



Adapting to climate change: A guide for local councils

Published by the Department for Environment,
Food and Rural Affairs.
Nobel House, 17 Smith Square
London SW1P 3JR
www.defra.gov.uk

© Crown Copyright 2010
PB13351 January 2010



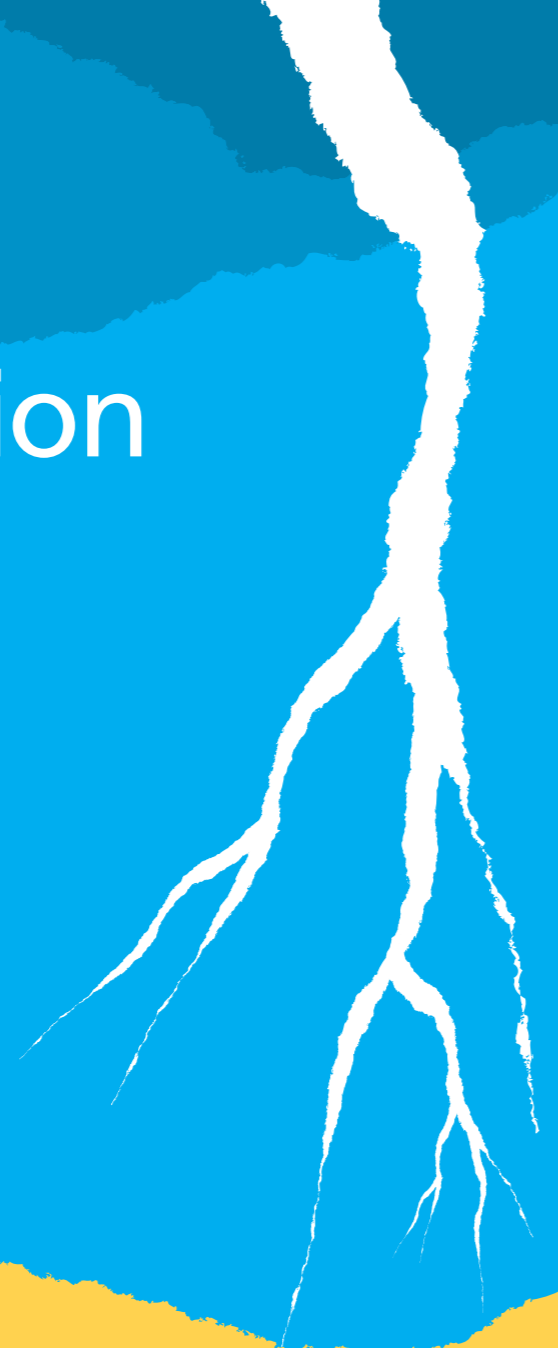


Contents

1. Introduction	4
2. How is the climate of the UK expected to change?	6
3. The Local Council context	10
4. Top tips	14
5. Tools and support available at the local level to help support adaptation planning and action	18
6. Case studies and good practice	28
Excess Water and Flood Management	
1. South Cerney, Gloucestershire	29
2. Sustainable Drainage Systems	31
Community Led Planning – A tool to enable community resilience	
3. Holbeach Parish Plan and Town Climate Change Plan	33
Community Action – Taking Control	
4. Bovey Tracey – Devon	35
5. Annesley Pit Top	36
6. South Marston Parish Council	37
7. Gloucestershire Village Agents	39
8. Emergency Self Help Plans	40
9. Farndon Residents Environment Group (FREG)	42
10. Hoveringham Village Hall / Emergency Refuge	44
11. EcoTeams	46
Appendix	47

1

Introduction



The Earth's climate is changing.

Global temperatures are projected to continue rising, bringing changes in weather patterns, rising sea levels and increased frequency and intensity of extreme weather for the UK.

The extent of change will depend greatly on how successfully we cut our greenhouse gas emissions.

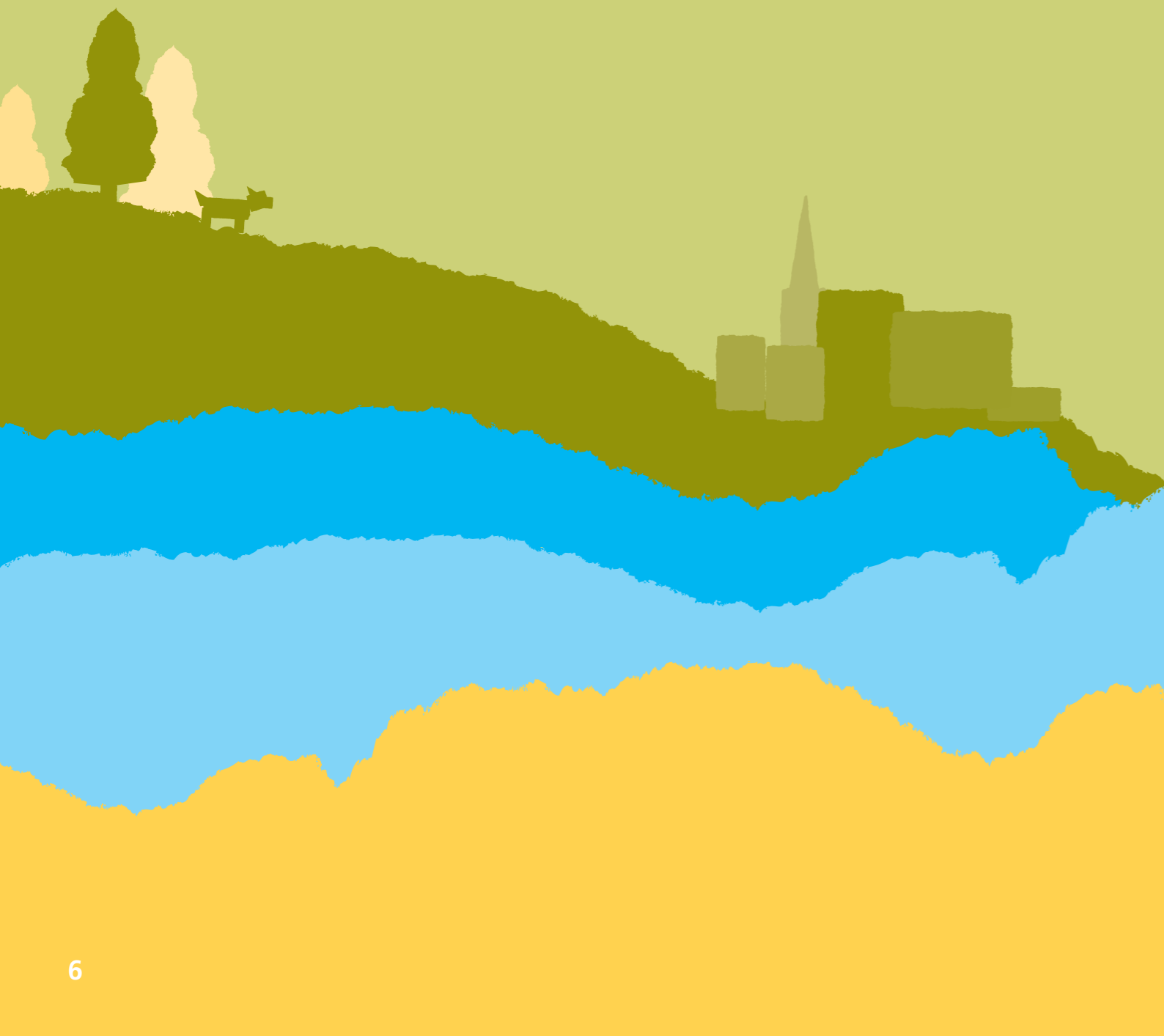
We need to understand how our climate might change so that we can prepare. The impacts of climate change, including flooding and droughts, will vary from place to place meaning that action at the local and regional level is vitally important to help reduce the risks.

This guide aims to provide local councils and community groups, wanting to take action to adapt to climate change, with information on some of the future risks and opportunities. It provides guidance and some practical examples of action that can make a real difference, including a number of case studies.

Having a good understanding of vulnerability to our climate – now and in the future – is the key to resilient communities, as we know from recent extreme weather events.

2

How is the climate of the UK expected to change?



Broadly speaking, in the future we will experience warmer and wetter winters, hotter and drier summers, sea level rise, and more severe weather.

By the 2080s we could see:

- Average summer temperature increases in the South East of England, of 3.9°C within our children's lifetimes (by the 2080s).
- A 23% decrease in average summer rainfall in the South East by the 2080s.
- An increase of 16% in average winter rainfall in the North West by the 2080s, with increases in the amount of rain on the wettest days.¹

These figures above are based on a 'medium emissions' pathway, which is a future scenario with global energy production based on a mixture of fossil fuels and renewable technologies. However we do not know how global emissions will change in future, and the rate could be higher, with more severe consequences. Or alternatively through concerted international action we could put the world on a lower emissions pathway, resulting in less change.

Although individual weather events cannot be directly attributed to climate change, we know the kinds of impacts we may face because we have some experience of them already:

- Coastal erosion has been a fact of life for centuries on the east coast of England.
- The August 2003 heat wave caused havoc across Europe and resulted in at least 2,000 premature deaths in the UK alone. Yet this occurred during a summer when average UK summer temperatures were only 2°C above the 1961-1990 average.
- The flooding in the summer of 2007 showed the devastating impact that can result from sudden heavy downpours; this weather event caused the flooding of 55,000 properties and left 350,000 people without mains water.

