National Indicator 188: Planning to adapt to climate change
Environment Agency guidance for local authorities

This guidance explains the help that the Environment Agency can provide for Local Authorities on National Indicator 188. The guidance is divided into five key sections which provide:

- an overview of the in full (LAA) indicator on adapting to climate change (NI 188);
- an overview of how it relates to the Environment Agency's roles;
- ways in which we can support local authorities (LAs) in making progress against this indicator;
- overarching actions we recommend LAs take in making progress against NI 188;
- information on monitoring progress against this indicator and further sources of guidance.

Official guidance notes produced by (UKCIP) aimed at local authorities will be available from late November 2008.

Section 1: Commentary on NI 188

1.1 This indicator is designed to measure how well local authorities are assessing and addressing the risks and opportunities of a changing climate. It covers managing the risks to service delivery, the public, local communities, local infrastructure, businesses and the natural environment. Although it concentrates on the local authority, it also extends to action by members of the Local Strategic Partnership.

1.2 NI 188 is new and can be described as a 'process' indicator - as performance is ultimately measured against success in developing and implementing a climate change adaptation plan. LA progress will be measured against the five levels of performance, graded 0-4, see Annex 1.

The link between NI 188 and the LAA Flood and Coastal Erosion indicator (NI 189)

1.3 There is a separate LAA indicator (NI 189) for flood and coastal erosion risk management. NI 189 is designed to monitor the progress of LAs in delivering agreed actions to implement strategic, long-term flood and coastal erosion risk management (FCERM) plans.

Section 2: How NI 188 relates to the Environment Agency's role

Delivering our priorities through action on NI 188

2.1 The Environment Agency takes a leading role in limiting and preparing for the impacts of climate change. The focus is to make sure that England and Wales are able to adapt to the changing climate, and particularly the increasing risks of flooding from all sources, coastal erosion, the growing pressures on water supplies for people and the environment and changing climate space for biodiversity.

Section 3: How involved can we be and how we can help LAs make progress against this indicator?

How involved can we be?

3.1 We wish to work collaboratively with local partners to raise awareness of the need and measures by which they can successfully adapt to climate change. We hope that by becoming actively involved in work to deliver this indicator we can help ensure that LAs (and the communities they serve) are better prepared for the risks posed by climate change.

Opportunities to help the LA deliver progress against this indicator:

3.2 We want to seek opportunities to support the delivery of NI 188. We recommend that at an early stage expected actions for each year of the LAA are developed, so we can plan activities and ensure we can contribute to delivering this target. Guidance suggests that in (LSP) partners should

be involved in the work at the earliest stage as possible, particularly where they have a duty to cooperate. We would like to be involved at Level 0 (where the initial plans and visions are developed) as we believe our contribution would be advantageous in shaping work.

3.3Generally we can offer expertise in numerous areas including flooding, water resources, biodiversity, waste and planning. For example we can take a proactive role in contributing to LA working groups, inputting to conferences, workshops and other events to share knowledge and experience. Specific opportunities are highlighted below and further background information on these issues is contained within Annex 2.

Ensuring inappropriate development does not take place

- We offer guidance and resources for local planning Authorities and developers including advice and guidance on strategic environmental assessment, in full (LDFs), monitoring work etc.
- Key to minimizing future risk will be *ensuring that we fully engage operating* and planning authorities to ensure that shoreline management plans (SMP's) and Catchment Flood Management Plans (CFMP's) link to and inform Regional Spatial Strategies (RSS) and Local Development Frameworks (LDF). This will help to ensure inappropriate development does not take place in areas that are at risk of flooding or erosion either now or in the future. LAs now have a duty to ensure LDFs integrate climate change measures, through the sustainability appraisal process.

Exchanging data

We produce maps showing current indicative availability of summer and winter surface and groundwater for England and Wales. This refers to climate change as a factor affecting future demand and supply, though it presents only current availability patterns. If an area is 'water stressed', this can be used by planners to justify higher water efficiency standards in new development. This will help inform a number of levels within the indicator (starting from **Level 0** at the initial baseline identification), by assessing current and future risks (see Annex 1). It can also be used at later levels to develop a comprehensive list of potential climate impacts.

Contact:
Andy Gill (Wessex Area)
Iain Baines (Surface) / Margret Thornley (Groundwater) (Devon and Cornwall Area)

Inputting to Local Climate Impacts Profile

As part of the LA's work on **NI 188 Level 1** (engaging partners and assessing current vulnerability), they may decide to carry out a Local Climate Impacts Profile (LCLIP). This is a resource that LAs can compile so that they better understand their exposure to weather and climate and is a useful tool to improve awareness of climate change. It is often carried out by looking at information which has been reported in the press about certain historical weather events. We can get involved in this by offering expertise to the person conducting the LCLIP e.g. for interviewing and providing personal experience of these extreme weather events. Data could also be provided regarding impacts of the weather event that the Environment Agency holds (e.g. financial costs of flooding). Further information can be obtained by visiting the UKCIP website and in the case studies for Midlands and Lincolnshire, see Annex 4.

