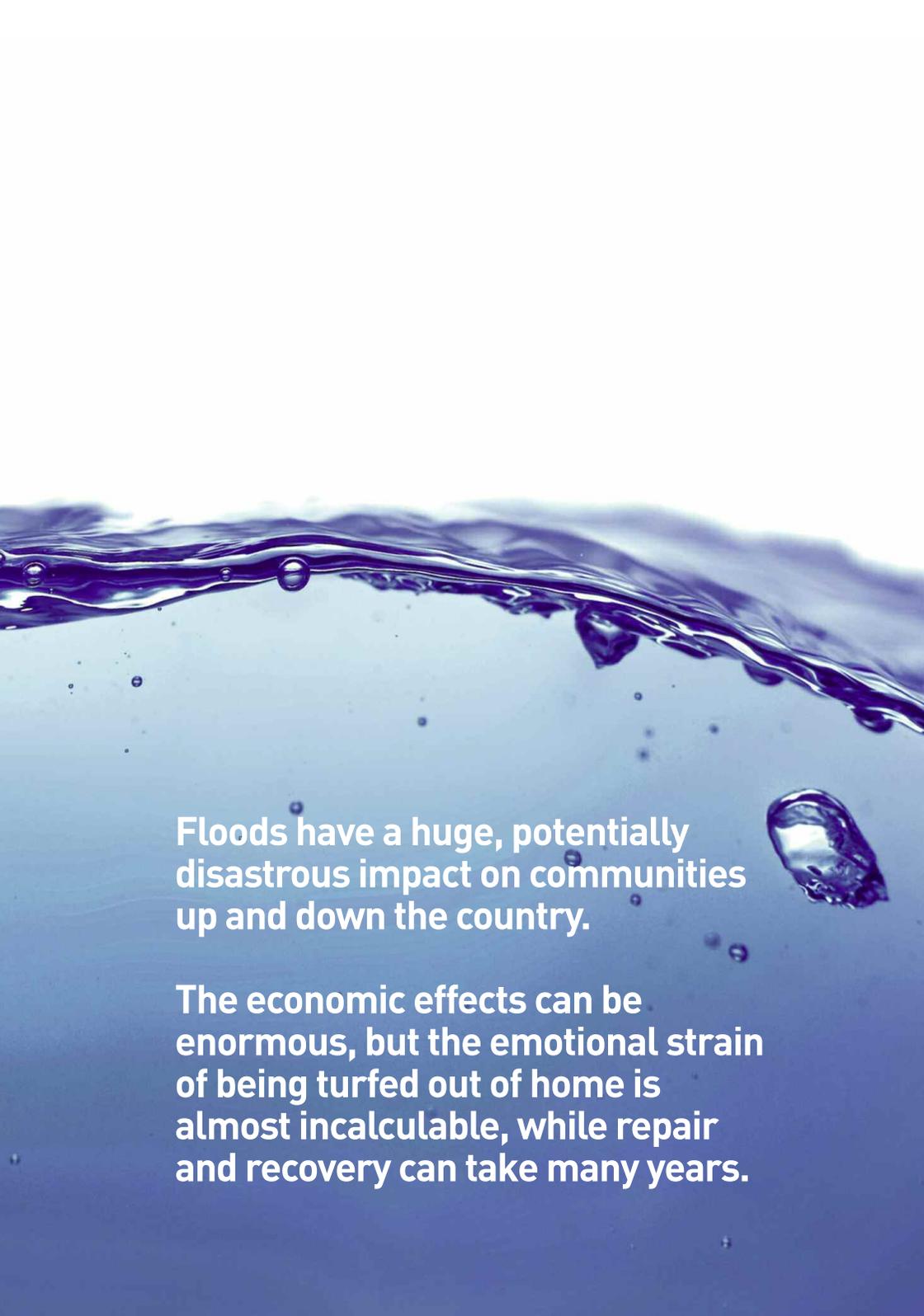


# Managing floods: supporting local partnerships





**Floods have a huge, potentially disastrous impact on communities up and down the country.**

**The economic effects can be enormous, but the emotional strain of being turfed out of home is almost incalculable, while repair and recovery can take many years.**

# Contents

<b>Introduction</b>	<b>2</b>
<b>Case studies</b>	<b>8</b>
<b>Recommendations</b>	<b>21</b>
<b>Conclusion</b>	<b>23</b>
<b>Acknowledgements</b>	<b>26</b>

## Authors

**Andrew Walker, Policy Researcher, LGiU, and  
Andy Johnston, Chief Operating Officer, LGiU**

# Foreword

Flooding is inevitable in many parts of the country. It can have a drastic and long-lasting impact on communities. Though we cannot stop it happening, we can look for ways to minimise the damage and to support those affected.

