pendle Borough Council



Capital Assets Wigan Council



Emergency Services Liverpool City Council



CLASP

Climate Change
Local Area
Support
Programme

Adaptation Resource Pack

Step-by-step guidance for
Local Authorities with case studies
from around the North West of England.

Climate Change Adaptation Risk Assessment in Detail
Service Area: **Emergency Services**
Example: Liverpool City Council

www.clasp-nw.info

February 2011

Emergency Services Liverpool City Council

Background

In this CLASP Climate Change Adaptation support project a consultant worked with the local authority to liaise with Liverpool's Emergency Planning team and the Merseyside Emergency Services to prepare risk assessments and to highlight common issues. This short document details the process, key lessons and outcomes for Liverpool's work on extending their own climate change work to the Emergency Services.

Timeframe

- Liverpool City Council (LCC) had been working on adaptation for over two years and were already at Level 3 on the NI188 scale and aiming for Level 4 by March 2011, with full engagement with LSP by March 2012
- July 2010 local authority application to CLASP for support
- August - first meeting with LCC climate change team to scope out the project
- September – initial workshop with Emergency Planning and Emergency Services
- October/November – separate meetings/mini workshops with Emergency Services
- January 2011 – follow up with NHS/PCT/Ambulance
- Q1 2011 (planned) – presentation to Local Resilience Forum

Challenges Before Workshop & How They Were Tackled

<i>Finding the right person to speak to in Emergency Services</i>	Use Emergency Planning plus personal contacts. Persistence!
<i>'Climate Change' manager sometimes not the right person (they focus on mitigation – for adaptation need to involve risk managers or business continuity officers/managers)</i>	Find out if Climate Change Manager is responsible for adaptation prior to arranging meetings
<i>Getting the right people together at the same time</i>	Individual meetings and mini workshops with each of the Emergency Services
<i>Emergency Services responses to short term weather events not labelled as 'climate change'</i>	Put into adaptation context during individual discussions



Emergency Services Liverpool City Council

Initial Questions Asked and Documents Reviewed

- *What is the aim of the process?* In Liverpool's case it was to understand how adaptation is being tackled in the Emergency Services and how the Council is linked into this. Also how to integrate plans with services that operate across Merseyside, not just in LCC area, e.g. is a joint plan appropriate or are they better kept separate?
- *Who does what?* Who is in charge of climate risk assessment in relation to Emergency Services? How does the process work? What links are already in place to the external agencies?
- *How does LCC work with the Emergency Services?* The Emergency Services cover all of Merseyside (i.e. five local authorities). How does this affect the thinking and actions of the Emergency Services?
- *What are the biggest risks from weather/climate?* In Liverpool the risks of flooding, storms, heatwaves and droughts are likely to increase. Recent data shows an increasing trend for median tides at Gladstone Dock and high frequency events for high winds and summer rainfall. The City's LCLIP data shows the biggest historical events to have included high winds, summer flash floods, heavy rain overwhelming drains, heavy rain leading to fluvial flooding and heatwave.
- *What plans are in place now?* All LCC service areas had done their own risk assessments and developed plans as part of the earlier adaptation work. There are also several plans that relate to climate change risks, e.g. Flood Plan, Heatwave Plan.
- *What risk assessment process is used?* LCC use a 4x4 risk impact/likelihood matrix. This form was used in the discussions with the Emergency Services.

The Approach

The original idea was to organise two workshops. The initial workshop was for the Emergency Services to present to each other and the facilitators on what they were doing to address climate change adaptation and their progress to date. The second workshop was to share the collective story on progress, risk assessment and adaptation planning with a wider audience of Local Authority staff and appropriate sub regional partners. Initial Emergency Services partners identified were the 'Big 3' - Police, Fire and NHS but as Liverpool is a coastal city it was considered important to engage the Coastguard as well as the Council's own Emergency Planning staff. The Environment Agency were also involved in the work as part of the project team.

The first workshop was not as successful as anticipated. Despite a promising start and guaranteed interest, neither the Coastguard nor NHS were represented. There was enthusiastic representation from the Police, but it was not from an officer with the appropriate knowledge. The meeting emphasised what appeared to be a gap in understanding and action/achievement on climate change adaptation between the Local Authority Emergency Planners (at NI 188 Level 3) and the sub-regional Emergency Services (who estimated themselves to be closer to NI 188 Level 1).

Emergency Services Liverpool City Council

Getting project buy in/attendance from the Emergency Services was a problem at the start. The ‘final’ NHS contact and Police contacts were identified through staff personal contacts/address books and a direct approach was made to these officers. Proactive efforts were made to keep the Coastguard in the loop and a later meeting was arranged.

Because of the difficulties of getting the right people together at the same time the idea of the second workshop was abandoned. A revised approach was adopted that entailed bespoke visits to each Emergency Service. Travelling to their premises to collect the information needed was easier for them, less intrusive, and gave a better insight into their working environments and practices.

A standardised template was used to capture and score their future risks – both long term and for specific weather related events (see below).