Contact:
Nick Lyness (Wessex Area)
Gordon Trapmore (Devon and Cornwall Area)

Floodline Warnings Direct

Although we can not stop flooding, we can help people in areas at risk of flooding be better prepared. We offer our Floodline Warnings Direct (FWD) service to those at highest flood risk. We provide flood warnings to LAs and emergency services that have a role in managing the impacts to people and the environment by responding during incidents and the recovery from floods. This could be used starting at **Levels 0 and 1** to identify baseline and current vulnerability, and future impacts of climate.

LAs also have responsibilities under the Civil Contingencies Act 2004 to promote business continuity. The Pitt Review has called for LAs to encourage the take up of property flood resistance and resilience by businesses. There are a number of documents available from the Environment Agency and other organisations that can help build adaptive capacity and information on reducing flood impacts. These include advice on risk assessment, and practical steps to prevent, or reduce the impact of, flooding in the future. See Annex 2 for further information. These actions could be used in **Levels 2 and 3** as a means of implementing adaptation action.
Contact:
Guy Parker / Paul Hardy (Wessex Area)
John Buttivant (Devon) / Steve Marks (Cornwall)

Biodiversity work
NI 188 states that LAs need to measure their progress in assessing and managing risks and opportunities from a changing climate for the natural environment. This means the potential for impacts on local ecosystems and biodiversity need to be identified.

We make an important contribution to biodiversity in wetland, river and coastal habitats and are the lead partner for certain Biodiversity Action Plan (BAP) habitats and species. Our specialist knowledge and data can, where appropriate, be shared and LA's are encouraged to consider the link between the LAA indicator on biodiversity and NI 188. Using the reports and information contained within MONARCH may be advantageous, as may the continuing use of spatial planning. For example developing habitat corridors to help species move as they adapt to climate change impacts or to incorporate 'green infrastructure' into development plans.
Contact:
D-J Gent / Steve Thomas (Wessex Area)
Mary-Rose Lane (Devon) / Rob Wood (Cornwall)

Water Framework Directive
We will be consulting on our draft River Basin Management Plans from 22 December 2008. You must consider how your work on river basin management and delivery of the 'programme of measures' relates to NI 188. The most relevant measures that will help you reduce the pressure on your waters and increase ecosystem resilience to climate change relate to delivering more sustainable surface water drainage and improving water efficiency by changing public behaviour and the way you shape development. Delivering the actions in the river basin plan will support other work areas and will therefore be useful at all levels of the indicator.
Contact:
Roseanne Broome (Wessex Area)
Dave Trewolla (Devon and Cornwall Area)

Sustainable Drainage Systems
Sustainable Drainage Systems (SUDS) provide an alternative approach to traditional drainage approaches. Examples include rainwater harvesting, permeable paving, soakaways and ponds. The attachment of planning conditions such as SUDS is an effective way of controlling local developments and ensuring they are thinking about adaptation. A number of documents and resources have been developed to advise LA's (and developers) about SUDS. See Annex 2 for further details. SUDS can be used to inform both assessment of adaptation needs and in implementing action, at a **number of levels** within the indicator.
Contact:
Malcolm Brushett / John Southwell (Wessex Area)
Steve Moore (Devon) / Simon Jeffries (Cornwall)

Section 4: Overarching actions we recommend LAs take in making progress against NI 188.

4.1 Flood risk
We want to see Local Planning Authorities (LPAs) increase their understanding of what future levels of flood risk will be as a result of climate change and to take action now to

adapt and prevent flood risk increasing and actually reduce it wherever possible. Our key flood risk recommendations, which are linked to NI 188's key performance levels, are set out below:

Each LPA is required by PPS25 to undertake a Strategic Flood Risk Assessment (SFRA), to identify the level of risk and nature of flood risk, both now and in the future accounting for climate change.

- Undertaking and completing a level 1 SFRA and, where appropriate, a level 2 SFRA which we deem to be of adequate scope and quality would achieve a Level 1 rating in NI 188.
- Translation of an SFRA's findings into LDF policies that steer development away from flood risk areas would achieve a Level 2 in NI 188, as would incorporation of SFRA results into Sustainability Appraisals etc.
- Production of supplementary planning guidance on flood risk or initiatives to address and reduce flood risk, e.g. for regeneration schemes or implementing the Government's Making Space for Water theme, would achieve a Level 3.
- Delivery of such initiatives, SPGs (in full) etc alone or as part of an overall climate change adaptation action plan would achieve a Level 4.