It is not something that can be achieved by government alone, however. The complex and interwoven issues involved with flooding make it necessary to build close local partnerships, to tap into local knowledge, and harness the assets within our communities.

Local government is ideally placed to do this, but it must be supported. There are significant changes taking place in local government. Rising demand and shrinking resources are making councils think differently about the way they work and the sort of organisations they work with.

Faced with budget cuts of up to 40%, innovation is both essential and extremely challenging. Technology can provide tools to help make this happen, but they must be designed and implemented with the people who use them in mind.

Increasingly local government must move from being an organisation that drivers or commissions services to one that creates the conditions for people to help themselves and each other. Citizens, the state and civil society all need to work

together but this will require multiple organisations to align at the local level, with shared goals and understanding.

This report is an important step in understanding how we might support local partnerships to manage the immediate and long-term problems associated with flooding. These problems are not going away so it is essential that we engage as individuals, as communities, and as a society.

**Jonathan Carr-West**  
**Chief Executive, LGiU**



# Introduction

Floods have a huge, potentially disastrous impact on communities up and down the country. The economic effects can be enormous, but the emotional strain of being turfed out of home is almost incalculable, while repair and recovery can take many years.

In many parts of the country flooding is inevitable, yet the worst effects can be mitigated and local government has a key role to play supporting communities to do this.

Local authorities have responsibility for managing surface water flood risk. In this report we recommend that do this effectively they will need to set up local flood forums to provide coordination and leadership for complex stakeholder partnerships.

We also recommend that the government should support this work by reallocating the current budget for flood risk. As surface water is the principle threat for the majority of properties at risk of flooding, local authorities should control the majority of the budget to manage that risk.

Flooding events are already reasonably frequent and are likely to become more so as a result of climate change, population growth, urbanisation and ageing infrastructure. The effects will be felt more profoundly in vulnerable communities. Adaptation

and resilience are essential, yet this requires investment of time and resources.

Citizens and government at all levels urgently need to engage with this issue. At present there is inadequate attention being paid to flooding. The Environment Agency estimates that for every £1 spent on flood defence £8 is saved in terms of insurance and costs to homes and businesses.

However, according to the latest Committee on Climate Change report<sup>1</sup>, nearly three quarters of existing flood defences on private property are not being sufficiently maintained.

Furthermore, the cumulative impact of new developments on future flood risk remains relatively unknown. All the minor changes that take place, such as the silting up of ditches and paving over of gardens, result in substantial changes to surface water.

The Environment Agency has 40% fewer staff to advise local authorities and developers on planning applications in flood risk areas than it did in 2010.

Given the complex nature of these issues, there is a real need for clarity and leadership. This is challenging, however, because a network of agencies have decision-making powers and control over budgets to protect communities from flooding.

In England the upper tier local authority is responsible for surface water flooding, while lower tier local authorities are responsible for planning development on floodplains, the

---

<sup>1</sup> Committee on Climate Change (2014) *Managing climate risks to well being and the economy: Progress report of the Adaptation sub-Committee*

Environment Agency is responsible for main river flooding, individual households are responsible for small ditches on their land, water on roads is the responsibility of the highways authorities and water in sewers or treatment works is the responsibility of private water companies.

In addition, there is no clear direction as to what each emergency service should do under flood conditions. In extreme circumstances the army may even be called in and the main responsible body – the Environment Agency – operates under a permissive system which means its allowed to act but doesn't have to.

This is a more straight-forward prospect in the Netherlands, where water management works its way through the tiers of government. The Municipalities have responsibility for local planning, sewerage and drainage and alongside them work the Water Boards, which manage local water bodies, dyke construction and cleaning wastewater.