Climate Change Risk Identification & Assessment							
Service:				High (score 10-16) Consider risk action and review regularly.			
Risk Assessor:				Medium / Tolerable (score 5-9) Consider risk action and review periodically.			
				Low (score <5) No action required. Review annually to ensure risk level does not change.			
CLIMATE VARIABLE:	Current frequency (H, M, L)	Future frequency (H, M, L)	NATURE OF IMPACT - Description (threat or opportunity)	RISK SCORE:			ADAPTATION ACTIONS:
				Impact score: 1-4 (A)	Likelihood score 1-4 (B)	RISK SCORE: Impact X Likelihood (A x B)	Action / Controls
LONG TERM WEATHER IMPACTS:							
Hotter Drier Summers							
Milder Wetter Winters							
ADVERSE WEATHER IMPACTS:							
Flood							
High winds/storms							
Heat wave/drought							
Ice/snow							
Higher frequency of adverse weather events.							
OTHER IMPACTS:							
Energy security							

Emergency Services Liverpool City Council

These efforts were successful in engaging with the Coastguard, Fire & Rescue and the Police and have facilitated ongoing engagement with the NHS/PCT.

For more on the practicalities of running a workshop and conducting risk assessments see the **Accelerator Pack – Embedding Climate Change Adaptation into LA processes.**

Main Risks Identified

- *Merseyside Fire & Rescue* – did not identify any high risks but found that high winds and stormy conditions are the greatest future risk because this is a area that they ‘lead on’ and they get a lot of calls during gale force winds. Flooding and hotter weather generally will need regular review. Hotter weather now and in the future could lead to increases in wild fires.
- *Merseyside Police* – did not find any high risks, but rated flooding as one of their risks to keep under regular review. The Police are not usually a lead organisation for responding and take a co-ordination role, setting and managing the cordon around an event and co-ordinating the overall response. Business continuity plans enable rapid and flexible responses with an ability to call on other trained staff like the Fire Service to assist if required. Interestingly hotter weather does not lead to more crime, although outdoor events may require higher policing levels. Longer term the Police are already considering future new build and adaptations and practical changes such as new uniforms.
- *Coastguard* - identified flood as a medium/high future risk –although it is recognised and dealt with appropriately. The coastguard role can vary with flooding as they are called in as required. They also supported flood work in Carlisle, Gloucester and Cumbria. The risks from high winds and storms are increasing, and they have already noticed an increase in intensity and numbers of rescues rising. Heat and drought scored relatively highly as good weather attracts people to the coast with more incidents. In 2003 incidents increased by 16% - a 23% increase is predicted over next 3 years due to more people holidaying in UK due to recession. The warming of the sea is also increasing volume and tidal rates.
- *NHS* – Unlike the other Emergency Services, Ice and Snow were identified as a very high risk with road closures affecting response times, access for staff and ambulances proving difficult, and staff being affected by public transport disruption. Severe weather was generally identified as a medium risk and responses included doubling up staff on community visits for health and safety purposes but this has the knock on effect of, reducing delivery/capacity with non-critical patients being deferred. Milder, wetter winters were identified as a medium risk as winter conditions increased pressure on the NHS due to a rise in asthma, respiratory diseases and flu. Wetter winters were also thought to exacerbate the effects of damp already seen among vulnerable people, especially those who smoke.

Lessons Learned

The main learning points were as follows:

- *Identifying the right contacts within the Services was vital to securing the information needed.*
Personal contacts were eventually used to establish Police and NHS representatives and by keeping the Coastguard informed it was possible to re-engage them in the project. In general the amount of calls or enquiries required to identify the most appropriate contact(s) will increase with the size of the organisation.
- *Bespoke visits to each organisation yielded more information.*
Staff spoke freely and we were able to focus in on specific areas or responses, and gave a practical insight into their operations.
- *The Emergency Services were already adapting to climate change.*
Many of their standard procedures covered key areas for future risk and robust, flexible systems were in place. Risks were well understood and some horizon scanning had begun for longer term risks. The Emergency Services were performing at a higher level than they gave themselves credit for under NI 188.
- *Whilst responses were in place these often related to statutory responsibilities and were not labelled as climate change adaptations.*
It is possible that as incidents become more frequent, climate change labelling of risks may begin to become more common.
- *Some risks were deemed to be of a low priority by all Services but other risk ratings varied according to the role each service played in multiagency responses.* Ice and snow and milder, wetter winters were not seen as significant risks to those services engaged, although these may be of a higher significance to the health service (e.g. increasing respiratory conditions etc). Most services agreed that flood, high winds and heatwaves posed the greatest risk.
- *The Local Resilience Forum was highlighted as the best way to engage with all the Emergency Services.* An offer has been made to present the findings of this work to the Forum once fully complete and to explore how best work can progress further with the partners.
- *Each Service was able to offer anecdotal evidence of how climate change was already affecting delivery of their services.* This was very interesting as services were already noticing, adapting and planning for the future, e.g. Fire and Rescue had high volume pumps issued following floods in 2004, Coastguard were beginning to change volunteer training; Police were considering new uniforms and adaptations in new build.



Next Steps

- Closer working links have been established with the Emergency Services and individual contacts have been identified. Ongoing support will be provided as appropriate.
- This work will assist LCC in gaining access to key individuals and working groups within the Emergency Service partners. Further work will follow up the latest NHS/PCT contacts.
- A presentation on the process and findings will be made to the Local Resilience Forum.
- LCC will continue to progress its current programme of work that seeks to take the Authority and its key partners towards Level 4, (implementation, monitoring and continuous review) of previous NI 188 on adaptation.
- It is not yet clear how the effects of the Comprehensive Spending Review and the removal of the National Indicator reporting system will impact on the future delivery of this and other similar work.

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Emergency Services Liverpool City Council

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