¹ Figures are from the UK Climate Projections 2009. Data given is for the central estimate (50% probability level), for the 2080s, for the medium emission scenario

Because of inertia in the climate system, past emissions mean that some changes are now inevitable whatever we do to reduce emissions, up until the 2040s. This could mean:

- Average summer temperature increases in the South East of England, of 2.3°C (by the 2040s).
- A 13% decrease in average summer rainfall in the South West.
- An increase of 10% in average winter rainfall in the North West by the 2040s, with increases in the amount of rain on the wettest days.²

Although we expect some significant changes to the climate after this time, the extent of the changes will depend heavily on current and future efforts to reduce greenhouse gas emissions. It is vital that we plan and prepare for these changes – whether it's in the design of school buildings or the protection of new power plants, maintaining the supply of drinking water, adjusting farming methods for drier summers, or understanding how our homes and businesses will have to adapt. Taking simple steps now will reduce the costs and discomfort for all of us in the future.

Although individual weather events cannot be directly attributed to climate change, we know the kinds of impacts we may face because we have some experience of them already

² Figures are from the UK Climate Projections 2009. Data given is for the central estimate (50% probability level), for the 2040s, for the medium emission scenario

3

The Local Council context

Adapting to climate change means changing the way we do things – in all areas of our lives – to respond to the changing circumstances.



Adapting to climate change means changing the way we do things – in all areas of our lives – to respond to the changing circumstances. It means not only protecting against negative impacts, but also making us better able to take advantage of any opportunities. Local Councils have a clear role to play. This section highlights some of the ways action can be taken.

Types of actions that can be taken

The first step has to be accepting that some form of climate change is happening, assessing the risks and then taking action within your own community to reduce your vulnerability to these changes.

Many of the steps that communities can take to adapt can be readily included in existing ways of managing risks or making long-term investments, but to be able to do this there is a need to raise awareness.

The following highlights some of the ways that a local council can respond in practical terms to the main climate risks communities may face.

1. Getting started

Collecting the evidence, raising awareness and creating the necessary relationships and processes that are needed as a foundation for delivering adaptation actions

2. Delivering actions

Actions that help to reduce vulnerability to climate risks or exploit potential opportunities arising from a changing climate.

We know that we often learn best by learning from the experience of others.

1. Getting started

Any organisation wanting to respond to climate change effectively will need to understand the nature of the issues and risks it faces, identify and engage with key people and organisations within the community, and assess the likely impacts and required responses. This can be done through:

- **Creating an information base**

Building knowledge through research, data collection and monitoring is the key to understanding the issues. For example local knowledge can build up a picture of the damage caused in the recent past by storms and flooding, helping to show where resilience needs to be built in. By learning from other successful initiatives, and promoting education and training on this relatively new area, an organisation will be better equipped to take action.

- **Supportive social structures**

Structures within your organisation and the relationships you develop with outside agencies are of key importance. This may mean training for committee members on issues relating to climate change adaptation or perhaps identifying climate champions to take work forward.

- **Partnership working**

Working in partnership with other organisations can develop a network which increases your own capacity to adapt. For example it may be possible to share knowledge of the risks of climate change and possible ways to adapt through the network. There may also be ways of extending the remit of existing groups such as the possible extension of Neighbourhood Watch into 'Gully Watch', reporting blocked and damaged drainage systems. The CRC Service Delegation Guidance for Town and Parish Councils (www.nalc.gov.uk/Publications/Booklets_and_Resources.aspx), developed in conjunction with NALC, contains good examples of powers being delegated to parish councils. Partnership working with other sectors should help to develop the most appropriate actions that will work in a locality.

- **Effective decision making and implementation**

It is important that your organisation is fit for purpose and ready to deal with the challenges it faces. This may mean that you have to take action and change or develop regulations, standards, codes, plans, policy or programmes to take account of future climate changes. This will enable your organisation to effectively change over time and with the appropriate resource allocations, put good practices in place into the future. For example you could develop and consult on new emergency planning policies which include your organisations response to the risks of climate change.

2. Delivering actions

In order to adapt effectively, an organisation will need to assess the risks posed by climate change and develop an action plan to address these, as well as prepare to take advantage of any opportunities. This could, for example, be by changing ways of delivering services (e.g. making changes to grounds maintenance or types of planting or outdoor swimming facilities to cater for hotter summers). There are a number of possible ways to respond, for example:

- **Offsetting losses by spreading or sharing risks or losses**

This could be through insurance policies (e.g. against building risk) or through sharing risks or losses by establishing partnerships or co-operatives. Utilisation of emergency funding from Government, National Agencies or the voluntary sector could also offset effects on an individual organisation.

- **Preventing effects or reducing risk**

There are various ways of preventing or reducing the risk, and this is most viable where assets are sufficiently valuable to warrant 'protection' measures. Measures could include relocating, changing use, improving preparedness and contingency planning. For example looking at projected coastal erosion rates, will allow you to plan for the siting of car parks, access roads and other community assets.

- **Preparing to exploit any opportunities**

As well as risks, there can also be positive effects of climate change and organisations should look at the ways in which they can make the most of these opportunities. This could be through the introduction of new activities or services, for example there may be increased potential for tourism in the future with hotter summers expected.

- **Living with and bearing losses or risks**

An organisation could respond in this way if a specific action is not required or existing systems and procedures are sufficient. In some instances it could also be that it is not economically viable to continue to sustain some assets and investment would be better spent on other resources or facilities.

The following sections provides some top tips and some practical ways that such responses have been implemented through case study examples

In order to adapt effectively, organisations will need to assess the risks posed by climate change and develop an action plan to address these

4

Top tips

We have developed some top tips to get you thinking about the ways that you could take action.



The top tips listed here are by no means an exhaustive list. There are likely to be many other routes you can take locally.

- **Community Led Planning**

Carrying out a Community Led Plan such as a Parish Plan or Market Town Action Plan can be an effective way of engaging the rest of your community in a debate about the practical actions that can be taken to adapt to climate change locally. Community Led Plans are useful for identifying local risks; for example those related to flooding or snowfall, traffic disruption and power cuts. Armed with this knowledge collected by the community, you will be in a strong position to create an action plan detailing how your community (sometimes with the support of external agencies) can implement and monitor actions that address climate change. Contact your local Rural Community Council (RCC) for more information and support to undertake a Community Led Plan www.communityledplanning.com

- **Identify potential opportunities from climate change**

Forward planning can help to ensure that any benefits of climate change can be fully taken advantage of, for example:

- **Parks and open spaces:** Demand for parks and open spaces is likely to increase with warmer winters and hotter drier summers. There are likely to be a number of social, health and environmental benefits in acting now to create well shaded green spaces and community woodland areas.

- **Tourism:** Research, support, encourage and invest in domestic tourism facilities and strategies as hotter, drier summers and warmer winters could boost local tourism and demand for outdoor leisure facilities.

- **Renewable energy production:** It may be possible to identify potential assets for energy production such as wind and water power.

- **Action Planning**

Set up an action group to tackle local climate issues, share information and/or be a contact/information point for residents. This team could also work to demonstrate many of the values of a Community Led Plan (self-help, empowerment, done by the community for the community).

- **Emergency Planning**

Create a Parish Emergency Plan including a Flooding Action Plan to ensure that residents are aware of what they, and others, can do in the event of an emergency.

There is likely to be a significant increase in demand for emergency services as a result of extreme weather conditions and events, so provide advice to vulnerable groups, introduce better warning systems, ensure there is appropriate allocation of resources and that equipment is updated to meet the increased risk.

- **Planting**

Manage land, verges and flower displays using drought-resistant plants and shrubs that look good and need less watering. These will be more resistant to extreme weather conditions caused by climate change such as droughts and floods. Also, use permeable surfacing in all public spaces to improve natural drainage and prevent flooding risks.

- **Buildings and infrastructure**

Work with local planning authorities to ensure that the design and location of any new buildings or infrastructure is resilient to the effects of climate change by including water conservation measures, appropriate heating/cooling and ventilation equipment and sustainable drainage systems (SuDS). It is also worth checking if such measures can be implemented in council owned properties.

- **Housing**

Work with the local authority and other national organisations to provide grants towards home composting kits, water butts, solar panels, insulation and simple devices such as ‘Hippos’ to place in toilet cisterns.

- **Waste**

Work with the local authority to provide as many recycling services as possible and ensure that waste contractors take into account warmer and windier conditions in the design and management of waste sites, to help control odours and vermin.

- **Sustainable transport**

Help to ensure that cycle paths, bus shelters, roadside seating and services are provided and well maintained to encourage community usage and reduce car dependency. Also, promote car sharing and offer incentives (e.g. allocate prime parking spaces or cheaper fees to car-sharers) to reduce air pollution, which may be exacerbated in increased summer temperatures.