Both the Municipalities and the Water Boards are accountable to the provincial government. Meaning that provincial government (roughly equivalent to large counties) have a comprehensive overview of the factors that affect flooding and access to the resources and expertise to manage them. In addition there are differences in legislation that give primacy to flood risk management issues in planning and delivery.

Local people, public agencies, and civil society need to work together to solve complex social problems, which cannot be sufficiently addressed by government activity alone, as the LGiU has argued in several recent publications.<sup>2</sup>

---

2 *Connected localism: A blueprint for better public services and stronger communities* (2013); *Municipal futures: How we might begin to think differently about local government* (2014)

An effective response to flooding will require close partnerships between the public and private sector, but it will also rely on engaged citizens.<sup>3</sup>

New technology has the potential to revolutionise the interaction between local government and citizens, enhancing the opportunities for closer collaboration and deeper engagement. However, as the LGiU stressed in a recent report, *Technology and Transformation in Town Halls*<sup>4</sup>, we need a people-centred approach to technology.

We need to be clear about how technology can support communities and empower citizens by addressing their needs. This means that technological innovations should be designed around citizens and communities from the beginning, rather than imposed on them, fully formed.

Local government practice will shift over the next few years from just providing services, to providing the space, networks and support for communities to take control of their lives.

Engaging in meaningful dialogue over an issue as serious as flooding is an important component of this shift, not least as the impact of climate change is felt more and more. Local government is in an excellent position to begin to do this.<sup>5</sup>

- 
- 3 Committee on Climate Change (2014) *Managing climate risks to well being and the economy: Progress report of the Adaptation sub-Committee, chapter 2*
  - 4 Carr-West, J. & Greenhalgh, L. (2014) *Technology and transformation in town halls*, LGiU, London
  - 5 Gash, T. Randall, J. & Sims, S (2014) *Achieving political decentralisation: Lessons from 30 years of attempting to devolve political power in the UK*; Institute for Government

## RainGain

Potential technological solutions to flood management are being explored. The European Union is currently funding RainGain, a research project that seeks to develop flood prediction techniques using radar and surface water modelling.

Partners from Belgium, the Netherlands, France, and the UK have been working for the past two years to produce a model that could drastically improve the accuracy of flood prediction.

The RainGain project seeks to obtain detailed rainfall data at a fine scale, to use these data to analyse and predict urban flooding and to implement the use of rainfall and flood data in urban water management practice to make urban areas more resilient to local rainfall-induced floods.

If it works it will result in local authorities getting approximately 30 minutes warning of a surface water flood.

It is possible that services developed through RainGain could be used directly by members of the public, as well as flooding managers and engineers, to build responses and coordinate defences. Increasing the already large number of stakeholders involved in flooding does mean that good leadership and coordination is essential.

Local government could perform this coordinating role, and provide the leadership to build firm partnerships with citizens.<sup>6</sup> This could be strengthened by reallocating the national flood risk management budget, which currently assigns 92% of

---

<sup>6</sup> Walker, A. (2014) "The powerful council" in *Municipal futures*, LGiU, pp.8-13

spending power to the Environment Agency, leaving just 8% for the lead local flooding authorities.<sup>7</sup>

## Recent developments

Following major flooding events in the UK in 2007, there have been significant policy developments that have impacted on how flood risk is managed at the local level.

In 2008 Sir Michael Pitt published his final review of lessons learnt from 2007. The report argued that coherent and coordinated responses to flooding require strong local partnerships. It made key recommendations to strengthen accountability for local flood risk management and requiring sustainable drainage in new developments, which remain largely unimplemented. It also recognised that flood protection is an important component of local regeneration.

The next major step was the Flood and Water Management Act (FWM) 2010, which established Lead Local Flooding Authorities in all areas, to coordinate local partnerships, draw up comprehensive Asset Registers and produce Local Flood Risk Management Strategies.

The National Planning Policy Framework has also had an impact on flood risk management. It contained a Flood Risk Management Hierarchy section, which requires local authorities to demonstrate that flood risk has been a consideration in all planning processes, and, where development is necessary, that flood risk is managed in an effective and sustainable manner.