Traditional flood defences are not the only way to manage flood risk. Other measures include:

1. flood awareness and flood warning to improve people's understanding of flood risk, their preparedness and their response to flood events;
2. improving the resistance or resilience of new and existing buildings to flood risk.

These form adaptation responses relevant to Level 1 of NI 188, with the development and implementation of these via specific actions achieving higher levels within NI 188. When considering activity relating to flooding, LAs should also be aware of the relationship between NI 188 and NI 189 on Flood and Coastal Erosion Risk Management.

Contact:
Malcolm Brushett / John Southwell (Wessex Area)
Cherry Herbert (Devon) / Jim Garland and Brett Grosvenor (Cornwall)

4.2 Surface Water Management Plans (SWMP's)

Flooding can arise from other sources than just rivers or the sea. More severe rainfall events as a result of climate change are likely to increase the risk of surface water flooding. SWMPs are an existing tool that local planning authorities can use to assess and plan for how surface water will be managed in their areas (PPS25 Practice Guide). **LAs are best placed to lead on the production of SWMPs. We want to see these taken up more widely and where the risk is greatest.**

Contact:
Brian Richards (Wessex Area)
Iain Baines (Devon) / Frank Newell (Cornwall)

4.3 Water Cycle Studies

Water Cycle Studies provide a strategic framework, drawing together interested parties and plans associated with flood risk, water supply and water quality. This provides an overview of environmental and infrastructure needs and helps facilitate a coordinated approach to providing for development needs in a cost effective way. **We would like to see these taken up more widely, ensuring this coordinated approach to water at the local level.**

Contact:
Fran Walker (Wessex Area)
Cherry Herbert (Devon) / Brett Grosvenor (Cornwall)

4.4 Biodiversity

Recommendations for LA action in addressing biodiversity in the context of a changing climate are shown below.

- To understand the potential impacts of climate change and how these can be mitigated or prepared for requires an understanding of the baseline and projected climate change. The latter should come with in full (UKCIP08). The former is reliant upon a number of organisations and individuals records over differing timescales. Local Environment/Biodiversity records centres hold this data. The National Biodiversity Network contains many species and wildlife sites datasets that have been submitted by Local Record Centres and can be used to help understand the baseline.
- In order for the new in full if we've not had this before (LDFs) to be judged sound, government recommends they should be based upon current up to date information. In full if we've not mentioned this before (PPS9) states 'Development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas. These characteristics should include the relevant biodiversity and geological resources of the area'.
- We believe that updated surveys of local sites could be used as evidence that LAs are 'preparing' for climate change and gathering information to inform plans to protect and enhance biodiversity.
- Green Infrastructure Mapping Projects will not only improve a LAs understanding of local biodiversity, but also help them to identify how different habitat patches are linked (or more importantly isolated). In order for biodiversity to adapt to a changing climate, it is important that species are allowed to migrate to more hospitable climate spaces. LAs should allow for this within their LDFs through habitat creation and in full (GI), and plan growth accordingly. Implementation of GI measures will demonstrate progress towards NI 188.

Contact:
D-J Gent / Steve Thomas (Wessex Area)
Mary-Rose Lane (Devon) / Rob Wood (Cornwall)

Further information and references to assist with adaptation action are included in Annex 2.

Section 5: Monitoring progress against this indicator and further sources of guidance

5.1 Who assesses performance in achieving this indicator?

Performance is 'self-assessed' by the LA. However, the Environment Agency may have a role in commenting on this. We recommend that this is agreed with the LA, particularly where we expect to have a role in contributing to delivery against the indicator based target. The Audit Commission may also seek our views as part of their Comprehensive Area Assessment.

5.2 Further sources of advice and support

The Environment Agency/LGA/UK CIP report '*Be aware, be prepared, take action*' guide to integrating climate change adaptation strategies into local government.

Further explanation on this indicator is available from the Department for Environment, Food and Rural Affairs (Defra)
Defra will also release further guidance on this indicator written by UKCIP in late November 2008. For full details of the technical definition of NI 188 please see the guidance

General approaches to climate change adaptation, including risk management, impacts studies and vulnerability assessments are led by the UK Climate Impacts Programme,

The South West Climate Change Impact Partnership is also providing advice and guidance on this indicator.

Case studies to illustrate what can be done are contained in Annex 4.

Annex 1 Overview of Climate Change Adaptation Indicator Performance Levels

Level 0: Baseline:
The LA has begun the process of assessing the potential threats and opportunities and has agreed the next steps to build on that assessment.

Level 1: Public commitment and prioritised risk-based assessment:
The LA has made a public commitment (e.g. signed the Nottingham Declaration) to identify and manage climate related risks. This has been communicated to internal staff and partners and next steps have been identified in addressing these risks.

