



## Stakeholder mapping for climate change adaptation

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# **Stakeholder Mapping for Climate Change Adaptation**

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## Introduction

Eco Cities is a joint initiative between the University of Manchester and Bruntwood, drawing on the expertise of the Manchester Architecture Research Centre, Centre for Urban Regional Ecology and Brooks World Poverty Institute. The project will focus on the response of urban areas to the impacts of climate change, looking particularly at how we can adapt our cities to the challenges and opportunities that a changing climate presents. Eco Cities is an international initiative, and aims to develop a network of partner cities in countries including America, Bangladesh and Japan. This document relates to the Manchester 'node' of the Eco Cities project. The aim and objectives of this element of the Eco Cities initiative are:

*Aim:* To create a climate change adaptation blueprint for Greater Manchester based on the analysis of climate change scenarios and the proposal of appropriate adaptation responses.

*Objectives:* The following objectives relate to the achievement of this aim.

1. *Impacts:* To explore climate change scenarios for Greater Manchester and to identify the possible nature and extent of associated impacts.
2. *Responses:* To develop an adaptation blueprint to address the climate change impacts projected to affect Greater Manchester.
3. *Engagement:* To engage key stakeholders in the development and implementation of the adaptation blueprint and associated responses.
4. *Dissemination:* To disseminate outputs of the Eco Cities project to policy makers, practitioners and academics.

It is important that an appropriate range of individuals and organisations is involved during the Eco Cities project in order to successfully deliver on its aim and objectives. The stakeholder mapping process reported in this document will help facilitate closer stakeholder engagement within Eco Cities. Ultimately, the success of the project relies on the involvement of committed stakeholders with an interest to take forward the adaptation agenda in the region. For this reason, the principal output of Eco Cities, the adaptation blueprint for Greater Manchester, will be developed in association with its end users. Stakeholders encompassed by the Eco Cities network will be actively involved in progressing the wider aims of the initiative. It is necessary to move beyond the position where stakeholders are merely passive receivers of information, to where they become engaged in a proactive way.

This document is intended to identify and provide an overview of organisations with a 'stake' in climate change adaptation in Greater Manchester. This includes discussion of organisations from beyond the city-region, which nevertheless have an important influence over the shape of the local agenda. The document begins by highlighting why the identification and involvement of stakeholders is important for Eco Cities, and highlights different forms of engagement that will be utilised.

## Stakeholder involvement within Eco Cities

Within Eco Cities, the term ‘stakeholder’ is defined as:

*‘A group or organisation with an interest, statutory responsibility, or practical role in developing and implementing climate change adaptation strategies and related initiatives.’*

The involvement of relevant stakeholders within Eco Cities is central to the success of the project. Ultimately, the core objective of Eco Cities, as reflected in the adaptation blueprint for Greater Manchester, is to strengthen the capacity of stakeholders in the city region to respond to climate change impacts. This will encompass, for example, awareness raising events, targeted scientific research, the production of guidance and the analysis of case studies. The project will not, in itself, deliver adaptation responses on the ground. However, there may be actions taken as a direct result of Eco Cities that modify Manchester’s urban areas with the goal of adapting to climate change (e.g. installing green roofs or planting street trees).

As Eco Cities is concerned with building adaptive capacity, it is crucial that an appropriate and relevant range of stakeholders are involved during the project in order to ensure the maximum utility and potential effectiveness of Eco Cities.

There are a range of benefits associated with stakeholder engagement in this context. They include:

- *Learning and awareness raising:* Involving stakeholders in the project can help to raise awareness of the goals of Eco Cities. Identifying stakeholders also provides an audience for the subsequent dissemination of project outputs. Further, Eco Cities has an important role to play in raising awareness of stakeholders concerning the potential impacts of climate change in Greater Manchester, and the types of adaptation response that are available to address these impacts.
- *Enhancing legitimacy:* Eco Cities is focused on raising adaptive capacity around the response to climate change impacts in Greater Manchester. The adaptation blueprint will form an important element of this effort. By involving stakeholders during the development of the blueprint, its legitimacy as a valuable document to help guide decision making will be enhanced by helping to create an output that more closely meets the needs of its end users. Increasing the transparency of the processes leading to the creation of the Eco Cities blueprint is also important in this respect. This will also encourage the blueprint to have a life beyond Eco Cities through encouraging a sense of ownership for the document.

- *Building stakeholder networks:* It is possible that the Eco Cities initiative could act as a forum for stakeholders interested in climate change adaptation in Greater Manchester and the Northwest region. Bringing stakeholders together in this way can help to generate consensus around the need to act to address climate change impacts; an important first step in the adaptation process. This is particularly important for adaptation which concerns anticipatory action to respond to future threats, the nature of which are not entirely certain. Building consensus around adaptation strategies is therefore vital.

Ultimately, Eco Cities is a decision aiding project. Stakeholders such as local authorities and developers must take decisions to act in order to bring about changes to the form and function of city that will strengthen its capacity to respond to the impacts of climate change in the future. Eco Cities, through bringing stakeholders together and encouraging the development of networks, can play an important role in this process.

- *Resource savings:* Through helping to develop collaborative networks, Eco Cities can exploit and generate synergies and resource savings. For example, the project may reduce the need for capacity building exercises around climate change adaptation in the future. Utilising the knowledge and experience of a wide range of stakeholders during the preparation of the blueprint could generate time and money savings regarding adaptation activity in the city-region. For example, there are real potential costs savings to be made around aiding the implementation of National Indicator 188 on adapting to climate change, which is part of the government's local authority performance review framework. Encouraging and supporting a collaborative adaptive response, both within and between sectors, makes sense in resource terms.
- *Strengthening decision making:* Perhaps the most significant outcome of encouraging stakeholder involvement within Eco Cities is the opportunity to strengthen decision making around climate change adaptation. Decisions become 'stronger' when, for example, they meet the needs of a wider range of stakeholders, have more durability, and are easier to implement in practice. The constructive and cooperative dialogue that can be generated through effective stakeholder involvement can lead to the development of stronger decisions relating to adapting the city-region to climate change.