---

<sup>7</sup> House of Commons Environment, Food and Rural Affairs Committee (2013) *Managing flood risk: Third report of session 2013 – 2014*; House of Commons

# Case studies



In order to understand how flooding is managed locally, the LGiU investigated current governance arrangements in three local authority areas. We sought to assess how multiple agencies work together, how partnerships are coordinated, and how the public is engaged.

We conducted interviews and site visits with local authority officers, members of the public, and a range of other stakeholders in Greater Manchester, Kent, and Oxford.



## Key points that emerged from the studies include:

- Questions about who has responsibility or who would have responsibility, or act as the hub when there is an emergency need to be clarified.
- There is widespread lack of confidence in current surface water modelling systems, so any new service would need to be introduced slowly and demonstrate a good track record to build confidence.
- Access to better data will be useful in certain circumstances, but is not universally required.
- Partnerships across the public sector and with the private sector appear to be working well in the areas we investigated, especially where there are forums set up explicitly to bring stakeholders together, to provide leadership, and to manage a coordinated strategy.
- It will be necessary to look again at the Pitt Review in order to see why Flood Risk Strategies have not been produced in more areas – to ascertain whether this is a problem with the partnership model more generally, or due to a lack of resources.
- Increased working across local authority boundaries is a positive development. Salford officers have been working across Greater Manchester and Lancashire, and engineers from Oxford worked with colleagues in Buckinghamshire.



## CASE STUDY 1

### Greater Manchester

Managing flood risk in a large urban conurbation like Greater Manchester, where 10 authorities have responsibility for individual areas but also work together through the combined Association of Greater Manchester Authorities (AGMA), inevitably comes with challenges and opportunities. AGMA works closely with the North West Regional Flood and Coastal Committee (RFCC) and brings together the local Lead Flooding Authorities (LFFs) in Greater Manchester.

There are two forums that support the governance arrangements for the city. The first is the Greater Manchester Flood and Water Management Board, which has a strategic function and makes decisions that affect the city region as a whole. Each authority is represented on the board, usually by the chief executive.

Next, Salford City Council has its own Flood Forum, which provides the space for local stakeholders to engage. It brings together emergency planners from AGMA, engineering teams, drainage, and other stakeholders, such as the University of Salford, United Utilities and Living Sustainably in Salford (a lottery-funded community engagement project).

These bodies work closely together and share a number of members. They are also directly supported by the Planning Officers Group (POG) and the Flood Risk

## CASE STUDY 1

Officers Group (FROG), which are both GM-wide technical support teams. AGMA does not produce its own surface water models, but relies on those it is sent by the Environment Agency and Defra.

Though the various teams have worked together for a long time, partnerships have improved and strengthened following the Flood and Water Management Act as there is a requirement that they work together. However, there is still a need to smooth out the wrinkles and make the overlaps between authorities work more effectively. There are many lead authorities, each with their own individual focus, whether it is surface water, canals, or rivers. On top of this the Environment Agency has its overall plans and strategies, and engagement with developers happens on a piecemeal basis.

The lack of clarity over emergency responses, roles and responsibilities, particularly within a legal context is an issue that is currently being grappled with. This is potentially the weakest link because the whole response is predicated on 'who finds out first'. There is a real need for a single point of contact between citizens and the state, and a single forum to coordinate and lead responses.

There have been on and off discussions about moving powers up to AGMA level, or keeping them local. So far it has been decided that these are local issues and the decision making processes should be kept as local as possible.

## CASE STUDY 1

It is widely seen that there is a need for more nuts and bolts strategic coordination, and more widespread engagement at local authority level. Rochdale, for example, has quite an engaged process and devolved structure. There are several distinct communities in the borough, which work almost like parishes, and are particularly engaged over flood strategy. It will be increasingly important to find ways to replicate this kind of work, as demonstrated in the Flood Resilience Pathfinder Projects (*see box opposite*).

Better access to local data would allow that conversation to be smarter and more direct – could be gold dust if it buys an extra hour or half hour to get the message out. If an area is known to be at risk, better data could facilitate more intelligent and preventative maintenance. More accurate investigations following a flood event would help to sharpen what is currently done in Greater Manchester.