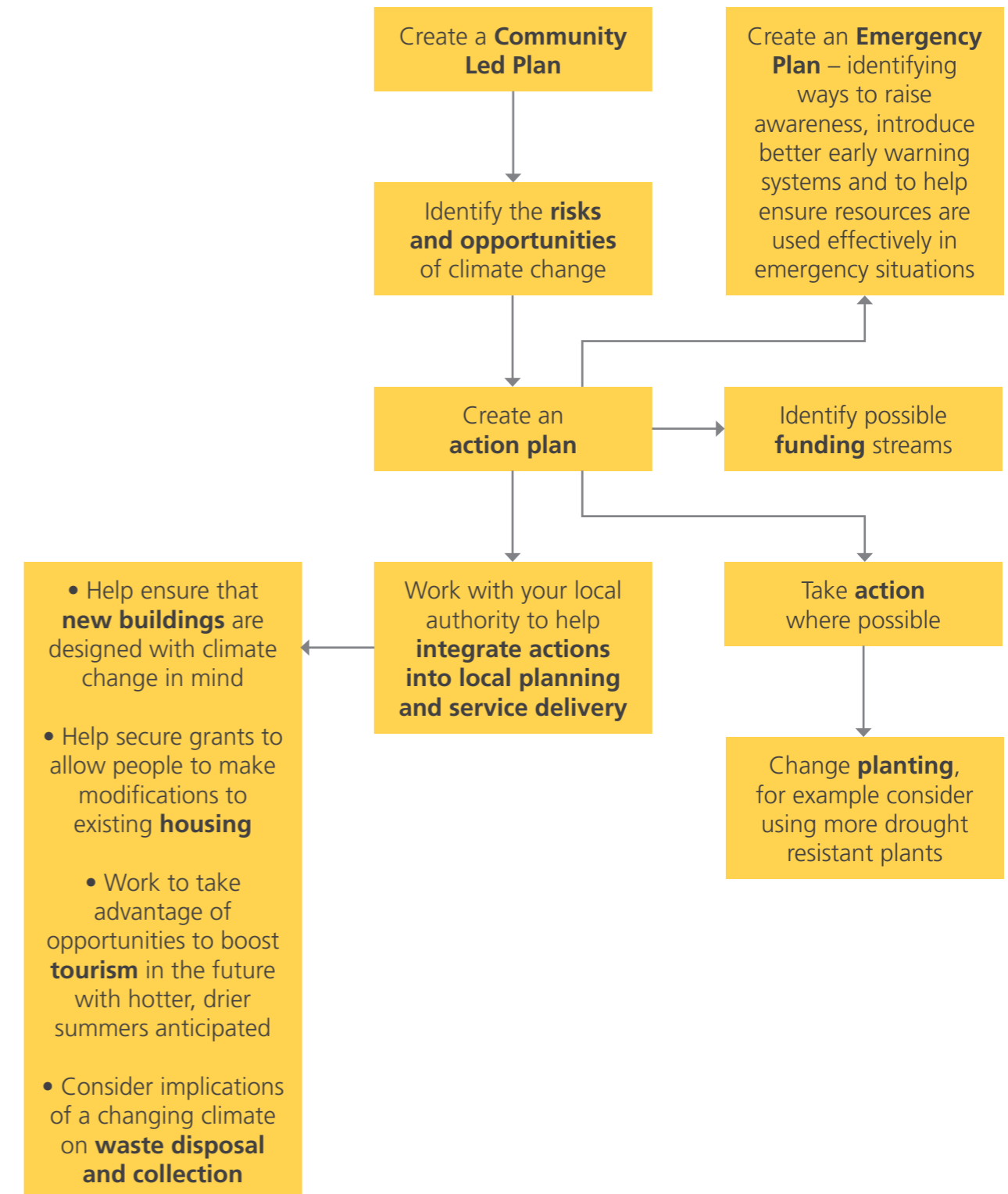
- **Farming**

Work with local farmers and residents with allotments to set up community markets. With climate change likely to increase the length of the growing season, support and encourage people to buy local and seasonal food all year round. This will not only reduce food miles, but also benefit the local economy.

- **Funding**

Contact your local Rural Community Council (RCC) or Councils for Voluntary Service (CVS) to find out what grants are available in your area.

The following diagram illustrates some of the actions a local council could take.



5

Tools and support available to help

There is a range of tools and support to help local councils assess the risks of climate change and develop an action plan.

There are a number of different organisations, tools and guidance available to support you through the process of assessing the risks of climate change and planning ways to adapt to climate change.

UK Climate Impacts Programme (UKCIP)

The UK Climate Impacts Programme, based at Oxford University, provides support to organisations across the UK to help them understand the risks of climate change and ways to adapt. The programme is funded by Defra on behalf of the UK Government, Scottish Government, Welsh Assembly and Department of the Environment Northern Ireland. Since its inception in 1997 it has brought together research and good practice to develop a range of tools and support materials including: www.ukcip.org.uk

The UK Climate Projections

The UK Climate Projections, or UKCP09 for short, have been developed to help us understand our possible future climate. They take cutting edge climate science and provide the results in a form which can be used by a wide range of organisations that need to assess the level of risk they face.

The information contained within UKCP09 is provided as a range of outputs or products including:

- a summary of the **key findings** to demonstrate the trends in future climate

- **pre-prepared maps and graphs** of the climate changes we are likely to see over the 21st century
- the ability to be able to obtain **customised output** for your region

Detailed guidance on the use of the Projections can be found through the UKCP09 website (www.ukclimateprojections.org.uk/) alongside information on how to access further training in using and accessing further support tools.

The Projections could be used by local and community councils in a number of ways, for example:

- To help raise awareness of the risks of climate change with local communities.
- To help inform community planning so that the risks of climate change can be factored into local plans.
- To help build an understanding of how the weather and climate might affect your area in the future. You can use the Projections to undertake local assessments of the risks of climate change.
- To inform decision making and long term funding decisions.

“Using an ‘extreme weather’ historical base, we have been encouraging communities to think about the local impacts of climate change, mitigation and adaptation. The ability to study relatively local projections is a good motivator. The data and supporting material will be of particular use to project centres such as Lympstone (river floods and rising sea levels) and Hartland (storms and heavy snows) that are undertaking a wide ranging approach to sustainability and who may move to ‘transition’ status as a project related outcome. In the case of Lympstone the project is being linked with their Community Led Planning process.”

MARTIN RICH, Community Projects Officer, Community Council of Devon

Martin has been working on a climate change heritage programme with 8 – 10 communities looking at how to manage extreme weather events by considering similar events that occurred locally in the past.

Other decision making tools, available through UKCIP’s website (www.ukcip.org.uk) include:

- **The Adaptation Wizard**
The wizard is an internet-based tool to help organisations follow a consistent process for creating an adaptation strategy. It allows organisations to assess their vulnerability to current and future climate, understand what risks may arise and assess the quality of the evidence. It will help you to develop a climate change adaptation strategy. The wizard also provides links through to the rest of the UKCIP toolkit with advice on which tool is most appropriate.
- **A Local Climate Impacts Profile (LCLIP)**
A resource that local authorities can compile so that they better understand their exposure to weather and climate. It is based on evidence of a locality’s vulnerability to severe weather events and in particular how these events affected a local community as well as the authority’s assets and capacity to deliver services.

- **Business assessment tool (BACLIAT)**
Provides a simple checklist to help businesses assess the potential impacts of climate change on logistics, finance, markets, process, people and premises and to explore management implications.
- **Risk Framework**
A step-by-step decision-making framework to help organisations judge the significance of climate change risks compared to the other risks they face.

The Nottingham Declaration Partnership (NDP)

The NDP is a unique partnership of eight organisations that support local authority action on climate change adaptation and mitigation. Each of the partners individually offers support and advice for councils on climate change. They also jointly provide combined adaptation and mitigation tools for local authorities and their partners.

The Nottingham Declaration Website (www.nottinghamdeclaration.org.uk) provides:

- An explanation of how adaptation is tackled in the Local Government Performance Framework, including National Indicator 188 – Planning to Adapt to Climate Change, Comprehensive Area Assessments and Local Area Agreements.
- The latest news on what is happening in the world of local adaptation.
- Advice on adaptation for local authority services.
- Guidance on developing an Adaptation Action Plan.
- Links to other resources.

Other key sources of support and guidance

Government action, guidance and support

The Government has a comprehensive plan for tackling climate change which has five elements:

- **Protecting the public from immediate risk** including through increased flood protection, coastal erosion management, and efficient use of water and health contingency plans.
- **Preparing for the future** by, for instance, changing the way we build our houses and infrastructure and developing new ways to do business.
- **Securing a global deal** to limit temperature increase to less than 2°C and avoid the most dangerous effects of climate change. Countries around the world need to cut emissions by 50% on 1990 levels by 2050.
- **Creating a low carbon UK.** We will not get global action unless countries like the UK provide a lead. We need to make fundamental changes to decarbonise the UK in a way which maximises business opportunities, treats people fairly and keeps energy supplies safe and secure.
- **Supporting individuals and businesses to play their part.** Government will work with all groups in society to support those already doing their bit and to encourage others to start.

As part of this targeted action the Government has set up an Adapting to Climate Change (ACC) programme, which brings together the work already being led by Government and the wider public sector

on adapting this country to climate change and will co-ordinate and drive forward the development of this work in the future.

Highlighted below are some examples of what action has already been taken:

- Since 1997, spending on **flood protection** has more than doubled with free Floodline Warnings provided to business by telephone, mobile, email (www.environment-agency.gov.uk/homeandleisure/floods/38289.asp/).
- There is a **heat wave plan** in place in the National Health Service.
- Continued help to communities affected by **coastal erosion**.
- Provided **advice to businesses** through Business Link about how climate change may affect them and what practical steps businesses can take, as well as what specific industries can do.
- Started providing **information to farmers and land managers** about the threats and opportunities that climate change brings. The Farming Futures project has produced a range of case studies and facts sheets, many of which address adaptation. (www.farmingfutures.org.uk).
- **Supporting local and regional organisations** both through funding and guidance.

Further information on the work that is taking place at the national, regional and local level as part of the Adapting to Climate Change Programme and the support, guidance and information it can provide can be found on Defra’s website: www.defra.gov.uk/adaptation

National agencies

Organisations such as the Environment Agency and Natural England, can advise on issues like flooding, water resources, coastal management, waste, biodiversity, landscape and the natural environment.