Level 2: **Comprehensive risk-based assessment and prioritised action in some areas:**
The LA has undertaken a comprehensive assessment of the risks and developed possible adaptation responses. It has started to incorporate adaptation responses into council strategies, plans, partnerships and operations, and has begun implementing adaptive responses in some priority areas.

Level 3: Comprehensive action plan and prioritised action in all priority areas:
The Authority has embedded climate impacts and risks across council decision making. It has developed a comprehensive adaptation action plan to achieve existing objectives set out in council strategies, investment decisions and partnership arrangements and is implementing appropriate adaptive responses in all priority areas. This includes leadership and support for in full if we've not had before (LSPs).

Level 4: **Implementation, monitoring and continuous review:**
The LA and LSP are implementing the comprehensive adaptation action plan across the LA area. There is a robust process for regular and continual monitoring and review. The LA and LSP are taking appropriate adaptive responses.

Annex 2 Further information and references resources for action on climate change adaptation

Exchanging information

See http://www.environment-agency.gov.uk/subjects/waterres/1341275/1688901/?lang=_e. Rainfall and river flow, reservoir information, groundwater recharge information etc both currently and in the past can be found at http://www.environment-agency.gov.uk/subjects/waterres/457898/?version=1&lang=_e

Surface Water Management Plans

Our response to Defra's Improving Surface Water Drainage (www.environment-agency.gov.uk/ourviews/1876673/2035493/?version=1&lang=_e) outlines our view on SWMPs as a developing policy area.

SWMPs can help with climate change adaptation by bring multiple benefits to flood risk, water quality and amenity/biodiversity. SWMPs have links with managing the risks identified in an authorities strategic flood risk assessments and showing that a Local Development Framework is addressing drainage issues. SWMPs will also assist with local authorities sustainable communities and green infrastructure objectives. Defra are producing guidance in autumn 2008.

SWMPs will help manage local flood risks from watercourses, drains and sewers by coordinating the activity of partners in three delivery areas: new development and urban design, preparing for emergencies and investment in maintenance and capital improvements. SWMPs will be produced in a partnership of local authorities, water companies and the Environment Agency. The SWMP partnerships will agree the most appropriate option, which could include: planning policies, development control, engineered solutions, asset maintenance regimes, resistance and resilience measures, and incident response.

Sustainable Drainage Systems

These systems endeavour to mimic the natural movement of water from a development, reducing flood risk, improving water quality, providing ecological benefits and often providing attractive features that can make towns and cities more desirable places to live in and enhancing the quality of life in the face of climate change. This approach helps adapt the area to more extreme weather events.

Resources:
These are suitable for use by both development control and planning liaison at the area level.

- CIRIA's SUDS website www.ciria.org.uk/suds which includes the SUDS manual, guidance for developers etc, all free to download.
- Information about SUDS and guidance from us can be found at http://www.environment-agency.gov.uk/business/444304/502508/464710/?version=1&lang=_e
- Guidance on soakaway design is available from the Building Research Establishment www.bre.co.uk/
- www.ea-training.org/courses/suds can be used by Environment Agency or given to LA's to further their knowledge on SUDS.

http://www.pipernetworking.com/floodrisk/index.html?lang=_e for the Environment Agency's Flood Risk Standing Advice for England. This advice has been produced to assist LPAs to make decisions on low risk planning applications where, whilst flood risk is an issue, there is no need to consult us directly for a bespoke response. The standing advice also sets out those higher risk developments on which we are a statutory consultee on development and flood risk where we need to be consulted directly by Local Planning Authorities. The standing advice also provides advice for applicants and agents on the requirements for flood risk assessment (FRA) for both low and higher risk developments.

Adaptation action/building resilience
There are a number of documents available from Environment Agency and other organisations that can help build adaptive capacity and information on reducing flood impacts. These include advice on risk assessment, and practical steps to prevent, or reduce the impact of, flooding in the future. Resources**:**

- Preparing for emergencies - www.preparingforemergencies.gov.uk
- CIRIA: www.ciria.org/flooding
- Association of British Insurers (ABI): fact sheet on Flood Resilient Homes http://www.abi.org.uk/Bookshop/default.asp
- Department of Communities and Local Government: 'Preparing for Floods' document http://www.planningportal.gov.uk/england/government/en/4000000001331.html
- Large number of Environment Agency flood resistance documents, http://www.environment-agency.gov.uk/subjects/flood/826674/830330/?lang=_e
- Flooding – minimising the risk. Your Caravan/Camping site is in a flood risk area. Practical advice on keeping you and your visitors safe in a flood. Contact Tel. 0870 850 6506 Email: enquiries@environment-agency.gov.uk