Shared confidence in the data and the models used is essential, especially regarding public engagement strategies. It is apparent in areas like Greater Manchester that there is insufficient confidence in surface water modelling techniques and the efficacy of flood warning systems.

Public confidence is undermined by false alarms and poor or unusable information. With that in mind, a new service like RainGain would have to be implemented carefully and with users in mind from the very beginning.

## The Flood Resilience Community Pathfinder

The engagement pathfinder in **Rochdale** is an excellent example of an innovative approach to engagement, especially as the communities involved are particularly vulnerable, as well as being at risk from some of the worst effects of flooding.

The project forms one of 13 Defra Flood Resilience Community Pathfinder projects investigating ways of working with communities to reduce the risk of flooding and its impacts.

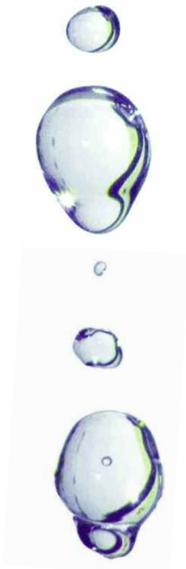
All of the projects involve the development of citizen-led flood action groups that take action through partnership working in a variety of ways.

- In **Warwickshire** and **Northamptonshire** communities are installing monitors on river levels, trash screens and culverts linked by telemetry to local warning systems (text, website, email, etc.)
- In **Southampton** Belsize project the local community responded collectively to protect themselves, although the group has only just started to form.
- In **Cornwall**, a community payback scheme has seen offenders clearing and composting leaf litter from streets to reduce the risk of flooding in places such as Lostwithiel; last winter this was timed to clear drains just before storms.

- In **Calderdale** flood action groups are heavily involved in discussions about how to reduce their flood risk in the future and how to ensure that people are warned in areas where there may only be 15 minutes to react.

Other areas have also been proactive. **Wychavon** introduced a local system of flood warning following the 2007 floods to ensure that local communities could respond as soon as possible.

**Buckingham** Flood Action Group, with **Aylesbury** DC and others, have developed a community incident plan that enables local action to take place safely before the emergency services arrive. It is linked to local early warning approaches, with more under discussion.





## CASE STUDY 2

### Kent

Kent is a large county, with rural, urban, and coastal areas. Coordinating partnerships and coherent responses to flooding carries a number of serious challenges.

The main coordinating body in Kent for flood response is the Serious Weather Advisory Group (SWAG), which is usually convened by the Environment Agency following a five-day weather alert.

SWAG brings together the Kent County Council, district councils, emergency services and water companies. The SWAG meeting is then held around three days before the expected flooding and refers to local multi-agency flood plans. The major barrier to action, however, is the lack of resources available to be deployed at short notice over an area as large as Kent. Given that there is currently no way of knowing exactly which areas will be most severely affected it is seriously challenging to deploy those resources effectively.

Kent is a two-tier authority, but Kent County Council is the lead flooding authority and has responsibility for around 70,000 houses at risk from various kinds of flooding. There is a pan-Kent multi-agency flood plan, drawn up by the Kent Resilience Forum, and a local plan drawn up by each district that sits underneath it. The Flood and Water Management Act 2010 reduced districts' role in flooding and the county council has varying contact with them today. Some have retained an active

## CASE STUDY 2

role in flooding where they have good networks of experts and contacts, while Kent County Council has strong regional liaison with Environment Agency partnership teams.

There are often misconceptions among the public about where responsibility lies, as many do not realise that all types of flooding on private property is the owner's responsibility. The public also think that the council has control over water companies, which they do not.

There is also a standing committee for flood risk management that allows elected members to engage on flooding issues, which sometimes involves direct conversations related to specific areas. The council would consider hosting data related to specific communities with specific needs, but would be reluctant to host anything more detailed or give out forecasts.

There needs to be a more rigorous and consistent approach and a better process for assessing and gathering information and knowledge on local flooding. Kent County Council carries out some surface water modelling already, but the process is hampered by vague weather forecasts. Without being able to know exactly where in Kent it will rain, accurate modelling is almost impossible.