The **Environment Agency** aims to protect and improve the environment, and promote sustainable development. It has responsibility for protecting communities from the risk of flooding and managing water resources, and it provides information for home owners, business, local councils and community groups. It also provides technical advice to help Local Planning Authorities and developers avoid development in areas that are at unacceptable risk of flooding, and offer planning resources to assist with this. Data and spatial information on your local environment, including flood risk, is available on the website: www.environment-agency.gov.uk/

Natural England is the government's advisor on the natural environment. Its remit is to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development. Natural England works with farmers and land managers; business and industry; planners and developers; national, regional and local government; interest groups and local communities to help them improve their local environment: www.naturalengland.org.uk/

National Association of Local Councils (NALC) provides advice and guidance to members on a range of issues affecting local councils, including legal and policy advice, best practice guidance and training for town and parish councils. www.nalc.gov.uk

Action with Communities in Rural England is the national umbrella body of the Rural Community Action Network (RCAN), which operates at national, regional and local level in support of rural communities across the country. It provides advice on community led planning www.acre.org.uk.

RCAN has successfully initiated a number of community projects that contribute to the climate change agenda, for example communities have been encouraged to devise their own emergency plans to cope with extreme weather conditions. Since 2007 RCAN has delivered an initiative on local community action called the **21st Century Village** project (www.acre.org.uk/sustainabledevelopment_21stcenturyvillage.html). This has shown that, by stimulating dialogue amongst groups and individuals within a community, ideas and volunteers come forward to create a myriad of collective initiatives.

Local and Regional Adaptation Partnership Board (LRAP) The Local and Regional Adaptation Partnership (LRAP) Board is a partnership of organisations with a focus on local and regional adaptation delivery. These organisations work together to develop and deliver a programme of projects to support local and regional bodies to adapt to climate change. Details of LRAP projects including a compendium of 27 local authority case studies of adaptation action, guidance on local adaptation and individual member website links are on the Defra website at www.defra.gov.uk/environment/climate/action/local-authorities.htm

The LRAP board has published guidance for councils on the new indicator process. This guidance (<http://www.defra.gov.uk/corporate/about/what/localgovindicators/ni188.htm>) is designed for use by councils to help in planning for NI188 but is also likely to be useful for local councils.

Local and Regional agencies and bodies

Regional Climate Change Partnerships (RCCPs) There is a climate change partnership in each of the 9 English regions. Their programmes of work vary but their key roles include raising awareness of the impacts of climate change, informing and advising on the challenges and opportunities of climate change in the region and developing practical adaptation responses. They work to influence the strategies and plans of key partners and work with stakeholders across key sectors to enhance the region's resilience to the impacts of climate change. Links to the website for each partnership is available via UKCIP (www.ukcip.org.uk)

Local authorities in England who are working towards performance indicator NI188 (included as a priority indicator in 56 Local Area Agreements) will have to assess and manage climate risks and opportunities, and incorporate appropriate action into strategic planning, including developing and implementing a climate change adaptation plan.

Contact details for your local council, including county, city, borough and district councils and unitary authorities can be found on the Directgov website www.direct.gov.uk/en/DI1/Directories/Localcouncils/index.htm.

Rural Community Councils (RCCs) are charitable local development agencies, generally based at county level. They support and enable initiatives with local communities. RCCs are part of the Rural Community Action Network (RCAN), which is the collective name for the 38 Rural Community Councils (RCCs) throughout England, their eight regional bodies and their national umbrella body, ACRE. RCCs are independent, local development agencies that, for decades, have been delivering support on the ground to enable rural communities to improve quality of life for all. They act as a strategic voice for rural communities, allowing grassroots issues to be championed and solutions worked out in partnership between statutory, voluntary and private sector providers. Their strength lies in their ability to work within communities in an inclusive and holistic way, helping local people to develop local solutions and identify unmet needs through a unique approach to community-led planning. For more information and contact details visit the ACRE website www.acre.org.uk/aboutthenetwork_index.html

Councils for Voluntary Service (CVS) are local infrastructure agencies; they provide their members with a range of services and development support. To find out if there is one in your area look at the NAVCA website <http://webdb.navca.org.uk/home.aspx>

Powers and functions of Local Councils to support action to adapt to climate change impacts

An overview of relevant functions, powers and duties already given to parish councils which can be used to put climate change adaptation activities in place is given in the following table.

The case study section shows some of the potential ways of implementing these.

Function	Powers and Duties
Allotments	Duty to provide allotments. Power to improve and adopt land for allotments and to let grazing rights.
Burial ground, cemeteries and crematoria	Power to acquire and maintain. Power to provide. Power to agree to maintain monuments and memorials. Power to contribute towards expenses of cemeteries.
Bus shelters	Power to provide and maintain shelters.
Bye-laws	Power to make bye-laws in regards to pleasure grounds. Cycle parks. Baths and washhouses. Open spaces and burial grounds. Mortuaries and post-mortem rooms. Public conveniences. Hiring of pleasure boats in parks and pleasure grounds. Dogs and dog fouling in parks and open spaces
Commons	Power for Parish Council to contribute to expense relating to scheme for the regulation and management of a common.
Common pastures	Powers in relation to providing common pasture.
Community centres	Power to provide and equip buildings for use of clubs having athletic, social or recreational objectives.
Drainage	Power to deal with ponds and ditches.
Entertainment and the arts	Provision of entertainment and support of the arts.
General powers	Power to incur expenditure for certain purposes.

Highways	Power to maintain footpaths and bridleways. Power to light roads and public places. Provision of litter bins. Powers to provide parking places for bicycles and motor-cycles, and other vehicles. Power to enter into agreement as to dedication and widening. Power to provide roadside seats and shelters. Consent of Parish Council required for ending maintenance of highway at public expense, or for stopping up or diversion of highway. Power to complain to highway authority as to unlawful stopping up or obstruction of highway or unlawful encroachment on roadside wastes. Power to provide traffic signs and other objects or devices warning of danger. Power to plant trees and lay out grass verges etc. to maintain them.
Land	Power to acquire by agreement, to appropriate, to dispose of. Power to accept gifts of land.
Open spaces	Power to acquire land and maintain.
Public buildings and village halls	Power to provide buildings for public meetings and assemblies.
Public conveniences	Power relating to provision of public conveniences.
Recreation	Power to acquire land for or to provide public walks, pleasure grounds and open spaces and to manage and control them. Power to provide gymnasiums, playing fields, holiday camps. Provision of boating pools.
Town and country planning	Right to be notified of planning applications.
Tourism	Power to encourage visitors and provide conference and other facilities.
Traffic calming	Powers to contribute financially to traffic calming measures.
Transport	Powers in relation to car-sharing schemes, taxi fare concessions and information about transport. Powers to make grants for bus services.
Water supply	Power to utilise a well, spring or stream and to provide facilities for obtaining water from them.

UKCIP's Local Climate Impacts Profile (LCLIP) approach may be useful to help identify your local vulnerability to severe weather events and in particular how these events affect a local community, local assets and capacity to deliver services. This information could then be used to help inform decisions about the most effective way to use the

powers listed above to help reduce vulnerability to current weather events. When combined with consideration of the projections of future climate, communities can begin to consider ways in which the powers could be used to help reduce longer term vulnerability to climate change.

Well-being Power

Possibly the most important power available is the Well-being Power, introduced in 2000 to increase local authorities' capability to act on behalf of their areas. In its original form it allowed principal local authorities in England and Wales to do anything they consider likely to promote the economic, social and environmental well-being of their area unless explicitly prohibited elsewhere in legislation.

Changes brought in at the beginning of 2009 extends the Well-being Power to local councils which meet the conditions prescribed in the Parish Councils (Power to Promote Well-Being) (Prescribed Conditions) Order 2008 (the Prescribed Conditions Order). Local Councils are now able to apply the power of well-being. To get the full guidance visit the NALC site www.nalc.gov.uk/Default.aspx or Communities and Local Government website www.communities.gov.uk/publications/localgovernment/powertopromote.

Funding streams for local councils and community groups

Below are just a few funding sources that may help you to secure funding to assess the risks of climate change, consider appropriate responses and take action.

- The Energy Saving Trust Green Communities programme has a funding database which provides up to date information on funding available to community groups across the UK to take action on climate change. www.energysavingtrust.org.uk/community

- Funding for transport and rural communities – to find out more about local and regional support, funding and concessionary fares visit the Department for Transport's website. www.dft.gov.uk/pgr/regional/

- Access to Nature – To encourage people from all backgrounds to understand access and enjoy our natural environment. Funded through the Big Lottery Fund Changing Spaces programme. www.naturalengland.org.uk/ourwork/enjoying/outdoorsforall/accesstonature/default.aspx

- Aggregates Levy Sustainability Fund – To reduce the effects of aggregate extraction on local communities and the natural environment Defra has commissioned ACRE to deliver three years of funding (from 2008-2011) with finances drawn from the Aggregates Levy Sustainability Fund. This grants programme, known as COMMA, has funding to distribute in 3 stages: 2008-2009, 2009-2010 and 2010-2011 and focuses on supporting community projects in settlements affected by quarrying. www.acre.org.uk/sustainabledevelopment_comma.html

- The Pilkington Energy Efficiency Trust (P.E.E.T.) has been set up to offer organisations the chance to bid for funds to improve the energy efficiency in their buildings. Local councils can also bid for these monies - please visit www.pilkington.com/europe/uk+and+ireland/english/building+products/pilkington4architects/peet.htm

Additional information on the funding available to community groups can be found via the direct.gov website www.direct.gov.uk/en/HomeAndCommunity/Gettinginvolvedinyourcommunity/Charitiesandcommunitygroups/DG_10025966

Funding may also be available through local District Councils and County Councils and through your Local Council's Local Area Agreement, which lists local priorities and progress towards achieving government targets. To find out whether your local authority has adopted National Indicator 188 – Planning to adapt to climate change as one of its priorities look at www.localpriorities.communities.gov.uk/ and search for your area.