## Stakeholder engagement processes

This document (within Tables 2-9) outlines the key stakeholder organisations and working groups associated with climate change adaptation in Greater Manchester. Eco Cities aims to strengthening relevant policies and strategies in the field of climate change adaptation. The project also looks to facilitate networking between stakeholders involved in this agenda. Several approaches will be utilised in order to encourage stakeholder engagement. These can be broadly categorised into three areas, each of which perform a different function within the project:

- *Active involvement:* The active involvement of stakeholders concerns their direct participation in shaping an initiative and/or its core outputs. In terms of Eco Cities, an example of this concerns the development of a scenario framework to consider different possible futures regarding climate change adaptation in Greater Manchester. The development of scenarios is an act of collective creative visioning around possible future events impacting on the city-region and its capacity to adapt to climate change. Securing a wide range of opinions and perspectives from stakeholders is crucial to this process.
- *Consultation:* Consultation is less intensive, in terms of time and levels of engagement, than active involvement. It refers to processes such as gaining feedback on document drafts, meeting with stakeholders to discuss the project, and developing and analysing questionnaires. Consultation can happen 'online' and may not require face-to-face communication. Consultation helps to set up a two-way flow of information exchange around the project.
- *Information provision:* This relates principally to disseminating information concerning Eco Cities and its key outputs, which will include reports and publications relating to climate change adaptation and the adaptation blueprint for Greater Manchester. This will take place principally through conference, workshops and post/email.

It is clear that there will be different forms of engagement throughout the project using various media. The stakeholder network identified within this report provides the basis for taking this element of the project forwards.

## **Exploring the range of stakeholders involved in Eco Cities**

There is a wide range of individuals and organisations with a 'stake' in adapting to climate change in Greater Manchester. This document explores these in detail. A simple spatial hierarchy is used to categorise stakeholders according to their area of influence and engagement:

- Supra-national (Global, European Union)
- National (UK)
- Regional (Northwest England)
- Sub-regional (Greater Manchester)

Those operating at supra-national and national scales are relevant in terms of their influence over the current and future capacity of the city-region to adapt to the impacts of a changing climate. Stakeholders at these scales will be principally consulted on and informed of the project. However, regional and sub-regional stakeholders are the focus of the practical stakeholder engagement element of Eco Cities, due principally to the Greater Manchester focus of the adaptation blueprint being produced. Aside from consultation and information provision, stakeholders at these scales will be actively involved in the Eco Cities project.

It is important to acknowledge that, when considering climate change adaptation in Greater Manchester, actions of stakeholders the national level, for example, will have a significant bearing on the city-region. Their influence comes in the form of statutory legislation, and through providing guidance and leadership on adaptation issues. Stakeholders at supra-national and national scales are significant in the context of climate change adaptation due to the strategic influence they exert on decision making within organisations and groups working at the regional scale and below. This influence can be both positive and negative. For example, pressure from central government and housing industry lobby groups may lead to the imposition of home building targets that lead to expansion of development on floodplains or in areas prone to risk of future water shortages. This would constrain the adaptive capacity of a city-region. Alternatively, supportive legislation from the European Commission, such as European Directives, may increase the chance of proactive legislation and action at the local level. Understanding governance and decision making structures of organisations operating at these scales is an important element of the project.

At regional and sub-regional levels, stakeholders play a different role. They respond to legislation and guidance set by stakeholders at supra-national and national levels in a locally determined situation. What works for Manchester in terms of adaptation responses will depend on issues including the climate change challenges projected for the city, topographies, demographics and the nature of local governance arrangements. Adaptation responses taken within Greater Manchester will therefore be highly context-specific. These actions will be designed by and impact directly on individuals and organisations within the city-region. Within Eco Cities, stakeholder involvement at regional and sub-

regional levels will therefore focus on engaging with individuals responsible for shaping this agenda, and understanding how these organisation and groups can best deliver effective adaptation responses.

Where appropriate, this stakeholder map splits stakeholders into organisations and working groups. Organisations are included where all or part of their operations are targeted at issues related to climate change adaptation. Working groups are identified in order to highlight particular units, often within these same organisations, whose direct function is to provide guidance and direction on adaptation or related activities.

The stakeholders described within this document (within Tables 2-9) concentrate on those with a direct impact on the adaptation agenda in the form of developing associated policies, plans or programmes, or through making a direct contribution through research, lobbying or development of buildings or infrastructure. Of course, there are many others that exert a significant effect on current and future capacity to adapt in Greater Manchester in more indirect ways. Her Majesty's Treasury, who implement public finance and economic policy, is a good example. Through enacting spending plans and taxation policy, the Treasury have much scope to influence adaptive capacity through releasing funding for flood risk management activities or by providing taxation incentives for climate resilient development for example.

The general public are not specifically identified within this report. Citizens clearly have a major role to play in adaptation to climate change. Many of the impacts of climate change, for example flooding and heat stress, will be felt by individuals. If successful, adaptation strategies designed to address these impacts will therefore be of considerable value to the general public. However, the Eco Cities project focuses on stakeholder groups responsible for developing the adaptation strategies that will be of benefit to the public in the future, and on groups that represent the public such as NGO's and other 'third' sector bodies.

There follows a set of tables which explore a wide range of stakeholders and working groups influencing and working to progress climate change adaptation in Greater Manchester. The tables describe three key issues:

- The role and responsibilities of the stakeholder/working group.
- The key linkages between the stakeholder/working group and climate change adaptation policy and practice.
- An insight into the policies and documents prepared by the stakeholder/working group that relate to adaptation.

Table 1 provides an overview of the organisations and working groups reviewed within the Eco Cities stakeholder mapping process. Figure 1 provides a visual representation of the key stakeholder groups involved in the climate change adaptation field. The roles and responsibilities of the stakeholder groups identified are explored in greater detail within Tables 2-9.



<b>Supra-national stakeholders</b>	Community Forests Northwest
Intergovernmental Panel on Climate Change	Groundwork Northwest
European Commission	Natural Economy Northwest
European Environment Agency	United Utilities
<b>National Stakeholders</b>	NHS Northwest
Office for Climate Change	<b>Regional working groups</b>
Department for Food Environment and Rural Affairs	Regional Strategy Team
Communities and Local Government	Northwest Regional Housing Board
Local Government Association	Northwest Improvement and Efficiency Partnership
Improvement and Development Agency	North West Climate Change Partnership
UK Climate Impacts Programme	North West Climate Change Unit
Commission for Architecture and Built Environment	North West Climate Change Adaptation Group
Association of British Insurers	Climate Change Local Areas Support Programme
Ofwat	<b>Sub-regional stakeholders</b>
Homes and Communities Agency	Association of Greater Manchester Authorities
Royal Town Planning Institute	Greater Manchester Local Authorities
Town and Country Planning Association	Local Authority Local Strategic Partnerships
Home Builders Federation	Visit Manchester
<b>National working groups</b>	Manchester Investment Development Agency Service
Committee on Climate Change	Greater Manchester Chamber of Commerce
Climate Action Support Programme	The Universities
Local and Regional Adaptation Partnership Board	Greater Manchester Integrated Transport Authority
Climate Change Partnership Board	Greater Manchester Police/Authority
<b>National stakeholders with a regional office</b>	Primary Care Trusts
Environment Agency	Greater Manchester Waste Disposal Authority
Natural England	Greater Manchester Fire Service
Forestry Commission	Urban Regeneration Companies
Groundwork	<b>Sub-regional working groups</b>
<b>Regional stakeholders</b>	Manchester Climate Change Agency
North West Development Agency	Greater Manchester Environmental Analysis Network
4NW (formerly the North West Regional Assembly)	Manchester Knowledge Capital
Government Office North West	Association of Greater Manchester Authorities Commissions
ENWORKS	

Table 1: Overview of the stakeholder organisations and working groups included in the Eco Cities stakeholder map.