This has been seen as a key drawback for the multi-agency flood plans, which are based less on hard data and more on anecdotes and rules of thumb. There is a

## CASE STUDY 2

need to take account of surface water modelling and local knowledge as much as possible, but drawing together all the smaller factors that affect surface water, such as new paving in private gardens, is extremely challenging.

Ultimately there is a need for a consistent and agreed set of objectives for flood risk management across the partners and coordination across the water cycle. As it stands, partners have different ways of measuring flooding and all have different funding mechanisms.

One of the key problems faced in an area such as Kent is the fact that flooding has been fragmented into a number of different areas of responsibilities. Joined up measures, objectives, and strategies are necessary to identify the flood problems in Kent and to address them together. At the moment separate partners address their own small issues.

Though a service such as RainGain would be useful for an area like Kent, there would be significant cost involved in setting it up and maintaining it. Given the size of the county, multiple radars would be needed to gather sufficient data, which would be expensive and resource intensive. Even other options, such as mobile radars, would be difficult for councils to commit to.

Therefore, Kent County Council might not be prepared to fund data collection itself, but would be interested in buying data from a third party, if it could enhance its flooding strategy.



## CASE STUDY 3

### Oxford

The Oxford Area Flood Partnership was set up following major flooding in the city and the surrounding area in 2007. The group comprises of the City Council, Oxfordshire County Council, Environment Agency, Network Rail, Thames Water and surrounding district councils.

Managing floods in Oxford is a challenge. The Thames and Cherwell rivers meet in the city, which sits on a wide flood plain, while a network of water courses run through it and converge at the southern end. The Partnership started working together early in order to use their budgets more effectively. It was also important that responsibility was shared to avoid attempts to apportion blame for flooding events, which occur regularly.

The combination of two river catchments, ground water issues, and a complex surface water picture makes accurate prediction very tricky. At present the partnership work on broad brush, five-day forecasts from the Met Office, and combine it with their river catchment plan, which gives a one and a half to two-day warning of flood risk. It is acknowledged that flash flooding is harder to predict.

Forward planning is, therefore, an essential feature of what the Partnership has set out to do. Two important schemes demonstrate the efficacy of the local partnerships. The recent scheme in Kennington, just south

## CASE STUDY 3

of Oxford, to reduce the risk of surface water flooding, was facilitated by Thames Water in partnership with Oxford City Council, Vale of White Horse District Council, Oxfordshire County Council, Network Rail, and the Environment Agency.

With a budget of £1m, a range of measures were put in place, including a new surface water sewer, relief channels, and de-silting of a railway bridge, to improve the flow of water through the city.

The planned Western Conveyance scheme is much larger, with backing from the Local Enterprise Partnership, Regional Flooding and Coastal Committee, local business and Network Rail. The plan is to create more channels in the West of Oxford to distribute water through the city and avoid several of the pinch points that put homes and business at risk. A great deal of the publicity around the scheme has been to dispel the perception that it will solve all the flooding issues in the area.

Public engagement is essential for the Partnership, and the various pressure groups in the city are seen as vital partners. They attend meetings regularly and help to distribute information and publicity for the Partnership.

The Oxford Flooding Alliance is a very active and engaged group, which works closely with the Partnership and advocates for new schemes and developments to

## CASE STUDY 3

help mitigate flooding, including a recent set of culverts, installed by the Environment Agency, to help water flow on the flood plain.

Around 60% of the parishes have parish level flood plans, while community wardens liaise with the council and environment agency. However, though 4,000 homes are at risk in the area, only around 50 have actually installed property level protection. Property level protection is not a panacea, though, and pumping is often an essential part of response. Some individuals in Oxford have purchased and deploy their own pumps.

In its publicity the Partnership is open about the challenges it faces. Though it emphasises that it cannot solve all the problems, they do discuss the help, mitigation, and potential funding it can offer.

# Recommendations

## Recommendations for local government

1. Lead local flooding authorities should set up local forums to forge closer relationships between local government and other organisations related to flooding to provide a coherent focus for state activity and a single point of contact with the public. This would require coordinated partnerships with the Environment Agency, emergency services, and water companies, to prevent duplication, ensure coherent information is collected and distributed.