For up to date information about locally available grants, contact your local Rural Community Council or CVS.

Funding is also available to help community groups to help cover the cost of renewable energy technology that can be used to produce green energy from the sun, wind, water, wood and other renewable sources.

- EDF Energy - www.edfenergy.com/greenfund.
- Carbon Trust's Building Design Advice Service www.carbontrust.co.uk/energy/assessyourorganisation/design_advice.htm.

6

Case studies and good practice

As the recognition grows of our need to not only mitigate the causes of climate change but adapt to the impacts, more and more action is being taken to enable communities to plan and develop resilience.

Below are some examples of action taken by communities and statutory bodies which may be useful in helping to inspire others to investigate the potential in their own community to respond.

Excess Water and Flood Management

The following case studies highlight the actions that can be taken to adapt to the changing climate particularly from heavier rainfall and the increased risk of flooding. The first case study shows how community action and partnership with appropriate agencies can contribute to enabling solutions. The second highlights ways of building adaptive measures into the design of a new development.

CASE STUDY 1: South Cerney, Gloucestershire

Brief summary

The Parish Council took a lead on developing a community led plan for the village in 2006; this highlighted a number of issues including the need to carry out ongoing flood monitoring activity. The Parish Council have been active in working with a number of agencies to address the ongoing flooding problems in the village.

What climate impact were the group looking to adapt to?

Excess water and flood management.

What actions were taken?

The community of South Cerney in Gloucestershire recognised the likely increased risk of flooding and likely impacts during the production of their village plan. Completed in 2006 with the support of Gloucestershire Rural Community Council, it set out an ambitious action plan to tackle this risk. There followed a great deal of work by the Parish Council with Cotswold District

Council and Gloucestershire County Council, leading to the establishment of a Flooding Forum to monitor the progress of work and surveys carried out by the Environment Agency and Thames Water.

Following the heavy rain in January 2008 the Parish Council held an emergency meeting as they were concerned that flood water posed a significant risk to the village. The river was at least seven inches above the top of the bridge arch and riverside properties were close to inundation. More properties were also under threat if the river overflowed its banks and at the time further rainfall was forecast with warnings from the Environment Agency that flooding was expected on rivers from South Cerney to Lechlade. As a result of this meeting the Parish Council agreed to install a culvert across the village playing field in order to relieve the build-up of water flowing under a bridge. The culvert was completed by the end of the week and within a short period a drop in the river level was noticeable. Thankfully the heavy rains did not arrive but the culvert gives reassurance to those residents in this part

of the village that due to the prompt action by the Parish Council a potential disastrous incident had been averted.

Who was involved?

South Cerney Parish Council and local residents supported by Gloucestershire Rural Community Council. Other organisations involved include The Environment Agency, Thames Water, Cotswold District Council and Gloucestershire County Council.

How was the project funded?

The Parish Council funded the emergency flood alleviation works in February 2008 at a cost of £1,610 exclusive of VAT. Parish Councillors also volunteered their own time to ensure the emergency works were completed on time. Other works were funded by various agencies including, The Environment Agency, Gloucestershire County Council and Thames Water.

The key outcomes and benefits

Successful outcomes have included the installation of a monitoring station on the river Churn by the Environment Agency; clearance of major obstructions found in drainage pipes by Gloucestershire County Council and the installation of a new pumping sewer pipe to the treatment works by Thames Water. The works followed six major incidents between 2006 and 2008 during which old mains pipes fractured and raw sewerage flooded areas of the village. There is ongoing partnership work with Cotswold District Council and Gloucestershire County Council to develop and implement a flood emergency action plan.

An overview of any barriers encountered and top tips

Prompt action by the Parish Council with the support of the community provided immediate relief to properties threatened by inundation. Subsequent partnership work with statutory agencies has enabled other substantial improvements to be installed thus alleviating the risk posed by flood water.

Other information:

The Community Plan can be found on ACRE's website:

www.acre.org.uk/DOCUMENTS/communityledplanning/South%20Cerney.pdf

South West ACRE Network Case Study:
www.grcc.org.uk/assets/0000/3036/South_Cerney_Case_Study.doc

Parish Council:
www.southcerney.org.uk

Funding

The Community Led Plan was funded by Gloucestershire Rural Community Council.

The Emergency flood alleviation works were funded by the Parish Council.

Contact:

Gloucestershire Rural Community Council
Community House
15 College Green
Gloucester
GL1 2LZ
Telephone: 01452 528491
Email: glosrcc@grcc.org.uk

Maurice McKee
South Cerney Parish Clerk
Email: clerk@southcerney.org.uk
Website: www.southcerney.org.uk



CASE STUDY 2: Lamb Drove, Cambourne, Cambridgeshire

Brief summary

Lamb Drove in Cambourne, where 35 affordable homes were built by Cambridge Housing Society on a one hectare site, provides an example of how SuDS (Sustainable Urban Drainage Systems) can be used in a small scale housing development. The aim of this unique and pioneering project was to showcase practical and innovative Sustainable Water Management Techniques (incorporating SuDS and property flood proofing) within residential developments. The project intended to demonstrate that SuDS are a viable and attractive alternative to more traditional forms of drainage and to deliver practical solutions for new housing areas.

The measures that have been installed slow the flow of water on site by natural means, thus avoiding flood risks occurring elsewhere during periods of high rainfall. They also enhance the physical environment of the site by adding biodiversity value and improving the quality of water leaving the area.

Background on sustainable drainage systems

Sustainable Drainage Systems (SuDS) offer an alternative approach to traditional drainage. SuDS employ a whole range of design techniques to manage drainage within a building development. These can include dry ditches, ponds and integrated constructed wetlands, all of which aim to detain surplus run-off water and release it slowly into watercourses or to the ground. Other designs that can be incorporated into developments include porous paving, collection tanks and 'green roofs' which allow rainwater re-use.

Rainwater collection is now being used on some new housing developments. Instead of going into the sewers the water is collected, filtered and stored in tanks buried in the garden. It can then be used for flushing the toilet or for washing - reducing water use by up to 50%.

SuDS techniques reduce the likelihood of flash flooding and result in greatly improved water quality. They are often cheaper and easier to maintain than traditionally engineered drainage solutions. In larger systems, such as wetlands, added value is provided by wildlife habitat or recreational potential.

What climate impact were the group looking to adapt to?

SuDS techniques reduce the likelihood of flash flooding and provide a mechanism for managing rain water, they mimic natural drainage, slowing water flow and reducing the amount running off into drains.

What actions were taken

The following features are incorporated at Lamb Drove:

1. Permeable paving – The paving within the roads and some of the car parking areas is of permeable construction. Gaps between the paving allow water to enter porous storage zones.
2. Detention basins – Sculpted depressions in open spaces help to slow down the runoff rate and store water on a temporary short-term basis.
3. Swales – Most of the excess water from the site is fed into a series of shallow creeks further slowing the flow of water and starting the water treatment process.
4. Green roof – The site includes a small demonstration green sedum roof to reduce water runoff and carry out some natural treatment of rainwater.

There are water butts at the front and rear of all of the properties. The water gathered from these devices can be reused for gardens and other uses.

The scheme also includes two dwellings that have been designed with techniques for flood resilience and to minimise water damage in the event of a flood, therefore reducing the damage costs. Flood proofing measures include:

- Identifying the potential sources and routes of flooding
- Elevation and contouring
- Dry proofing: measures applied to those portions of buildings located below the design elevation to keep the enclosed space dry during a flood
- Wet proofing: measures to minimise the damage if flood waters enter the property

Monitoring Project

A two-year monitoring project has been set up to gauge the success of the measures installed. This aims to examine the overall performance of the SuDs system and evaluate the performance of individual features, for example permeable pavements, green roof, detention basins and swales.

The results will be compared with a control site which has a traditional drainage system. Factors to be examined include water quality (control of pollutant levels), impact on wildlife, costs of maintenance, aesthetic appeal and health and safety issues.

The Final Report is due to be published in Autumn 2010.

Who was involved?

Cambridgeshire County Council, South Cambridgeshire District Council, Cambridge Housing Society, Cambridgeshire Wildlife Trust and Royal Haskoning. RS Hydro are undertaking water flow monitoring for the development.

How was the project funded?

The contract for undertaking the monitoring project has been let to Royal Haskoning and funding secured from Defra, the Environment Agency and Cambridgeshire Horizons. RSHydro has installed bespoke flow monitoring equipment.

The key outcomes and benefits

SuDS reduce the risk of flooding; help to replenish groundwater levels and create habitat for wildlife using natural features in the landscape to create attractive surroundings. They offer a cost saving when compared to conventional drainage systems. Water consumption can be reduced which not only helps the environment but reduces load on the sewerage system.

An overview of any barriers encountered and top tips

Some of the design features of SuDS can be incorporated into small scale developments. For example permeable paving can be used for car parking spaces and the use of rainwater reuse systems could be encouraged.

Specialist advice from the local authority should be sought when considering larger scale development.

Contact

Wendy Hague
Cambridgeshire County Council
Shire Hall
Cambridge
CB3 0AP
Tel: 01223 715533
Wendy.Hague@cambridgeshire.gov.uk

Further information:

To find out more about SuDS techniques, research, policy and guidance visit the Environment Agency website.

www.environment-agency.gov.uk/business/sectors/36998.aspx

The Ciria website provides additional guidance and information on SuDS.

www.ciria.com/suds/index.html

Lamb Drove is featured on the Cambridgeshire County Council Website and on the Ciria website.

www.ciria.com/suds/cs_lamb_drove.htm

www.cambridgeshire.gov.uk/environment/planning/flows/

Community Led Planning – A tool to enable community resilience

Community Led Planning, the process by which communities identify and address the needs and aspirations of their population and place, is proving a useful tool in identifying opportunities for local action on adaptation to climate change.