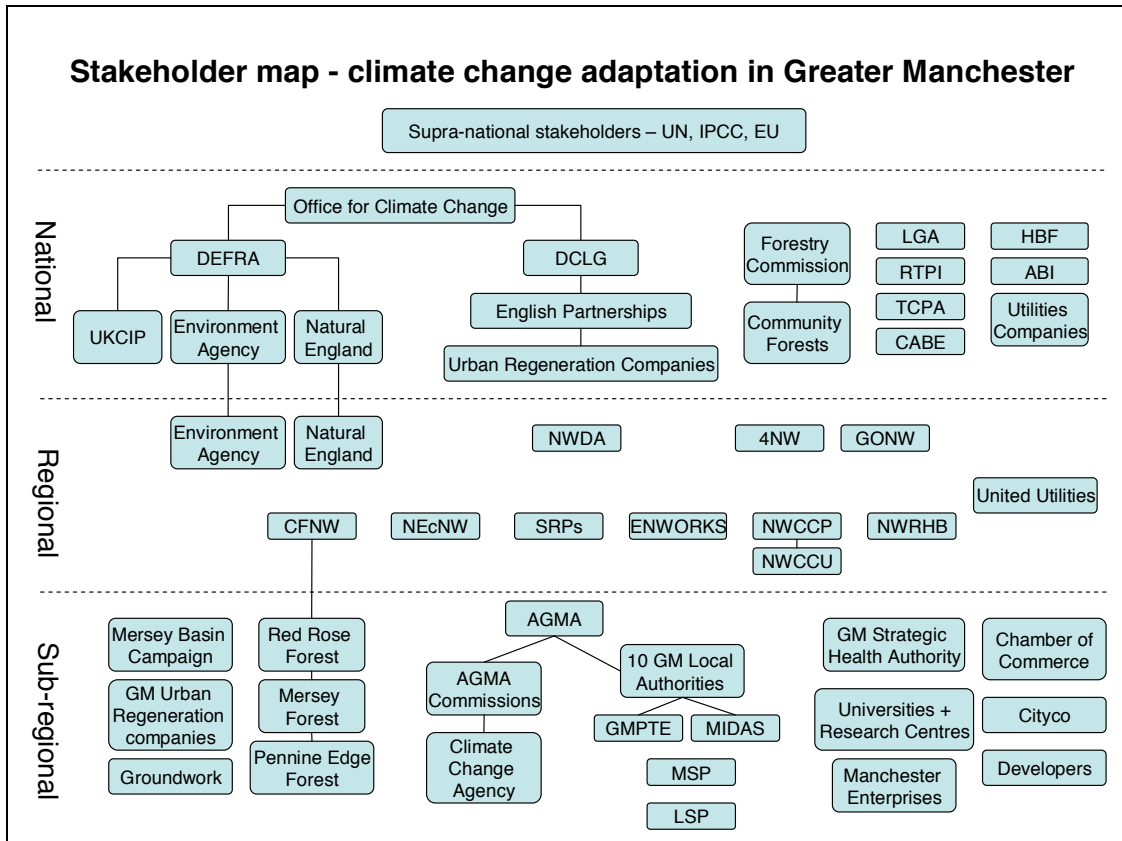


Figure 1: Climate change adaptation in Greater Manchester – stakeholder map

### Stakeholder Map - Acronyms

<ul style="list-style-type: none"> <li>• <b>UN</b> – United Nations</li> <li>• <b>IPCC</b> – Intergovernmental Panel on Climate Change</li> <li>• <b>EU</b> – European Union</li> <li>• <b>DCLG</b> – Department of Communities and Local Government</li> <li>• <b>DEFRA</b> – Department for Environment, Food and Rural Affairs</li> <li>• <b>UKCIP</b> – UK Climate Impacts Programme</li> <li>• <b>LGA</b> – Local Government Association</li> <li>• <b>TCPA</b> – Town and Country Planning Association</li> <li>• <b>RTPI</b> – Royal Town Planning Institute</li> <li>• <b>CABE</b> – Commission for Architecture and the Built Environment</li> <li>• <b>HBF</b> – Home Builders Federation</li> <li>• <b>ABI</b> – Association of British Insurers</li> <li>• <b>NWDA</b> – Northwest Regional Development Agency</li> <li>• <b>4NW</b> – Regional Leaders Forum (formerly Northwest Regional Assembly)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>GONW</b> – Government Office Northwest</li> <li>• <b>NWCCP</b> – Northwest Climate Change Partnership</li> <li>• <b>NWCCU</b> – Northwest Climate Change Unit</li> <li>• <b>SRP</b> – The five sub-regional partnerships within the Northwest region</li> <li>• <b>NEcNW</b> – Natural Economy Northwest</li> <li>• <b>NWRHB</b> – Northwest Regional Housing Board</li> <li>• <b>CFNW</b> – Community Forest Northwest</li> <li>• <b>AGMA</b> – Association of Greater Manchester Authorities</li> <li>• <b>GMPTE</b> – Greater Manchester Passenger Transport Executive</li> <li>• <b>MIDAS</b> – Manchester Inward Agency</li> <li>• <b>MSP</b> – Manchester Salford Housing Market Renewal Pathfinder</li> <li>• <b>GMSHA</b> – Greater Manchester Strategic Health Authority</li> <li>• <b>LSP</b> – Local Strategic Partnership</li> <li>• <b>Cityco</b> – Manchester City Centre Management Company</li> </ul>
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Figure 1.1. Stakeholder map acronyms