2. If councils are expected to coordinate and manage local flood risk strategies they will need greater control of the budgets allocated for flood protection. The government should therefore review the current distribution arrangements, which allocate 92% of the £656m to Environment Agency for flood risk management, leaving just 8% for councils, drainage boards and lead local flooding authorities. Given that over three million of the 5.5 million properties at risk from flooding in the UK are at risk from surface water, we recommend adjusting the budget so that 60% is controlled by lead local flooding authorities.

To give budgetary control to local authorities will not remove the Environment Agency from its leading technical and delivery role but will mean that the resources are better targeted to local need and in a way that is accountable to the people who benefit from the scheme and those who pay for it. Local authorities are

able to join up the engineering of flooding with the unique characteristics of individual households and bring an ability to aggregate funds for public health, community cohesion and flood control.

## Recommendation for RainGain

1. Tests of the service should be expanded to encompass all the potential stakeholders, including the public. Effective partnerships are founded on confidence and wider, inclusive testing is essential to ensure that those who might use the tool are confident that it works.



# Conclusion

RainGain is intended as a flood prediction service for drainage engineers, but it could also be used by non-experts. With the right design and interface it could provide useful information about flooding directly to the individuals and communities affected by it.

Engaging with more stakeholders would make greater leadership and coordination all the more important, and local government should be supported to fulfil this role.

In our discussions with councils about whether and how Rain Gain would be a useful tool it became apparent that there were three ways in which flood protection could work:

- As an activity undertaken by local government officers, who share information and take action when necessary. There is a real strain on the resources currently available for authorities to deal with flooding, so they are unlikely to have the capacity to manage a new tool entirely in-house.
- Through individuals, who have the responsibility to use the available information, take decisions about private property and to coordinate community level action. There is an issue with capacity here, however, as few members of the public have the skills or understanding

of complex data to fulfil that responsibility independently.

- Or through partnership between citizens, local government officers and other public bodies.

Though it inevitably requires greater coordination and leadership to ensure that various stakeholders are pulling in the same direction, this third option fits with the direction that local government should be beginning to take more generally.

Rather than always looking for ways to do things for people, local government needs to start finding ways to make things happen.

This means opening up space for collaboration with and between citizens, it means sharing information and resources across institutional boundaries, and it means understanding and nurturing the networks that already exist within our communities, tapping into neighbourhood assets and listening to the needs of citizens.

There is a key challenge here, however, around raising awareness and increasing engagement among local people. Many people do not appreciate the risks of flooding, or the short lifespan of products to protect their homes.

Finding ways to connect meaningfully with communities, as in the Pathfinder schemes, is essential for building up the knowledge and understanding necessary for new partnerships.

Success can bring its own issues. Following the 2012 floods West Sussex County Council started on a programme of recovery with the National Flood Forum and partners and this

has led to a dozen communities forming flood action groups and working with partners to reduce their flood risk. Demand for facilitation and support from other communities has grown rapidly and this has led to questions of how to engage with networks of groups across a large area.

RainGain could potentially be used as an engagement tool in a similar way to the Environment Agency's Floodline Warnings Direct service, which provides information by phone or email. This would require a single point of contact, however, to receive, manage, and distribute data in a useful way.





# Acknowledgements

We would like to thank the following individuals and organisations that helped with our research. Any mistakes and/or omissions are the responsibility of the LGiU.

Cllr Derek Antrobus, Assistant Mayor  
for Strategic Planning, Salford City Council