CASE STUDY 3: Holbeach Parish Plan and Town Climate Change Plan

Brief summary

A dynamic and committed Parish Planning Group has been engaged in identifying the issues and concerns of its community through a Parish Plan and has also taken advantage of the new Climate Change Programme operated by Groundwork Lincolnshire to plan a number of environmental activities.

What climate impact were the group looking to adapt to?

Holbeach is close to the Wash on the Lincolnshire coast which is particularly at risk of sea-level rises. The community has taken the opportunity to undertake a project which assesses the general impact of climate change, in the context of its own social, environmental and economic development.

What actions were taken?

With the support of Community Lincs the community has undertaken a thorough survey of key issues and established an action plan for change. Over 1,700 people responded to the consultation on the future of Holbeach and its surrounding villages. Two key environmental actions that have come out of the Parish Plan are to encourage eco housing on rural exception sites and to investigate the options for an Eco-Centre. This centre would be housed in an

environmentally sustainable building and would incorporate bird watching facilities and educational displays on the environment, climate change, flood protection and the work of the drainage boards.

A complementary scheme, the Climate Change Programme, led by Lincolnshire Groundwork Trust, aims to assist communities to achieve sustainable environmental regeneration and to facilitate community action to address the impacts of climate change within the context of local economic and community development. The programme is based on targeted geographical communities and aims to work with specific neighbourhoods, groups of villages and towns.

Who was involved?

A range of organisations have been involved in the project including Holbeach Parish Council, South Holland District Council, Community Lincolnshire, Holbeach Business Forum, Holbeach Civic Society, Holbeach Seniors Forum & Age Concern, Holbeach Youth Club and other members of the community.

How was the project funded?

The Parish Plan was funded by Community Lincolnshire. They provided £3,000 to pay for community surveys, information leaflets, market stalls and the production of the parish plan. South Holland District Council also gave £10,000 to spend on the delivery of the plan. At the end of year one this £10,000 has levered in an additional £140,000 into Holbeach Parish, through grants and other partnership funding.

The key outcomes and benefits

This project has raised community awareness and levels of community engagement helping to ensure action on the ground. As well as Holbeach parish and district councillors, members of the public, the civic society, business forum, police and some local primary schools all got involved in delivering some of the 59 recommendations emanating from the plan. People took individual responsibility for delivering parts of the plan and were backed up by Groundwork Lincolnshire, Community Lincolnshire and South Lincolnshire Community and Voluntary Service, who helped in the writing of grant applications that secured much of the matched funding.

An overview of any barriers encountered and top tips

The Holbeach Town Climate Change Plan and Parish Plan provide an example of how social, economic and environmental priorities can be integrated and enable a structured approach to the challenges of climate change.

Contact:

Nick Worth (Councillor): 01406 701420
Email: nick@nickworth.f9.co.uk

Further Information:

Parish Plan:
www.nickworth.ik.com/attachments/Holbeach_Parish_Plan.pdf

www.groundwork-lincolnshire.org.uk

Community Action – Taking Control

New groups are being formed through a number of initiatives aimed at focusing communities' attention on the impacts of climate change. Combining the dual priorities of mitigation and adaptation, these new forums provide a platform for community action which can evolve as local understanding of needs grow.

CASE STUDY 4: Bovey Tracey – Devon

Brief summary

Bovey Climate Action is a community organisation that was founded in October 2006 to raise awareness locally of climate change and how to tackle it. The group works to help reduce carbon emissions from Bovey and the surrounding area and also lobby government and business for change.

What climate impact were the group looking to adapt to?

Bovey Climate Action wants to reduce carbon emissions to slow the rate of climate change but it also realises that some of the effects are unavoidable and we must adapt to them. The group's focus is on action which has helped to ensure that things get done.

Who was involved?

The local community, the group now has over 200 members.

What actions were taken?

Bovey Tracey is a rural town in Devon. In November 2006, the local vicar urged members of his community to join with him to take action on climate change, resulting in a group of eight volunteers forming an action group. The first few activities included a newsletter and posters advertising a showing of 'An Inconvenient Truth' at the local town hall to which 116 people turned up. The group also used the town carnival to raise awareness and took part in a procession as polar bears, wheelie bins, foot prints and soft drink cans. Slowly the group formalised its objectives:

1. To undertake activities that reduce emissions from Bovey Tracey and surrounding area.
2. To raise awareness of the impacts of climate change and the need to adapt to its effects in Bovey Tracey and surrounding area.
3. To lobby to reduce carbon emissions.

With its objectives in place, a determined professional aspect to its own branding and high profile speaker event, getting credence and involvement from the local council and key agencies became markedly easier. The group now has two hundred members, a committee of eight, and various action groups. It aims to have one climate change activity every month ranging from speaker events which are attended usually by twenty to forty people; to practical 'weekend' activities some of which over two hundred residents have attended.



During the course of the project, the group has witnessed an increase in concern for and action on climate change amongst the residents. The group has recently been involved in a garden share scheme and developing a solar water heating system for the local swimming pool.

How was the project funded?

It is resourced by grant funding, donations from members, and in-kind support from the local community.

The key outcomes and benefits

Residents come together in local groups to share ideas and take action. The programme of activities is designed to meet objectives of raising awareness of individual responsibility in saving energy and reducing carbon in Bovey and the surrounding area. In 2008 the South West Regional Development Agency (RDA) launched its Environmental Awards to recognise and celebrate the rich collection of environmental excellence in the region. From eleven categories Bovey Climate Action won the Community Award. This Award is a second scoop for the group which earlier in the year was awarded the Regen SW Award for Best Sustainable Energy Community. In addition to being plastic-bag free since Christmas 2007, it has established a community garden at Parke (in conjunction with the National Trust), been key to the setting up of the car share club, Moorcar, and has many energy and food initiatives.

An overview of any barriers encountered and top tips

This case study demonstrates the enormous potential for communities to lead on action both for themselves and to act as mentors for others.

Contact:

Bovey Climate Action
Tel: 01626 835311
Website: www.boveyclimateaction.org.uk/energy.html

CASE STUDY 5: Annesley Pit Top – Regeneration underpinned by the need to adapt to climate change

Brief summary

This proposed project will involve the regeneration of a disused colliery site. As part of the development environmental considerations will be incorporated into the design.

What climate impact were the group looking to adapt to?

The project is in development but demonstrates how adaptive techniques are being applied at the very earliest stages of planning for redevelopment in a multi-faceted project aimed at improving the economic, social and environmental wellbeing of a disadvantaged community.

What actions were taken?

This proposed project, which is in the course of development, embraces the broadest range of activities associated with regeneration and aims to include adaptive techniques to ensure the development, if successful, will be sustainable in the long term.

The proposal includes the purchase of the 120 acre site Annesley Pit Tops and possible asset transfer of a further 60 acres. This will include a community woodland, coal stocking yards, community restored allotments and a pocket park. The elements of the proposal most readily associated with adapting to the impacts of climate change are:

- Converting polishing ponds to fish ponds, providing a local source of food, particularly addressing the risk to fish stocks from traditional sources and ensuring local provision.
- Careful planning of species of trees and plants to ensure adaptation to warmer climate and potential for drought.

- The proposal to install wind turbines to provide energy for the site and Newstead village – a response to issues of energy security.

Who was involved

The project is led by the CAST team at Rural Community Action Nottinghamshire. CAST is a project which enables young people from the local area to gain skills and qualifications through angling and associated activities. These young people are often unable to take full advantage of more formal educational opportunities or unable to access employment. This project will provide further opportunities to enable local young people to learn transferable skills in addition to the links with the wider community in Newstead village.

How was the project funded?

Funding for the project is currently being sought.

The key outcomes and benefits

The key benefits of the project include increased green space for community use, and the development of community food production and renewable energy projects. The project also provides aims to engage the community to take action and provides the opportunity for the training and education of young people.

An overview of any barriers encountered and top tips

This is an innovative project which has a socio-economic basis but which is building in adaptation principles into the first design stages to enable the development to be sustainable in the long term. The key barrier to the project going ahead is access to funding.

Contact:

Mick Leivers,
Rural Community Action
Nottinghamshire

Newstead Miners Welfare
Community Centre
Tilford Road
Newstead Village
Nottingham
Nottinghamshire
NG15 0BS
Tel: 01623 727600

CASE STUDY 6: South Marston Parish Council

Brief summary

This case study highlights both the practical action and the strategic role that a community can take to adapt to the effects of climate change, including fostering relationships between the community, local business and the local authority.

What climate impact were the group looking to adapt to?

This case study provides an example of how a local community and parish council have worked together with landowners, the local authority and a major factory to find shared solutions to ongoing issues around flooding.

What actions were taken?

South Marston is a small village of 350 houses on the outskirts of Swindon, Wiltshire which experienced long term issues with flooding through both surface water and limited capacity in local watercourses. Over the years, there has been massive industrial development to three sides of South Marston. Whilst balancing ponds now serve these developments, the community generally had a low level of confidence that surface water would always be retained on site during periods of heavy rainfall.

This came to a head in 2007 when 20 percent of local houses were flooded. Initial local reaction blamed the failure of the balancing ponds at a major company's neighbouring site. The parish council thought further investigation was needed and helped local residents to explore the scope of the flooding problem as well as working with the authorities to identify the actual causes. It transpired that the problem lay further upstream and the tension between the community and the local company was overcome.