Table 2: Supra-national stakeholders

Organisation	Role	Climate change adaptation link	Climate change adaptation related documents/policies
Intergovernmental Panel on Climate Change (IPCC)	The IPCC, established in 1988 by the World Meteorological Society and United Nations Environment Programme, is a scientific panel providing decision makers with objective (policy neutral) information on climate change.	IPCC discusses adaptation extensively, noting that it is necessary to reduce vulnerability to climate change impacts that are already unavoidable due to past emissions.	Numerous documents have been published. In terms of adaptation, the 4 <sup>th</sup> <i>Assessment Report on Impacts, Adaptation and Vulnerability</i> is most relevant recent publication.
European Commission (EC)	The Environment Directorate General's (DG) mission statement is: "Protecting, preserving and improving the environment for present and future generations, and promoting sustainable development." They develop legislation and work for its implementation by EU Member States.	The EC note that even if mitigation efforts are successful, that action will be needed to respond to impacts that are occurring and will continue to do so. Adaptation is defined by the EC as actions taken to cope with a changing climate, which it states are unavoidable and indispensable.	In 2009, the Environment DG released a White Paper on <i>Adapting to Climate Change in Europe</i> , which set out a framework for policy and action at the EU level. The EC aims to promote an integrated and coordinated approach across the continent.
European Environment Agency	The EEA is an agency of the European Union. Its role is to provide independent advice to governments, business, academia and the public on the development and implementation of environmental policy. They aim to improve decision making on environmental issues.	The EEA provides a wide range of information on climate change adaptation issues. These relate to different environmental sectors, for example water and biodiversity, and to particular impacts such as flooding or heat stress.	A range of documents are produced relating to climate change adaptation. These are aimed at providing guidance to decision makers rather than forming direct contributions to legislation and policy.

Table 3: National stakeholders

Organisation	Role	Climate change adaptation link	Climate change adaptation related documents/policies
Office for Climate Change (OCC)	The OCC works across central government departments providing guidance on climate change strategy and policy development. They act as an advocate on this issue within government.	Work has been undertaken on financing adaptation responses in developing countries. There is no evidence of work on climate change adaptation in the UK context, although future studies are likely.	To date, no publications specifically on climate change adaptation have been published by the OCC.
Department for Food Environment and Rural Affairs (DEFRA)	DEFRA is the UK government department responsible for environmental issues. The governments Comprehensive Spending Review (2007) tasks DEFRA with delivering 2 new public service agreements, relating to securing a healthy natural environment for current and future generations, and leading the global effort to avoid dangerous climate change.	One of DEFRA's key strategic objectives is to adapt the economy and society to climate change. DEFRA has developed the <i>Adaptation to Climate Change Programme</i> to coordinate action by the government and public sector. The aim is, by 2012, to develop a statutory National Adaptation Programme. DEFRA's <i>Regional Adaptation Fund</i> supports action and research into adaptation	In 2008, DEFRA published <i>Adapting to climate change in England: a framework for action</i> . This is a key document guiding activity and policy making on climate change adaptation in England. The DEFRA webpage provides further details on adaptation, including case studies showing adaptation in practice.
Communities and Local Government (CLG)	CLG is responsible for the development of government policy and guidance on a wide range of issues relating to the delivery of sustainable communities. Their remit includes sectors including local government, housing, planning and urban regeneration.	Through its influence over the development and use of land, CLG have an important role to play in adaptation. Specific issues such as increasing the efficiency of water use in homes and improving the environmental performance of existing housing will benefit adaptation.	The Local Government White Paper encourages local authorities to take a stronger role in implementing adaptation responses. The Code for Sustainable Homes also addresses adaptation issues, as do several Planning Policy Statements.
Local Government Association (LGA)	The LGA was created in 1997 to be the voice of local government at the national level. They lobby on behalf of local government. 466 local authorities are represented by the LGA.	LGA has a Climate Change Commission that makes recommendations on how the local government response to climate change must be improved. They note that for local authorities, climate change is now the single priority that overrides all others.	In 2007, the Climate Change Commission produced a report entitled <i>A Climate of Change</i> within which recommendations on strengthening local government adaptation responses are described.
Improvement and Development Agency (IDeA)	The IDeA focuses on encouraging the improvement of local government in order that authorities can better serve people and places. IDeA focuses on partnership working, place shaping and addressing cross-cutting issues. The LGA owns IDeA.	IDeA provides support to local authorities and their LSPs on climate change adaptation. In the context of adaptation, the Agency supports the implementation of NI188, and provides information on policy and good practice in this area.	The IDeA website includes case studies on local authority action on adaptation, addressing issues such as flooding and heat waves. IDeA will provide additional support and guidance to local authorities where appropriate.

UK Climate Impacts Programme (UKCIP)	Funded principally by DEFRA, UKCIP is tasked with researching the impacts of climate change and supporting organisations in adapting to inevitable impacts. UKCIP09 will offer probabilistic climate change scenarios for the UK.	Adaptation is central to UKCIP's remit. Their <i>Adaptation Wizard</i> is designed to help users adapt to climate change through assessing vulnerability, identifying adaptation options and creating an adaptation strategy.	Additional adaptation guidance offered by UKCIP includes a database of completed and ongoing adaptation case studies, details of adaptation options and a series of principles of good adaptation.
Commission for Architecture and the Built Environment (CABE)	CABE provides advice to the government on issues relating to architecture, design and open space. CABE work across a range of spatial scales, from regional planning through to providing advice on individual buildings.	The built environment and public space have a significant role to play in adapting to climate change in urban areas. Sustainable design and ecologically focused development strategies championed by CABE will also assist in enhancing future adaptation capacity.	A recent CABE report discusses adapting public spaces to climate change. In addition, a wide range of policy relevant documents addressing many aspects of architecture and design in urban areas link to the goal of strengthening adaptive capacity.
Association of British Insurers	The ABI represent the interests of the insurance and investment industry, and is funded by subscriptions of member companies. Around 400 companies are members, covering 94% of UK domestic insurance. ABI members collectively account for around 20% of investment going into the London stock market.	ABI recognises that adaptation is in the interest of the industries that they represent. This in turn links to protecting people and businesses. The ABI lobbies government for increased attention to adaptation issues, e.g. via legislation and public sector spending plans. They also support research into adaptation.	ABI has a strategy for reducing the threat of climate risks based on improving understanding of risk and projecting people and businesses. Various guidance documents relating to adaptation issues have been released, with a particular emphasis on flooding. Information is also offered to members via conferences.
Ofwat	Ofwat is the economic regulator of the water industry. They are independent of government and water companies, but remain accountable to Parliament. Their objectives are to protect customers, promote value and safeguard the future. They work with the Environment Agency and Drinking Water Inspectorate.	Ofwat are clear that climate change presents a long term threat to the sustainability of the water industry. Hence, Ofwat state that they will regulate the water sector in a way that takes into account the need for adaptation to climate change. A phased approach to adaptation is promoted.	Ofwat has produced a climate change policy statement outlining related impacts on water and sewerage. This document also outlines their policies to address these impacts, and the available responses from water companies.
Homes and Communities Agency (HCA)	The HCA is a non-departmental public agency sponsored by CLG. It is the national housing and delivery agency for England. Programmes (e.g. the Thames Gateway) are delivered via partnership and community engagement, for example through Urban Regeneration Companies.	The HCA works to deliver sustainable communities in existing and new developments, particularly targeting areas of greatest need. The HCA recognise that adaptation to climate change is central to the agenda of promoting sustainable communities.	A website, <i>Demystifying Climate Change</i> , aims to increase understanding of the issue and provide guidance on strategy development and practical action. Guidance aims to share relevant good practice and help implement planning policy.