Flood resistance and resilience has also been investigated by Government in the Making Space for Water programme - http://www.defra.gov.uk/environ/fcd/policy/strategy/rf1rf2.htm

Water Cycle Studies
More information about water cycle studies can be found at http://www.halcrow.com/wcs%5Fguidance/

Further information and references to assist with adaptation action (all indicator levels)

- **Water Neutrality in the Thames** Gateway – report looking at how water demand might change, and how it is possible to keep total demand for water neutral between 2005 and 2016. http://www.environment-agency.gov.uk/subjects/waterres/287169/1917628/?lang=_e
- **Your home in a changing climate** – a report to inform and promote adaptation of existing houses for future climate. This has an emphasis on water conservation, drainage and flood risk. http://www.london.gov.uk/trccg/docs/pub1.pdf
- **ESPACE project** The ESPACE (European spatial planning: adapting to climate events) project was a four year programme of work funded by the EU's Interreg Programme, and included the Environment Agency as a partner. The project found that existing spatial planning frameworks are poorly developed to minimise the risk of climate change. Robust spatial planning has a crucial part to play and ESPACE aims to tackle this problem by ensuring that adaptation strategies are incorporated into spatial planning systems. As part of the project, water resource maps which factor in both future climate change and proposed housing and population growth figures were produced for the South East Plan. In addition to practical examples of water storage strategies 'in the field', the models offer procedures to facilitate implementation and an emphasis on collaborative decision-making. The approach is broadly transferable to UK land use planning and climate change adaptation. A climate change guide for planners was also produced. See www.espace-project.org
- **The Code for Sustainable homes** aims to increase the environmental performance of homes, above building regulations. Compliance will raise awareness with householders, improve water efficiency and management of surface water run-off in new homes. http://www.planningportal.gov.uk/england/professionals/en/1115314116927.html

Inputting to Local Climate Impacts Profile (LCLIP)
http://www.ukcip.org.uk/index.php?option=com_content&task=view&id=278, and in the case studies for Midlands and Lincolnshire, see Annex 4.

Annex 3 Local Authorities who have adopted NI 188 within their LAA.

Local Authorities who have adopted NI 188 as one of their 'top 35' or nationally designated indicators:

- Northumberland
- North Tyneside
- Gateshead
- Durham
- Darlington
- Hartlepool
- Stockton
- Middlesbrough
- Bury
- Lancashire
- Liverpool
- Rochdale
- Sefton
- Warrington
- Wigan
- Kirklees
- Leeds
- Sheffield
- Derbyshire
- Leicestershire
- Northamptonshire
- Lincolnshire
- Rutland
- Walsall
- Worcestershire
- Solihull
- Warwickshire
- Cambridgeshire
- Essex
- Luton
- Norfolk
- Peterborough
- Southend-on-Sea
- Suffolk
- Thurrock
- Brent
- City of London
- Islington
- Richmond upon Thames
- Sutton
- Wandsworth
- East Sussex
- Hampshire
- Isle of Wight
- Kent
- Oxfordshire
- Windsor and Maidenhead
- Dorset
- Poole
- Somerset
- South Gloucestershire
- Bournemouth
- Gloucestershire
- North Somerset
- Wiltshire
- Isles of Scilly

Local Authorities who have adopted NI 188 as one of their 'locally determined' or 'non-designated indicators':

- Blackburn with Darwen
- Bolton
- Oldham
- Salford
- Barnsley
- Doncaster
- York
- Leicester
- Nottingham
- Birmingham
- Kingston upon Thames
- Portsmouth
- Reading
- Devon

Annex 4 Emerging case studies

Local Climate Impact Profiles in the East Midlands

Supporting councils with climate change adaptation in Local Area Agreements (NI 188) and Nottingham Declaration commitments

Overview

The Environment Agency was keen to support East Midlands councils in getting started with adaptation, particularly the nine LAA lead councils, in order that local and regional government can begin to move forward more systematically on this important agenda.

The Local Climate Impact Profile (LCLIP) project will take place within each of the nine LAA areas (Derbyshire, Nottinghamshire, Lincolnshire, Leicestershire, Northamptonshire, Rutland, Nottingham, Leicester and Derby). We helped UKCIP run a regional LCLIP workshop in order for all the partners to work out a collective approach, methodology and project plan.

Nine recent graduates have been recruited via *Studentforce for Sustainability* and placed within each of the nine councils in order to carry out the initial LCLIP. Our Head Office Information Services Unit has agreed to contribute after the initial media trawl which will help the students consolidate the evidence of what weather event happened when, what kinds of impacts/incidents this created, what the consequences were and for whom (e.g. residents, businesses and agencies).