A working party was formed by volunteers to address flooding challenges which concluded that:

- Wider housing growth planned for Swindon, which would encompass South Marston parish, required a better evidence base and more realistic solutions to flooding risk.
- The same event in 2007 had caused widespread flooding within urban Swindon and residents felt that flooding in rural areas was not being given as much attention by the relevant authorities.
- No fundamental improvement had been made to the local watercourses and regular maintenance was, in many cases, non-existent.
- Numerous ponds that had traditionally retained surface water had been filled in over the years to maximise the use of the land.
- A number of landowners needed to be engaged in finding solutions, but some were not willing or motivated to help.
- There was an urgent need for the community to tackle the smaller challenges within the parish as well as inform the wider strategy under future development plans for the area.

Who was involved?

South Marston Parish Council, local community, landowners, local businesses.

How was the project funded?

By the Parish Council with Borough Council support.

The key outcomes and benefits

The result has been an engaged community who have been building partnerships with the aim of:

- Taking forward strategic issues by informing technical reports and feasibility studies.
- The Parish Council brokering solutions with landowners and local businesses to improve watercourses or water retention when the Environment Agency could not be involved.
- Ensuring all stakeholders are aware of the problem and accept appropriate responsibility for taking action.

An overview of any barriers encountered and top tips

Authorities can see flooding in rural communities as less of a priority than in urban areas because of the number of households involved, but the community can be proactive in raising awareness of the issues and seeking local solutions.

Recognition is needed that communities should be involved within technical studies on flooding risk by providing evidence as well being able to take practical action on the ground.

Some landowners did not recognise that they had responsibility for maintaining local ditches that border roads. Any powers of enforcement that might exist are generally not used due to lack of necessary resources.

Ongoing engagement of all stakeholders, both inside and outside the community, is vital.

Contact:

Roger Powell (Parish Clerk) 01793 827515, Colin McEwen 01793 825312

Website: www.southmarston.co.uk/

Email: clerksmpc@aol.com

CASE STUDY 7: Gloucestershire Village Agents



Brief summary

This project is an example of how individuals in a community can work together and address problems that arise in their area. Village Agents support people aged 50 plus living in rural areas of Gloucestershire, bridging the gap between the local community and the statutory or voluntary organisations able to offer help or support.

What climate impact were the group looking to adapt to?

This approach has proven to work especially around forward planning for emergencies related to weather events such as flooding, the occurrence of which is likely to become more frequent in future as a result of climate change. The approach would equally work in addressing the impact of other severe weather events such as storms, snow or heat wave.

What actions were taken?

During the floods of July 2007 Village Agents across Gloucestershire assisted their communities in numerous ways. The list below is by no means exhaustive but details the most common areas of assistance.

- Making sure older people had water and are heeding the advice of the authorities with regards to personal health.
- Finding out about the locations of laundrettes in the locality.
- Assisting communities in arranging for bowsers to be delivered and replenished.
- Phoning round to key contacts in the villages giving out the county council emergency helpline number.
- Delivering milk and bread and other staple goods.
- Involved in working parties to distribute water and this is continuing.
- Offering help to other parts of the county, those with 4 x 4's and plenty of water are willing to go where necessary.
- General ringing round to their existing clients to make sure that everything is okay on a daily basis.

Who was involved?

There is a team of 28 part-time Village Agents who:

- Provide high quality face-to-face information and support.
- Offer a facilitated signposting service and put people in direct contact with the appropriate agency.

- Help individuals make informed choices about their future needs.
- Identify unmet need in their communities.
- Primarily support older people, but other disadvantaged and isolated people are also able to receive Village Agent support.
- Cover 160 of the most rurally isolated parishes of Gloucestershire; this has grown from 96 since October 2006.
- Are recruited locally and receive ongoing training.

The Village Agent website provided at the end of this case study contains useful information and links of relevance to older people, plus much more.

How was the project funded?

From June 2008, Gloucestershire Village Agents has been mainstreamed as a service, with 3 year funding from Gloucestershire Primary Care Trust and Gloucestershire County Council. The successful partnership between Gloucestershire County Council and Gloucestershire Rural Community Council (GRCC) will remain in place with the Village Agents being employed and managed by GRCC.

The key outcomes and benefits

A key outcome has been the creation of a skilled network of advisors, raising awareness in communities so that they can help themselves. This has resulted in increased community engagement, more effective coordination and planning of activities. The successful partnership between Gloucestershire County Council and Gloucestershire Rural Community Council (GRCC) continues with the Village Agents being employed and managed by GRCC. When the scheme began in July 2006 a total of 92 parishes were covered by Village Agents this has now increased to just over 200 – reasons for this include

an identified need in a number of areas. In addition to everyday work, Village Agents have been called upon to meet with local authorities from across England interested in starting up similar schemes.

An overview of any barriers encountered and top tips

A named local person trained and equipped to provide advice and support, particularly to vulnerable people, is a particular benefit in times of need such as responding to flood or other climatic risk. Partnership with statutory authorities provides essential financial support and credibility to a scheme which relies on part time workers.

Contact:

Kate Darch (Village Agents Project Manager)
Tel: 01452 528491
Email: kated@grcc.org.uk
Website: www.villageagents.org.uk

CASE STUDY 8: Emergency Self Help Plans

Brief summary

Emergency Self Help Plans can be developed by local communities as a way of being prepared for major incidents. These may be disasters, accidents, or environmental problems such as such a severe weather, storms, snow or heat wave. These emergencies may result in a loss of essential services such as prolonged power failure, restricted access to drinking water or other disruptions to services. A number of local authorities provide guidance on writing a plan.

What climate impact were the group looking to adapt to?

Severe weather such as storms, flooding, snow and heatwaves may mean that essential services such as water supply, telephones or electricity are affected. By planning ahead communities can help to minimise the impact of severe weather events, which are likely to become more frequent in future as a result of climate change.

Nottinghamshire County Council

Nottinghamshire County Council, has employed a Community Resilience Officer who works within the emergency planning department. This post forms part of a team tackling the wider aspects of emergency planning but with a clear remit to help communities identify opportunities to alleviate problems which might occur as a result of climate change. Making use of whatever communication channel is most effective, including close working with town and parish councils, the Officer will help communities form their own community emergency plans. So far 12 communities have benefited from the service and undertaken their own plan. The Council has developed a template plan as a tool to make the work easier.

One example of the results of the scheme is the village of North Leverton in Nottinghamshire who have developed a plan at household level which enables them to know who is most likely to be vulnerable in a flooding situation and where local relief or support can be provided prior to the arrival of the emergency services. Another example is the establishment of flood emergency stores in Newark and Sherwood – containers strategically placed across the district with appropriate supplies (such as sandbags and hard hats) to enable the local community to respond quickly to flood risk.

Local Authority guidance on developing your own plans

There is a range of guidance available to support communities wishing to develop a self help plan. Some examples are provided below, however it would be worth contacting your local authority to find out if they have guidance available to help you draw up your own community self help plan.

Some examples of guidance include

- Northamptonshire: www.northamptonshire.gov.uk/en/councilservices/fire/eplan/Documents/Word%20Documents/Parish%20Plan%20Guidance.doc
- Royal Borough of Windsor and Maidenhead: www.rbwm.gov.uk/public/sdop_guide_to_developing_community_emergency_plans.pdf
- Buckinghamshire: Buckinghamshire County Council have developed guidance aimed a small community, and for circumstances where external professional assistance is not available – either because access is difficult or because the situation is so urgent that the community itself must act without delay. www.buckscc.gov.uk/assets/content/bcc/docs/emergency_planning/Emergency_Self_Help_Plan_Guidance.pdf
- Telford and Wrekin District Council have been working with Shropshire Rural Community Council to help communities to interpret and then develop their own emergency plans.

- Nottinghamshire. Guide to creating a Community Emergency Plan: www.nottinghamshire.gov.uk/communityemergencyplanguidance.pdf
- Newark and Sherwood district councils Community Resilience leaflet: www.newark-sherwooddc.gov.uk/ppimageupload/holding/image61382.PDF

Funding

No direct funding is needed by the community, however, time is needed to write the plan and the commitment of local service providers, businesses and the wider community is needed to ensure that the plan is effective and comprehensive.

An overview of any barriers encountered and top tips

It is very important to ensure that everyone in the community is aware of the plan once it is developed and knows the role they may have to play should they need to implement it. It is important to ensure that there is ongoing communication with all involved and to continue to monitor and evaluate the plan annually, so that contact details are up to date and ensure it remains effective.

Examples of Emergency Self Help Plans include:

Westleigh Parish Council
www.westleigh-devon.gov.uk/pages/westleigh_plan.htm

Instow Parish Council: North Devon
www.instow.net/parishcouncilemergency.htm

Another useful source of information is the cabinet office's website.
www.cabinetoffice.gov.uk/ukresilience/emergencies/weatherandflooding.aspx

CASE STUDY 9: Farndon Residents Environment Group (FREG)

The Farndon Residents Environment Group (FREG) of Nottinghamshire has been working in partnership with the Parish Council and has been involved in a variety of projects over the last ten years to preserve biodiversity and adapt to climate change. They have planted trees, repaired footpaths, helped to keep the village clean, managed habitats and catalogued the populations of local wildlife. FREG organised energy efficiency weeks in 1998, when very few people were talking about climate change or the energy crisis. Encouraged by Chairman Philip Holmes, the group has compiled a booklet called One Planet Living. The booklet aims to show people the practical things they can do.

FREG's past work has brought benefit to both the local environment and to local people, and they believe that by trying to combat climate change, Farndon – and indeed communities everywhere – will be able to benefit.

Due to its riverside location, Farndon itself is directly threatened by the floods that may result from climate change. FREG are working to engage as many people as possible, but getting a community of over two thousand people involved in a project has been a major challenge.