Royal Town Planning Institute	The RTPI is a professional body representing the planning profession, and has the aim of enhancing the natural and built environment. RTPI aims to influence policy debates on behalf of planners, and undertakes research, education and training on behalf of planners.	In their <i>New Vision for Planning</i> the RTPI argue that climate change should be the overarching priority for planning, and that the balance between environmental, economic and social priorities needs to be reassessed in this light. Planning has a key role to play in delivering adaptation.	The RTPI's guidance <i>Planning to Live with Climate Change</i> is currently in development and will advise planners/stakeholders on the issue. Other guidance on adaptation has been developed to make planning more responsive.
Town and Country Planning Association	The TCPA is an organisation that campaigns to strengthen the planning system and planning practice with the aim of promoting sustainable development. They also aim to promote community involvement in decision making.	The TCPA aims to influence policy relating to the role of planning in responding to the impacts of climate change. The links between adapting to climate change and delivering sustainable communities is acknowledged.	The TCPA publication <i>Adaptation by Design</i> offers guidance and details of practical case studies on how to respond to a range of climate change impacts. Other guidance linking climate change and planning is available.
Home Builders Federation (HBF)	The HBF represents the house building industry. Members account for around 80% of all new homes built annually. The HBF lobby on behalf of the industry across a wide range of government activities on issues relating to delivering housing.	Relating to climate change, recent activity has focused on mitigation issues such as the Merton Rule and the Zero Carbon Homes initiative. Considering the influence that the HBF has over the housing sector, they have an important role to play in the adaptation agenda.	The HBF provide briefings to members on issues relating to climate change. The focus is principally on emissions reduction at this stage, although issues such as flooding are also addressed by the Federation.

Table 4: National working groups

Organisation	Role	Climate change adaptation link	Climate change adaptation related documents/policies
Committee on Climate Change	Created out of the Climate Change Act, the Committee is an independent statutory non-departmental body tasked with advising government on climate change. The Committee has a particular focus on mitigation, and on advising the government on the optimum level of future carbon budgets.	An Adaptation Sub-Committee has been established to provide independent oversight to the governments Adapting to Climate Change Programme and to provide guidance on the UK's climate change risk assessment as required by the Climate Change Act. They will also provide advice to national agencies on adaptation where requested.	The chair of the Adaptation Sub-Committee, Lord John Krebs, was appointed on the 12 <sup>th</sup> May 2009. As it is in its early stages, the sub-committee has yet to release any publications.
Climate Action Support Programme (CASP)	CASP is a multi-partnership support programme running until 31-3-2011, linking to the current round of Local Area Agreements. CASP's key role is in supporting local authorities in delivering on the National Indicators relating to climate change (185,186 and 188)	CASP assist local authorities and their local strategic partnerships in delivering NI188 on climate change adaptation. Partners from the public sector operating under the CASP partnership aim to develop a coordinated cross regional/local approach to adaptation activity.	CASP undertakes workshops and seminars on climate change adaptation, and will disseminate guidance on the subject where appropriate.
Local and Regional Adaptation Partnership Board (LRAP)	The aim of LRAP, which will run from 2008-2011, is to encourage coordinated and consultative responses to climate change adaptation at the local and regional level. Their focus is on collecting and sharing best practice.	The LRAP work programme centres on delivering the CASP climate change adaptation agenda. This includes initiatives such as developing the PACT tool for assessing adaptive capacity, the development of case study guides, and links to implementing NI188.	LRAP is not focused on policy making but on developing partnerships between organisations addressing the climate change adaptation agenda in order to strengthen good practice.
Climate Change Partnership Board	This DEFRA led initiative brings together individuals from the public, private and third sectors. The board provides advice to the government on their Adaptation to Climate Change Programme.	The partnership board has a specific remit to increase engagement on adaptation across sectors (including those that work with the general public) at national, regional and local scales.	As a recently formed partnership group, there has yet to be any publications released by the Board.

Table 5: National stakeholders with a regional office in Northwest England

Organisation	Role	Climate change adaptation link	Climate change adaptation related documents/policies
Environment Agency (EA)	The Environment Agency has a statutory responsibility to work towards improving the environment of England and Wales. The Agency works independently, providing advice and policy guidance to government on environmental issues.	Due to its influence over issues such as flooding, water resources, and coastal management, the Agency has a key role to play in the adaptation agenda. Adaptation Action Plans are being developed to respond to specific impacts.	The Agency has its own Climate Change Adaptation Strategy (2008-2011) which details a strategy to embed the issue within their core activities. The Agency's Corporate Strategy cites adaptation as a key priority for the organisation.
Natural England	Natural England works to conserve, enhance and manage the natural environment for the benefit of current and future generations. They act as the government's advisor on issues relating to the natural environment.	Through the use of land management schemes, investments in adaptation measures will be made by Natural England. These will focus on reducing rainwater runoff and re-connecting wildlife sites. Adaptation can be fostered via a more dynamic approach to conservation.	Natural England (and previously English Nature) has produced a range of reports on climate change in the context of the natural environment. Adaptation responses are also considered within these reports.
Forestry Commission	The Forestry Commission is the government department (non-ministerial) responsible for the protection and enhancement of forests and woodlands in Great Britain. England, Scotland and Wales have distinct approaches to forest management.	The core mission of the Commission is to enhance the value of forests for people and the environment. The link between forests, woodlands and even individual trees and climate change adaptation is identified. Valuing landscapes more holistically could raise the significance of forests for climate change adaptation.	A range of research and position papers are produced on the topic of climate change and forests. Much of this is produced by Forest Research, the research arm of the Commission. Some relate to climate change adaptation and evolving forestry management to respond to impacts such as water shortages.
Groundwork	Groundwork is a registered charity that works to promote sustainable communities through joint environmental actions which improve quality of life. Programmes are delivered in partnership with communities and organisations.	Climate change is a central issue for Groundwork who recognise that it will impact particularly severely on poorer communities. Groundwork promotes the use of green space for adaptation purposes. Policy hooks such as NI188 are addressed.	On an individual project level, Groundwork takes steps to promote climate change adaptation, e.g. through offering guidance on adapting the public realm to future impacts.