Undertaking a series of LCLIP exercises simultaneously enables councils and regional bodies to learn from one another during the process. The other key benefit is the development of a regional picture of vulnerability as part of the East Midlands Programme of Action on Climate Change, which in turn will help either support or initiate work on climate change adaptation across the region.

Background

A Local Climate Impact Profile (LCLIP) is a study of vulnerability to extreme weather in the recent past, focusing on its impacts on a council and its community. The concept was originated by the UK Climate Impacts Programme (UKCIP) and was piloted in Oxfordshire in 2007. Using a paid student placement over a 10 week period, the County Council's Environment Team was able to record extreme weather events over the last decade and explore how each of these had impacted upon its services, using techniques that included media trawls and interviews with the service managers concerned.

Examples included schools having to close as a result of flooding or during exceptionally hot weather and road surfaces melting and needing repairs. The resulting report was able to identify a conservative estimate of the costs to the council (much of which was unplanned expenditure), a range of affected services and a number of 'critical thresholds', e.g. the temperature at which a certain school would need to close because internal conditions became too difficult for teaching and learning.

The report to senior management helped to get climate change adaptation on to the Council's agenda, by flagging it up as a cost and risk issue. It was found to be a good way of starting off a process of internal debate about what kinds of adaptive measures would need to be taken in order to make the council more prepared for future such weather events. UKCIP scenarios indicate that floods, heat waves, storms and other such events are likely to become more frequent and more severe as the climate continues to warm over forthcoming decades.

Following a dissemination workshop in July 2007, a number of other councils embarked on similar LCLIP exercises, including Worcester, Aylesbury Vale, Devon, Kent and Leeds. All report similar benefits about revealing some baseline type information through a short intensive process of research and interview. Those who are intending to commit to the use of NI 188 in their Local Area Agreement (LAA) have found this a particularly helpful first step.

UKCIP is now reflecting this developing experience within the new version of the Nottingham Declaration Action Pack (NDAP) where the LCLIP methodology is recommended as part of the process of getting started. The Defra definition for NI 188 refers to NDAP as a principal source of advice and this new version of NDAP will be launched in April to coincide with the beginning of the next round of three year LAAs.

What happens after an LCLIP process?

There is little experience so far in embedding adaptation into mainstream council processes and the NDAP guidance on this is hence somewhat theoretical. Discussions at the January 2008 LCLIP workshop in Oxford with Devon and Lincolnshire County Councils have identified Emergency Planning Officers and Business Continuity Officers and local and regional resilience forum as well placed potential partners for the development and future use of LCLIPs. The statutory framework resulting from the Civil Contingencies Act 2004 requires all councils to develop and maintain corporate and community risk registers, where one of the areas of preparedness for specific emergencies is 'severe weather, floods and drought'. This framework could offer one of the most logical ways of taking forward climate change adaptation within local authorities.

The benefits to the councils involved include:

- Developing an understanding of their community's **vulnerability to extreme weather** and the resultant impacts on their services and operations;
- Subsequently, helping to make their council and community **more resilient** to the impacts of a changing climate;
- Helping them to make progress on **NI 188**, where they have included this indicator within their **Local Area Agreement**, or as a supplementary local indicator;
- Helping them to make progress against their public commitments on climate change adaptation as a signatory to the **Nottingham Declaration;**
- **Demonstrating leadership** on climate change adaptation to their LSP partners;
- **Piloting good practice**, by being part of the first region-wide application of this methodology.

What support is on offer to enable the council to participate in the project?

- A **short term graduate placement** has been recruited and inducted for participating councils by Studentforce and funded by in full (EMRA) and in full (GOEM) (provisionally between May – August).;
- That person will undertake research into extreme weather and identify how it has affected your community and your council. This will be qualitative and quantitative and provide the council with an estimate of **overall costs** as well as capturing the **service responses** to weather events;
- This information will be recorded in a database and from it a **summary report of findings and recommendations** will be produced, which will be of interest to senior management and potentially to elected members and LSP partners.

Sue Brothwood Climate Change Principal Officer – Midlands
Andy Bailey Senior External Relations Officer - Anglian
15 July 2008

Working in partnership with local authorities on climate change – Lincolnshire County Council

Initial engagement started with negotiations for Lincolnshire's 1st Local Area Agreement in autumn 2006. This resulted in the formation of the Lincolnshire Environment and Climate Change Action Partnership (LECCAP) whose initial task was to identify potential environmental priorities for the LAA. Climate change was one priority – initial targets included all districts signing the Nottingham Declaration. We supported a high profile signing event (where several full CEOs' and council leaders signed the declaration) as panellists on a debate following a screening of an inconvenient truth to officers and members of the local authorities.