FREG conducted a survey on randomly selected residents in order to get their feedback.

"The survey suggested that most of us wanted to help, and are already taking small actions, but we are so overwhelmed with information that we don't know which actions are going to have the most impact. That's why One Planet Living includes a list of actions that everyone can take, arranged in the themes of the Every Action Counts project: Save Energy, Travel Wisely, Save Our Resources, Shop Ethically and Care For Your Area. Some actions are small – such as using tap water rather than mineral water. Others are more significant – such as avoiding flying when you travel and re-insulating your house. We want to make sure that the emphasis is truly there on the actions, it's not even about 'Climate Change' per se. It's about living in this world properly. Hopefully, the booklet and the work we're doing in Farndon will act as a model for other groups, other villages."

Philip Holmes, FREG Chairman

FREG believes these habits will have a big impact, especially if whole communities start to adopt them. FREG will team up with the Newark and Sherwood District Council to host a fair dedicated to environmental awareness.

How was the project funded?

Much of the funding for the work is raised through community fundraising. There are a range of other funding partners including Building Better Communities, Tree Council UK, Community Earth Watch, The Parish and District council and local business. A raffle club with a monthly and annual draw generates a regular income for the group, and owing to the growing recognition by the residents of their work over the years, they receive many requests with donations to plant a tree on their behalf. 60 trees have been planted in the last 2 years.



The key outcomes and benefits

The project has resulted in the funding of conservation work, mapping of riverside biodiversity, tree planting, bulb planting, litter picking and has led to the development of sustainable wildlife habitats. The project has also raised awareness of some of the local risks of climate change in the community.

For further information see the booklet 'The guide for the perplexed':
www.capacity.org.uk/downloads/casestudy/philip_holmes.pdf

An overview of any barriers encountered and top tips

The main issue is land ownership and permission to carry out conservation work.

Contact:

FREG, Philip Holmes

Email: phil.holmes@bluebottle.com

The Farndon Residents Environment Group continues to undertake projects in the village and runs a well-maintained website of its activities. www.freg.ik.com

CASE STUDY 10: Hoveringham Village Hall / Emergency Refuge

Brief summary

Hoveringham is a village of 350 residents situated about half a mile from the river Trent. The village is about 10 miles downstream from Nottingham in the flood plain of a major river. The village and its surrounding fields sit on a three metre deep bed of high quality gravel that has a history of flooding.

What climate impact were the group looking to adapt to?

The village has a 1 in 10 year risk of river flooding. The villagers have been told there is little hope of flood defences as the population does not warrant expenditure on a cost effective basis. It has also been pointed out that the situation will get worse not least because of an increased level of flood alleviation works up stream. This has provoked the villagers to take an increased interest in their own community.

What actions were taken?

The village gets 18-24 hours notice of a flood but then the water rises rapidly. A flood plan was created with the Village Hall, one of the highest points in the village, as the control centre and refuge for those unable either to reach their homes or for those whose properties have been flooded. This new use for the old community building brought its deficiencies into focus including an inadequate toilet block, a worn out lightweight roof, a kitchen that would not pass modern hygiene regulations, a lack of facilities for the disabled and heating that would be inadequate for emergency overnight accommodation.

A new chairman was recruited for the Village Hall Management Committee who sought advice from the Planning and Conservation Department of the local district council and the Village Hall's advisor from Nottinghamshire's Rural Community Council to identify what could be done and how to start the project.

A design brief was written with the help of ACRE publications. This document laid out the needs of both an emergency refuge with an incident control room, and the facilities of a modern community meeting place. Following a discussion in committee an architect was appointed and an application submitted to the Big Lottery for funding. The application process forced consideration of the ways to reduce the running and maintenance costs of the building. Annual energy and cleaning expenses formed 85 percent of the total expenditure so ways to make financial or environmental savings were considered.

The new refuge provides cover for ten beds for emergency use, portable folding screens to provide some privacy for overnight occupiers, dual fuel cooking facilities, power from an emergency generator, a broadband enabled computer to aid emergency communication as well as a shower and updated toilets.

Information about links to other incident controls centres has been obtained from the District and County Council. The Village flood database covers 98 percent of the buildings in the village, all the information on the database comes only from that supplied by the household. Flooding history identifies homes at risk and inhabitants that could need assistance whether due or because young children, age of medical conditions.

Who was involved?

The Village Hall management committee were supported by an advisor from Rural Community Action Nottinghamshire. The future Village Hall provides confidence for villagers in that in any flooding incident there is a plan, there is a comfortable well equipped haven and the means for the community to help those in danger. The full effect of this planning will not be known until after the event but the community is better placed than in the year 2000 when a lot of the effort was misplaced and ineffective.

How was the project funded?

The project was funded by the Big Lottery Community Buildings Programme plus community fundraising. Various grants were obtained from community sources. The lottery's 'Awards for All' covered kitchen appliances, tables, chairs, screens, the generator and some crockery.

The key outcomes and benefits

The community now has a purpose built emergency refuge which, given the high risk of flood in that area, is a particular benefit, whilst improving the village hall facilities for general benefit to the community. In addition, holding information within the community of those who may be at greatest risk and in need of assistance enables the community to take action immediately in the event of flood or other climate incident.

An overview of any barriers encountered and top tips

Maintaining up to date and accurate information of at risk groups is essential to ensure quick and appropriate action is taken. The opportunity to provide an emergency refuge whilst updating the village hall facilities is an easily replicable model for other communities to follow.

Contact:

Katie Wilson, Rural Community Action Nottinghamshire
Email: KWilson@rcan.org.uk

Local Contact:

Peter Watson
Email: pwbwatson@aol.com

Case Study 11: EcoTeams

Local communities are very keen to come together on a local scale to discuss a range of ways their lives impact on the environment, and to agree actions that they can take and to monitor the impacts of those actions. Eco Teams, run by Global Action Plan, provides a helpful resource to enable people to work together in a team approach, whilst there remains a strong element of self-help as well as finding local solutions to problems.

Groups help each other by sharing information about what has worked for them, which allows teams to find local adaptation solutions. For example, what drought-resistant plants grow well in the local climate; how to keep houses cool during sustained hot period, ways to improve houses heating efficiency and dealing with excess surface water from domestic properties during heavy rainfall.

Many problems need to be addressed on a local level with solutions reflecting local need. Once a community has found its capacity to deal with issues, it is often able to go on to other environmental action and some have become local action groups where none existed in the past. These groups provide excellent mentors for other communities wishing to be similarly dynamic.

Funding:

Community action does not require funding unless specific projects arise from assessment/planning exercises a community may go through. The Eco Teams initiative receives funding from: DEFRA's Environmental Action Fund, Calouste Gulbenkian Foundation UK, and the Rufford Maurice Laing Foundation.

Outcomes:

Raised community awareness, shared good practice, community action to find local adaption solutions.

Contact:

Global Action Plan
8 Fulwood Place
London
WC1V 6HG
Tel: 020 7405 5633
Website: www.globalactionplan.org.uk

Appendix A: Case Study Summary Table

Case Study	Topic	Summary
South Cerney, Gloucestershire	Excess Water and Flood Management	The Parish Council took a lead on developing a community led plan for the village in 2006; this highlighted a number of issues including the need to carry out ongoing flood monitoring activity.
Sustainable Drainage systems (SuDs)	Sustainable urban drainage to reduce the risk of flash flooding	An example of how SuDS have been used in a small scale housing development is Lamb Drove, Cambourne, where 35 affordable homes were built by Cambridge Housing Society on a one hectare site.
Holbeach Parish Plan and Town Climate Change Plan	Community planning	A dynamic and committed Parish Plan Group has engaged in identifying the issues and concerns of its community through a Parish Plan and also taken advantage of the new Climate Change Programme operated by Groundwork Lincolnshire to plan a number of environmental activities.
Bovey Tracey - Devon	Community Action	Bovey Climate Action is a community organisation that was founded in October 2006 to: <ul style="list-style-type: none"> • Raise awareness locally of climate change and how to tackle it • Reduce carbon emissions from Bovey and the surrounding area • Lobby government and business for change
Annesley Pit Top	Regeneration	This proposed project will involve the regeneration of a disused colliery site. As part of the development environmental considerations will be incorporated into the design.
South Marston Parish Council	Flooding - developing good relationships	This case study highlights both the practical action and the strategic role that a community can take to adapt to the effects of climate change, including fostering relationships between the community, local business and the local authority.
Gloucestershire Village Agents	Emergency Planning	This project is an example of how individuals in a community can work together and address problems that arise in their area. Village Agents support people aged 50+ living in rural areas of Gloucestershire, bridging the gap between the local community and the statutory or voluntary organisations able to offer help or support.

Emergency self help plans	Emergency planning	Emergency Self Help Plans can be developed by local communities as a way of being prepared for major incidents. These may be disasters, accidents, or environmental problems such as such a severe weather, storms, snow or heat wave.
Farndon Residents Environment Group	Partnership working	The Farndon Residents Environment Group (FREG) of Nottinghamshire has been working in partnership with the Parish Council and has been involved in a variety of projects over the last ten years to preserve biodiversity and adapt to climate change.
Hoveringham Village Hall	Emergency planning - flooding	Taking action to help respond to the risk of flooding in Hoveringham. The village has a 1 in 10 year risk of river flooding is unlikely to receive investment in of flood defences and is likely to be exposed to increased risk of flooding as a result of climate change and flood alleviation works up stream.
Ecoteams	Partnership working	EcoTeams, run by Global Action Plan, provide a resource to help people to work together in a team to find local solutions to problems.

Notes

Notes