Table 6: Regional stakeholders

Organisation	Role	Climate change adaptation link	Climate change adaptation related documents/policies
North West Development Agency (NWDA)	NWDA's key role is to champion economic development and regeneration in the region whilst also improving quality of life of residents. NWDA is ultimately a business-led organisation, but recognises the importance of sustainable development to economic growth.	NWDA's priorities are relevant adaptation. Indeed, a region poorly adapted to future climate change will not be conducive to sustainable economic growth and high quality of life. The North West Climate Change Action Plan (NWCCAP) is led by NWDA, and makes some reference to climate change adaptation.	The key climate change related document (making reference to adaptation) is the NWCCAP. Progress on implementation will be monitored and the plan will be reviewed every 3 years. It is currently going through a 'refresh' to take the plan through to 2012.
4NW (formerly the North West Regional Assembly)	4NW (the regional leaders forum) is the regional planning body for North West England. 4NW is responsible for planning, transport and housing issues within the context of spatial planning. Related policies are outlined with the Regional Spatial Strategy (RSS), soon to be replaced by the Single Regional Strategy.	The current RSS has a strong climate change adaptation element. Further, 4NW is an important partner responsible for delivery of key elements of the NWCCAP. Issues covered by 4NW, particularly planning and housing, are central to the future success of climate change adaptation efforts in the region.	The RSS for the region includes policies that address climate change adaptation both directly and indirectly (e.g. in respect of flooding and water resources). Indeed, one of the overarching regional development principles relates to this issue.
Government Office North West (GONW)	GONW represents central government in the North West region. GONW works to assist the delivery of government policy and programmes on environmental, economic and social issues.	GONW works with partners (including local planning authorities) to ensure that climate change policy from central government is embedded into policies and strategies. Member of NWCCU, which is tasked with delivering the NWCCAP.	GONW is a delivery agent of central government policy on climate change adaptation in the region, with an emphasis on policy initiatives such as NI188. GONW contributed to the development of the NWCCAP.
ENWORKS	ENWORKS provides support to North West businesses and organisations (in the public and private sector) with the aim of improving the environment and economy of the region. Bringing competitive advantage to the region's businesses is a key aim.	ENWORKS acknowledges that climate change will impact on businesses in the region, stating that businesses must respond to possible threats and identify potential opportunities of a changing climate. The <i>Green Business Park</i> concept offers potential to incorporate climate change adaptation agendas.	ENWORKS provides links to relevant climate change reports from EU, national government, regional bodies etc. Training workshops on some climate change issues are provided for their target audience. ENWORKS are not responsible for developing policy/

Community Forests Northwest (CFNW)	CFNW provides strategic support for the Mersey, Red Rose and Pennine Edge Community Forests. CFNW is a registered charity and non-profit making organisation. Community Forests combine physical transformation of landscapes with community involvement to increase green cover and improve local environments.	CFNW (and the 3 individual community forests and their partners) is tasked with helping to deliver elements of the RES and NWCCAP. Specifically, the role of green infrastructure in climate change adaptation is being explored. Action currently taken by the Community Forests e.g. the Green Streets project, greening brownfield land and woodland planting, boosts adaptation capacity in the region.	Community forests work with partners (e.g. NWDA, local authorities, United Utilities) to encourage links between green infrastructure and climate change (mitigation and adaptation) to be considered more strongly in their policy making. CFNW does not have their own climate change policies, and is instead an enabler regarding the operationalisation of this agenda in practice.
Groundwork Northwest	Groundwork Northwest is a partnership organisation that addresses issues relating to people, places and prosperity. Their aim is to work towards the creation of sustainable communities, particularly in deprived areas.	Addressing climate change is an important focus for Groundwork. Initiatives include promoting the conversion of derelict land into green space resource. The Greening Greater Manchester project provides grants to improve local environmental quality, some of which will indirectly aid climate change adaptation.	Groundwork has developed some guidance at the regional level, but none relating specifically to adaptation. It is generally at the national level that such documents are produced. Groundwork manages the NW Climate Fund, but this focuses on supporting mitigation projects.
Natural Economy Northwest (NENW)	This is a partnership involving Natural England, the NWDA and the SITA trust. NENW aims to stimulate natural environment projects which will deliver economic and social benefits. They also provide direction and leadership and training to regional stakeholders.	Many of the initiatives promoted by NENW will have indirect benefits in terms of adaptation, for example enhancing green infrastructure resources (GI) or restoring wetlands, even though this is not the primary driver behind related projects.	NENW aim to influence regional policy making, particularly concerning strengthening the position of GI. Supporting research is undertaken and published, e.g. studies regarding the economic benefits of GI and strategies for linking green + grey infrastructure.
United Utilities (UU)	UU is a utility company providing Northwest England with water, waste water, gas and electricity services. UU has around 7 million water and waste water customers in the region. Related services are offered in other parts of the UK and overseas.	As a company involved in the utilisation and protection of natural resources, UU are aware of the impact of climate change on their business. Activities related to adaptation include managing water resources, promoting water meters, and addressing surface water flooding.	UU have a <i>Strategic Direction Statement</i> identifying challenges and opportunities to 2035. Climate change is highlighted as the most significant development discussed in the document. The Statement is informing UU's <i>Water Resource Management Plan</i> , which addresses adaptation issues.
NHS Northwest	NHS NW is the Strategic Health Authority for the Northwest region. They provide strategic direction for delivering health care to people in the region. They have overall responsibility for related organisations such as primary health trusts, acute trusts, mental health trusts and ambulance services.	Climate change will have significant health impacts. One of the NHS's performance indicators relates to ensuring that NHS organisations are considering the impacts of climate change on future service planning, service delivery and business continuity. The NHS is represented on the NW Climate Change Partnership.	At the national level, the NHS has a Sustainable Development Unit and has a strategy for climate change. NHS NW has a <i>North West Climate Change and Health Project</i> and is increasingly engaging in this agenda throughout the services they provide in the region.