Following on from this a Nottingham Declaration task group was established – this brought together nominated representatives of all councils with the objective of delivering the commitments made by signing of the declaration. We pulled the group together and then handed leadership over to LCC. The group shares experiences, pools knowledge, supports each other and identifies areas for joint working. Experience varied from those with an existing carbon management plan to those whose experience was fuel poverty or flood risk and development.

We are now just into the delivery stage of LAA2. LECCAP played a role in identifying priorities and will play a role in delivery of targets. Both climate change mitigation and adaptation have been included within the LAA and we will play a role in the delivery of both through LECCAP and the LAA Priority Group (Climate Change). Adaptation will be our focus and we will help to deliver the NI188 indicator through the following:

- Local Climates Impact Profile: Lincolnshire is a very large and diverse county with urban, rural and coastal districts facing different climate change pressures. We (along with the county and some district councils through LECCAP) have agreed to provide additional funding to extend the LCLIP to six months to enable greater focus at a district level. This will allow for a more informed discussion with heads of service etc. We may also be needed to provide additional evidence through interview or mapping.
- Coastal Study – the in full RSS8 Enquiry in Public resulted in a moratorium on new major development (not including granted permissions) in the Lincolnshire coastal authorities while a multi agency coastal study focused on delivering sustainable development along the Lincolnshire Coast (taking into account climate change) is produced. We are partners on this study along with the county and district authorities, EMDA and GOEM.
- Catchment Flood Management Plans / Shoreline Management Plans /Humber Strategy – since the white paper on strong and prosperous communities, the local government and health act, increased partnership work and engagement through both the LSPs and the LAA the county council have taken a more proactive role in leading the districts on the issue of flood risk (part of the pathfinder process for improved 2 tier local government). NI 189 (flood risk management and coastal erosion) has been included in LAA2 as a local indicator. This provides good opportunities for us to gain local authority support in the implementation of relevant policies which will help adapt the county to climate change, for example realignment at Donna Nook. We will be leading on this indicator.
- Lincolnshire Assembly – this is the Local Strategic Partnership for Lincolnshire. They are currently producing their Sustainable Community Strategy for Lincolnshire. Flood Risk is a priority. We are a member of the Assembly and recently our Area Manager supported a flood risk debate as key note speaker on the coastal study. There are proposals that the Assembly acts as the umbrella body for all things related to flood risk and Lincolnshire. We support the partnership approach of this proposal but our support will depend upon the precise nature of the proposals.
- Water Cycle Strategies / Integrated Urban Drainage Study – we are working with those local authorities bidding for growth point status on the 1st stage of assessing the ability of environmental infrastructure to facilitate the proposed levels of growth.
- Green Infrastructure projects – we are working in partnership with LCC and others on the following:
    - Lincolnshire Coastal Grazing Marshes – restoration of intensive arable to traditional grazing marsh involving raising of water levels. An important aspect of this project is

providing additional incentive for farmers to enter into a Higher Level Stewardship Scheme with resulting biodiversity and water resource benefits.
    - Coastal Country Park – linked through, but broader than the grazing marshes project. This project aims to provide high quality facilities for visitors and better protection for wildlife, by creating enhanced, extensive and interconnected nature reserves and wildlife areas.
    - Sub Regional Country Park for Lincoln – gaining environmental benefit out of the proposed and expected minerals extractions needed to support projected growth in Lincolnshire by developing a green infrastructure network which will provide multiple benefits including flood risk, biodiversity, and water resources.
    - Green Infrastructure Master Plan for the Wash – identify what is already there, what the gaps are and opportunities for improvement. The area that the GIMP covers includes parts of the coastal communities where growth, planning and climate change are a major issue.
- Groundwork Climate Changing Programme – this programme works with local communities to raise awareness of climate change and produce a green action plan. There are a number of projects running in Lincolnshire which we input through membership of the steering group. We are also funding a project at Manby (rural, ex military brownfield) where we have placed a specific focus on adaptation.
- Provision of publications, scientific research and guidance that can support LA officers in adapting their own services and influencing their own superiors or politicians.

Other work by LECCAP:

- Produced a simple carbon calculator for use by all partners to raise awareness of individuals footprints (http://www.bestfootforward.com/leccap/). This was launched in time for this years World Environment Day and a number of partners used it to raise awareness internally.
- Lincolnshire County Council are producing a county climate change strategy. The in full ND task group are supportive of a county wide approach with each district producing their own version to the same format. It is accepted that adaptation needs to be addressed and as partners we will be consulted – our focus will be on getting this aspect right.
- Contributing to the production of the community risk register – discussing with emergency planners how to incorporate climate change. The LCLIP will help with this.
- Supporting sustainable schools – we are hoping to contribute to a project which helps conserve water at schools through the provision of water butts.
- Sustain NK (http://www.n-kesteven.gov.uk/sustainnk/section.asp?catId=1060). Both LCC and ourselves have supported this project with attendance at events and provision of literature.
- Supporting the consultation on the East Midlands Plan of Action through an event in Lincoln.