Association of Greater Manchester Authorities

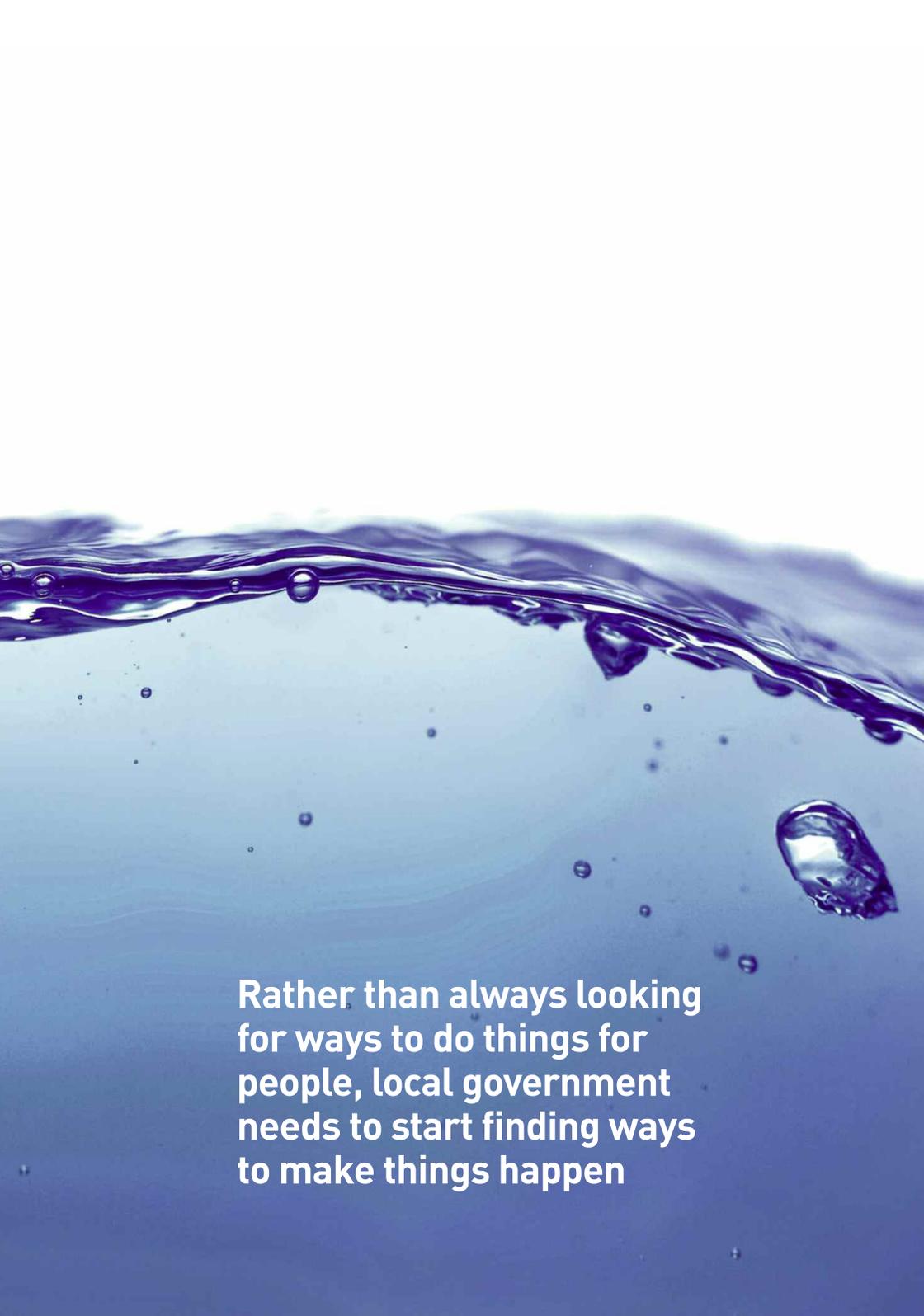
Paul Cobbing, CEO of the National  
Flood Forum

John Copley, Head of Environmental  
Development, Oxford City Council

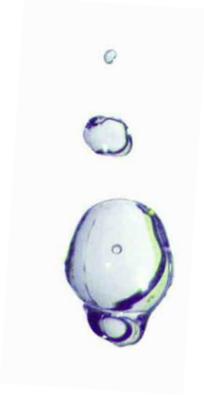
Oxford Area Flood Partnership

Rochdale Borough Council

Max Tant, Flood Risk Manager,  
Kent County Council



**Rather than always looking  
for ways to do things for  
people, local government  
needs to start finding ways  
to make things happen**



**LGiU**  
the local democracy think tank

**Third Floor,  
251 Pentonville Road,  
Islington,  
London N1 9NG  
020 7554 2800  
info@lgiu.org.uk  
www.lgiu.org.uk**

**The LGiU is an award winning think-tank and local authority membership organisation. Our mission is to strengthen local democracy to put citizens in control of their own lives, communities and local services. We work with local councils and other public services providers, along with a wider network of public, private and third sector organisations.**