Table 7: Regional working groups

Organisation	Role	Climate change adaptation link	Climate adaptation change related documents/policies
Regional Strategy Team	This team brings together NWDA, 4NW, GONW and their relevant boards. They are responsible for developing the new <i>Single Regional Strategy</i> for the region.	Climate change is acknowledged as a significant issue. The team agreed the formation of the NWCCP, which led to the development of the NWCCAP.	The new <i>Single Regional Strategy</i> , which will incorporate the RES and RSS, will address climate change agendas.
Northwest Regional Housing Board	The Board, made up of 17 members from key organisations, is part of 4NW. Its role is to develop, implement and review a regional housing strategy and to communicate to central government housing priorities for the region.	The Board has a role in delivering the sustainable communities agenda for the region with consideration of relevant strategies and priorities at a range of scales. Ultimately adaptation issues, including flooding and water resources, will impact on their activity.	The Board is an advisory body feeding up into the Regional Leaders Forum and down into the officer support group responsible for delivering the housing strategy. There are no documents on adaptation available to date.
Northwest Improvement and Efficiency Partnership (NWIEP)	The NWIEP is funded by CLG. It supports local authorities and their public sector partners in delivering the priority outcomes within their Local Area Agreements (LAAs). These priorities are distilled into a NWIEP strategy document. NWIEP works closely with the regions 5 sub-regional partnerships to deliver this agenda.	One of the 6 priorities within the NWIEP strategy relates to environmental quality and climate change. The NWIEP is responsible for the DEFRA/DECC/CLG <i>Climate Change Best Practice Programme</i> , which is linked to the LAA process. NWIEP has developed CLASP to perform this function. This includes assistance on NI188.	The NWIEP supports a programme of regional learning on climate change for local authorities and their partners. They are also responsible for supporting bringing best practice regarding climate change into the region.
North West Climate Change Partnership (NWCCP)	Formed in 2007, the partnership is made up of representatives of organisations with lead responsibility for one or more action within the NWCCAP. Their key role is to drive forward the NWCCAP and the activities that it includes.	The NWCCAP does have an adaptation dimension, which links the Partnership strongly to this agenda. The Partnership has a role in raising awareness of actions necessary to adapt to climate change in the region amongst stakeholders.	The Partnership produced the North West Climate Change Perceptions Study. They are also responsible for providing advice and guidance to key strategic regional bodies on climate change issues.
North West Climate Change Unit	The Unit was established by the NWCCP in 2007 to coordinate and drive forward the delivery of the NWCCAP. The Unit is the key contact point for the NWCCAP. It is led by NWDA and also staffed by 4NW, GONW and the EA.	The Unit has a broad remit (mitigation and adaptation) to keep the NWCCAP under continual review to take advantage of emerging opportunities. Adaptation agendas are therefore an important consideration.	The Unit is effectively a coordinating and delivery agency. It does not in itself produce policy or guidance, but helps to implement existing policy on adaptation. It does have an awareness raising role regarding adaptation nevertheless.

North West Climate Change Adaptation Group	The NWCCAG has a specific role in promoting adaptation in the region. It incorporates four sub-groups which address local authorities (community and people), business, the natural environment, and the built environment.	Each sub-group provides a forum for relevant stakeholders to address climate change adaptation issues. The local authority sub-group provides the link between the LRAP adaptation agenda and local authorities in the region.	The NWCCAG is an advisory body bringing together key stakeholders in the region to share experience and build capacity around adaptation. The group supports policy implementation. No documentation exists to date.
Climate Change Local Areas Support Programme (CLASP)	CLASP aims to assist NW local authorities and their Local Strategic Partnership members on climate change issues, particularly National Indicators 185, 186 and 188. CLASP is lead by 4NW as part of the NWCCP.	CLASP provides assistance, advice and support to local authorities in the region on NI188 and organises related events. The development of a database of good practice case studies on adaptation is also ongoing.	No specific documentation on climate change adaptation is yet available. Presentations from events organised by CLASP which relate to adaptation are available.

Table 8: Sub-regional stakeholders

Organisation	Role	Climate change adaptation link	Climate change adaptation related documents/policies
Association of Greater Manchester Authorities (AGMA)	AGMA is a partnership between the ten local authorities of Greater Manchester. AGMA brings these organisations (and associate member local authorities lying just outside Greater Manchester) together to collaborate on issues best addressed at the city-region scale.	AGMA governance structures are currently in a state of flux. Seven Commissions are being created, one of which relates to the environment. This Commission will address the climate change adaptation agenda.	AGMA's key strategic document, the Greater Manchester Strategy, does not address climate change adaptation directly. However, it is clear that the city must address this issue to secure future economic and social progress. The Environment Commission is likely to progress this issues in the city-region.
Greater Manchester Local Authorities	The 10 local authorities (LAs) within Greater Manchester have a strong role to play across a wide range of functions including education, social care and spatial planning.	NI188, part of the governments LA performance framework, concerns planning to adapt to climate change. All LAs must report on NI188, and 3 GM LAs have chosen it as a 'headline indicator'. All other LAs must nevertheless report on progress towards the indicator.	Adaptation is beginning to feature in policy documents, particularly relating to spatial planning. For example, local development frameworks and supplementary planning guidance documents are beginning to specifically address adaptation and related issues such as flooding.
Local Authority Local Strategic Partnerships	Each local authority is responsible for leading a non-statutory local strategic partnership. They bring together the public, private, community and voluntary sectors to collaborate on the delivery of shared goals for the local area. They develop and deliver Community Strategies and Local Area Agreements (LAAs).	Partnerships are responsible for improving quality of life and services in their local area. Climate change will impact on this remit, and therefore adaptation is important. National Indicator 188 on climate change adaptation requires local authorities to involve the Partnership in the delivery of adaptation strategies.	The Partnerships contribute to Community Strategies and LAAs. Manchester's LAA, for example, does not mention adaptation, but core elements of the document including sustainable economic growth and making Manchester a 'green city' ultimately depend on adaptation to climate change impacts
Visit Manchester www.themanchestertouristboard.com	Visit Manchester is a sub-regional tourist board, and is responsible for providing strategic leadership to the tourism industry. They specifically address tourism development, business tourism, leisure tourism and visitor services.	In 2007, tourism contributed £5.6 billion to Greater Manchester's economy, employing 79000 people. Climate change will have a potentially beneficial impact on this industry in the city-region, but this must be managed effectively.	The tourism strategy for the city-region notes the need to encourage sustainable tourism, and environmental sustainability, and improving the quality of the public realm. A <i>Sustainable Tourism Strategy</i> is being created.
Manchester Investment Development Agency Service (MIDAS)	MIDAS, who act on behalf of Greater Manchester's 10 local authorities, is the city-region's inward investment agency. It aims to secure investment and employment for Manchester from relocating or expanding companies.	The changing climate of the 21 <sup>st</sup> century will bring risks and opportunities to Manchester in terms of the city-region's business environment. Forward planning is necessary to manage and capitalise on these issues.	MIDAS does not at present have a publicly available strategy document.