Alongside this separate influencing has been happening with the Local Strategic Partnerships and climate change has been embedded as a priority within all sustainable community strategies as they have been revised. The provision of evidence on what the issues are and why they are important for each district was important in getting this accepted. Again the LAA was an important tool in achieving this.

Lessons learnt

- It is important to note that the partnership approach, and developing a network of relevant people at the right organisation working together on common objectives has played a key role. A greater focus and increased leadership from LCC, coupled with central government direction for two tier authorities to work better together has decreased the political barriers to working together at this level.
- Use our name as the leading environmental organisation in England and Wales and named partner on LAAs to open doors.
- Involve our natural partners – Natural England, wildlife trusts etc. Between us we have the knowledge, the authority and the passion to successfully influence. Our collective voice carries more weight.

- Provide evidence why climate change is an issue at a local level – opportunities as well as threats.
- Work with others to provide solutions. Words and evidence are essential but we also need to put our money where … and look for practical partnership projects that can be supported either through officer time, provision of information or funding.
- Promote the work we do internally (our own targets can set a benchmark) and externally. Why re-invent the wheel?

Andy Bailey
Planning and Corporate Services Technical Specialist, Anglian Northern
July 2008

Annex 5 Information included for Local Authorities

A number of summaries have been produced by the Environment Agency explaining our role in climate change. The summaries that have been sent to Local Authorities are as follows:

Limiting and Adapting to climate change
Strategic Environmental Assessment
Adaptation by Design
Your home in a changing climate
Water resources science
Climate change in the Uplands
Flood risk science
Farming futures
The UK Marine Climate Change Impacts Partnership
The Wetland Vision for England
Local Authorities: Climate change adaptation indicator
UKCIP08: new climate change scenarios
Water quality
Water resources
Waste
Flooding and coastal erosion
Land quality
Monitoring, assessment and reporting
Freshwater ecology
The Water Framework Directive
Recreation and navigation

Annex 6 Local Authorities and Environment Agency areas and contacts

Local Authority	Contact Name	Email	Tel	188 Status	Environment Agency Area	Environment Agency lead
B&NES	Jane Wildblood	jane_wildblood@bathnes.gov.uk	01225 477685	-	Wessex	Andy Gardiner
Bournemouth BC	Lee Green (Mr)	Lee.Green@Bournemouth.gov.uk	01202 451144	Designated	Wessex	Ron Curtis
Bristol CC	Alex Minshull (Mr)	alex.minshull@bristol.gov.uk	0117 9224453	-	Wessex	Jim Flory
Cornwall CC	Alison Ward	alison.ward@ncdc.gov.uk	01208 893169	-	Devon and Cornwall	Gordon Trapmore
Devon CC	Ian Bateman	Ian.bateman@devon.gov.uk	01312 383390	Local	Devon and Cornwall	Martin Weiler
Dorset CC	Kate Hall	k.m.hall@dorsetcc.gov.uk	01305 224774	Designated	Wessex	Nick Lyness
Gloucestershire CC	Pete Wiggins	peter.wiggins@gloucestershire.gov.uk	01452 425189	Designated	Midlands	Stuart Gamble (or Mark Bowers)
North Somerset	Nicola Builder	Nicola.Builder@n-somerset.gov.uk	01275 884472	Designated	Wessex	Andy Hicklin
Plymouth CC	Jackie Young	jackie.young@plymouth.gov.uk	01752 304220	-	Devon and Cornwall	Bruce Newport
Poole BC	Hilary Evans	h.evans@poole.gov.uk	01202 633067	Designated	Wessex	Ron Curtis
Somerset CC	Mike Fackrell	MJFackrell@somerset.gov.uk	01823 355310	Designated	Wessex	Emma Baker
South Gloucs C	Jane Thompson	jane.thompson@southglos.gov.uk	01454 863870	Designated	Wessex	Nick Gupta
Swindon	Lyn Forrester	lforrester@swindon.gov.uk	01793 463197	-	Thames	Nikki Richards
Torbay BC	Douglas Eltham	Douglas.eltham@torbay.gov.uk	01803 207750	-	Devon and Cornwall	Paul Sadler
Wiltshire CC	Alan Feist	alanfeist@wiltshire.gov.uk	01225 713305	Designated	Wessex	Craig Fisher
Isles of Scilly	Aisling Hick (Ms)	ahick@scilly.gov.uk	01720 424312	Designated	Devon and Cornwall	Martin Weiler (to be delegated possibly)