Greater Manchester Chamber of Commerce	The Chamber provides business support and networking opportunities to organisations across the full range of sectors in the city-region.	Like many other sectors, business will be impacted by climate change both directly (e.g. flooding) and through associated legislation. Their chief executive sits on the AGMA Environment Commission.	The Chamber offers advice to members on environmental issues, including climate change, with emphasis on mitigation. Occasional events are organised on adaptation issues, e.g. a flooding workshops for members, with EA support.
The Universities	The University of Manchester, Manchester Metropolitan University and Salford University collectively make Manchester one of the most populated student cities in the UK. Aside from educating students, the Universities play a key role in delivering research relevant to the Northwest region and beyond.	Greater Manchester has several Universities, each of which is active in the climate change adaptation agenda to some degree via education and research. Research activity takes place in research centres. The most relevant include the Tyndall Centre and the Centre for Urban and Regional Ecology.	Several research programmes have begun to address climate change adaptation issues. These include projects connected to the Eco Cities, Sustainable Consumption Institute and Building Knowledge for Climate Change programmes. Outputs guide decision making in the public and private sectors.
Greater Manchester Integrated Transport Authority	GMITA is responsible for public transport policy making and funding decisions across Greater Manchester (the AGMA 10). The Greater Manchester Passenger Transport Executive (GMPTE), who owns the Metrolink tram system, implements decisions taken by GMITA. The Highways Agency is responsible for managing the region's motorways and trunk roads.	Transport will be significantly impacted by climate change, for example by flooding of roads and heat stress effects on public transport users. Infrastructure and service provision will be affected. GMITA will need to develop adaptation responses accordingly, with similar action from the Highways Agency also necessary.	The <i>Integrated Transport Strategy</i> for Greater Manchester includes no reference to adaptation to climate change impacts. However, through NI188, LAs are responsible for working with organisations such as GMITA on collaborative adaptation responses. Transport policy at the national level is now recognising risks associated with climate change.
Greater Manchester Police/Authority	GM Police cover the 10 AGMA local authorities. Their vision is to make Manchester safer, bring criminals to justice, be visible on the streets, and work closely with local communities.	GM Police and their operations will be significantly impacted by climate change. Direct impacts on the service e.g. responding to flood events, and indirect impacts through changes in lifestyles – e.g. outdoor living, threat of burglary due to more open windows, are likely.	No reference to climate change was found in GM Police publications available on the internet. However, at the national level, the Home Office is working to raise awareness of the impact of climate change on business continuity planning within police forces.
Primary Care Trusts	Greater Manchester has 11 PCTs which broadly correspond to the AGMA 10 LA areas. PCTs are responsible for delivering health care services at the local level. Services are provided according to local need. The PCT decides how to allocate their NHS budget most effectively.	The impacts of climate change on health are wide ranging. They include negative effects on human health of events such as floods, storms and heat waves. Conversely, health in Greater Manchester could improve as a result of more outdoor living and warmer winters.	PCTs respond to overarching priorities and budget decisions set by Strategic Health Authorities, who are in turn working to policies of the Department of Health. Although individual PCTs do not have adaptation policies, at higher levels in the NHS the issue is receiving more attention.

Greater Manchester Waste Disposal Authority	The GMWDA is a statutory authority responsible for waste management functions across the AGMA LAs (except Wigan). GMWDA serves close to 1 million households and over 2 million people.	GMWDA collect, treat, recycle, transport and dispose of municipal waste. They also manage completed landfill sites. Climate change has the potential to impact on various element of GMWDA's work.	GM's <i>Municipal Waste Strategy</i> does not mention climate change. As a statutory body, they may be impacted by legislation/regulation from central government on climate change issues.
Greater Manchester Fire Service	GM Fire Service is responsible for an area of over 500 square miles, which is home to around 2.5 million people. Their aim is to make Manchester safer by providing a modern, community focused fire and rescue service. In 2007, they attended over 49000 incidents.	A CLG document addresses links between climate change and the fire service, identifying increased risk of forest and grassland fires, water shortages in the summer and flooding. The GM fire service <i>Risk Management Plan</i> , recognises these issues and commits to addressing impacts on the service.	The Fire Service <i>Risk Management Plan</i> states that they will consider how climate change could alter current risks to life from fire, or introduce new risks for the service to deal with. The Plan also notes that the service will monitor emerging climate change research.
Urban Regeneration Companies (URCs)	There are 19 URCs in England, funded by Regional Development Agencies, the HCA and LAs. They are independent partnership organisations set up to develop and implement plans for the regeneration of declining urban areas. Greater Manchester has 2 URCs – New East Manchester and Central Salford.	URCs intend to create sustainable communities. URCs have an important role to play in driving urban regeneration forwards. Ongoing developments within the Greater Manchester's URCs have adaptation links, e.g. the Eco Park within New Islington that provides green and blue space.	URCs produce masterplans and visioning documents for the areas that they are responsible for regenerating. These often have environmental sustainability embedded within them, and can have knock-on benefits in terms of adaptation to climate change. The funders of URCs often promote adaptation in their policies.

Table 9: Sub-regional working groups

Organisation	Role	Climate change adaptation link	Climate change adaptation related documents/policies
The AGMA Commissions	AGMA's new governance arrangements involve the development of seven strategic commissions tasked with taking forward key priorities in Greater Manchester. Commission's goals generally relate to strategy and project delivery, raising knowledge and awareness, and collaborative working.	The commissions all relate indirectly to adaptation. Those with the most direct relevance to adaptation include commissions addressing the environment, planning and housing, transport, public protection and health. The other Commissions are Economic Development, Employment and Skills and Improvement and Efficiency.	The AGMA Commissions are at their early stages of development and have yet to release any formal policies or documents. However, It is likely that their Climate Change Agency, which is part of the Environment Commission will lead on adaptation issues.
Manchester Climate Change Agency	The Agency, which is currently being developed by and will work under the Environment Commission, will have responsibility for taking forward the climate change agenda in the city.	The Agency will be responsible for issues relating to both mitigation and adaptation. Initial focus seems to be in mitigation, with involvement in energy planning and the <i>Low Carbon Cities Programme</i> .	The Agency is yet to be formally established. It can be expected that when operational, formal work on adaptation issues will be forthcoming.
Greater Manchester Environmental Analysis Network	Working within the Environment Commission, the Analysis Network works to gather intelligence on environmental issues within the city-region, which will be used by the Commission to inform policy and guidance.	The Analysis Network has a broad remit, focusing across a wide range of environmental issues. Climate change, and adaptation to climate change, is within its scope.	It is not the role of the Analysis Network to produce policy documentation, but to inform policy development through gathering and disseminating intelligence on environmental issues.
Manchester Knowledge Capital (M:KC)	M:KC is a strategic partnership (of Universities, local authorities, public agencies and businesses) aiming to stimulate innovation and economic transformation in Manchester.	Amongst other aims, M:KC aims to encourage the conditions for sustainable growth. This will clearly involve the generation of responses to climate change risks and opportunities.	M:KC runs the 'Manchester is my Planet' initiative which is focused on reducing emissions of GHGs. No formal policy on climate change adaptation has been produced.