FRS17192 SUPP - SIMULATION WORKSHOP BRIEFING PACK - WATER COMPANY EMPLOYEE

Contents

Welcome

Thank you for your interest in participating in our online simulation workshop – we really value your time, commitment and inputs. The simulation exercise has been developed to explore ways in which communities can exchange views, build understanding and plan together to help reduce flood risk in the face of climate change predictions.

The simulation was originally developed as part of the project *'Working together to adapt to a changing climate: flood and coast'* (2019-21), which was funded by the Flood and Coastal Erosion Risk Management Research and Development Programme (Environment Agency, Defra, Welsh Government and Natural Resources Wales). A steering group of representatives from organisations in one of the project pilot areas (Caterham and Old Coulsdon, Surrey) supported the development of the exercise. This included community organisations, local authorities, a water company and the Environment Agency. A specialist engagement organisation, Icarus, coordinated the project and produced the final version of the simulation.

This workshop is a little different from a normal meeting. To encourage creative and ambitious ideas, participants will be invited to see the issues from a different perspective. We have created a scenario that will encourage you and the other participants to weigh up a range of options for flood risk management. You will be doing so from a perspective that is likely to be different from your own – we want to make sure that a range of different views are represented and considered, and to encourage some shared understanding of why people may feel the way they do about different options.

This pack includes a set of materials that we hope will help you prepare for our workshop:

1. A brief explanation of how the simulation will work and what you will be expected to do.
2. How to participate in our online workshop.
3. A briefing on the scenario, the options we will consider and your role within the simulation.

Please read through these materials in advance of our workshop. During the simulation itself, you will need to have the information about the options under consideration and the briefing about your role and preferences in front of you for reference.

We are looking forward to seeing you soon!

1. Workshop format

The simulation

A fictional but plausible scenario

We have created a fictional scenario of a place that is facing challenges of surface water flooding. The scenario is set in the near future, and we are asking you to imagine a meeting of key stakeholders that has been convened to discuss and recommend a set of potential options for flood risk management. For the full scenario, please see briefing under 3A. below. The options are explained in section 3B below.

Representing key stakeholders

Each participant will represent a particular stakeholder – someone who cares about what happens and who has a set of values, priorities and preferences. Your role is set out in detail in your confidential briefing in section 3C below. Please try your best to stay true to your role throughout the simulation, even if your own preferences are different from those specified in your role. Within the parameters specified in your role description, you can improvise. You may also change your mind in response to the arguments of other characters, but please stay true to your priorities.

Early in the simulation, you will be asked to introduce yourself in your role, and to give a brief statement on what matters to you (see role briefing).

Identifying priorities and possibilities

We will then identify each participant's priorities and take a look at the degree of consensus or disagreement on each option. Following this, participants will discuss different possibilities with each other and try to find a package of options that might be agreeable to as many participants as possible.

Weighing up potential funding sources

In a second step, you will then collectively weigh up different potential funding streams. As with the options themselves, there will be some difficult trade-offs involved.

Facilitation

Throughout, your discussions as a group will be supported by an independent facilitator who will encourage all participants to speak and express their views. We will also use visual aids to help us all see what is being discussed.

What we're trying to achieve

By the end of the simulation, the group will aim to be in a position where it can recommend a series of options. Depending on the dynamics of the discussion, this may or may not be possible. Overall, the process is as important as the outcome.

Please bear in mind that there is no one 'right' outcome of this simulation – different outcomes are possible and legitimate, and your group might even come up with new options and ideas. We are looking forward to seeing what emerges!

Debrief

After the simulation, we will reflect together on what happened and on our individual and collective learning from the process.

2. How to participate in our online workshop

This workshop will be held online. You will be able to access it via the following link you have been sent by email. We will also confirm the date and joining time via email.

You will need a device with the following capacities:

1. A screen large enough for you to see the other participants and visual aids that we will share with you.
2. A camera, so that facilitators and other participants will be able to see you.
3. A microphone and speakers or a headset.

If you have any accessibility needs, please get in touch with us as soon as possible to let us know. We will try our best to make participation as easy and enjoyable for you as possible.

3. Detailed briefing – the scenario, the options and your role

On the next few pages, you will find three key bits of information that you will need to read in advance to prepare for the simulation:

1. An overview of the scenario.
2. An outline of all of the options under consideration, including their costs and benefits.
3. An overview of your role, including your priorities and preferences.

When you join the online meeting, please have these materials in front of you so you can refer to them during the discussion – we are not expecting you to remember them all!

A. The scenario

The setting

The simulation is set in 2025, in a place called Springhill. Springhill has a population of close to 24000 people. The area is hilly, with many steep roads, and with homes and businesses both on the hills and in the valleys.

In recent years, the area has come under considerable pressure from government and developers to plan for new housing and commercial developments. In addition, there are always some existing homeowners seeking to make alterations to their properties – e.g. by building extensions and/or creating paved driveways in their gardens.

The problem

Springhill has been badly affected by flooding in recent years. This has affected an increasing number of households, businesses and public buildings, including schools and community facilities. Many residents, however, still do not know that they or their neighbours could be at risk, what is causing the flooding and what can be done about it.

Intense storms, often in summer, can deposit a huge amount of water in a very short time. To make matters worse, the water can overload sewers; this means sewage has entered people's properties. The destruction that flooding brings to Springhill takes many months to put right, and people who have already flooded live in fear of the next heavy rainfall. Flooding has also badly affected a number of local businesses, and some would not be able to survive another major flood.

In the last few years, flooding has become more frequent. The most vulnerable areas of Springhill were flooded in 2016 and 2021. A major summer storm on 15th July 2024 affected a wider area: it caused extensive flooding that devastated 250 local homes and 50 businesses, closed roads and saw sewage flowing above ground in parts of the town.

Last year's flooding was particularly shocking to residents and to the authorities responsible for managing flooding, not least because a number of flood management measures had already been taken in 2020/21. The increased intensity of the storm and the flooding that resulted overtopped much of the newly installed flood protection.

There is now a recognition that more needs to be done to mitigate the increasing impact on the local economy and the wellbeing of the community.

Flooding causes and issues

Across the country climate change is having increasingly dramatic consequences. The winters between 2019 and 2024 have been among the warmest and wettest on record. Springhill has also been hit by intense summer storms. The July 2024 flood in Springhill was caused by 60 mm of rain falling in a four-hour period.

Over the years the severity of surface water flooding has also been made worse by new housing, roads and commercial developments being built without sufficient drainage and water management measures installed. Existing houses that have built extensions or paved over driveways also add to the problem if drainage is not considered properly. More hard surfaces have contributed to less drainage and soak away capacity, more water running off, moving faster and, in heavy rain, causing flooding.

At the same time, periods of drought have increased too, putting a different kind of pressure on water management. Drought periods have been made more severe by there being a lack of water storage at a property and town level. Periods of drought can also make sudden flooding more likely. When the landscape is dried out, it is less able to absorb the large volumes of water deposited by summer storms.

The Flood Exchange

The 'Flood exchange' is a group that brings together representatives of flood action groups, community organisations, residents and the water company to consider options to reduce and manage flooding in Springhill and make recommendations to the local council as to the best way forward. It has been meeting on a regular basis since the major floods in 2024.

Today's meeting

Today's meeting of the Flood Exchange is tasked by the local council to make clear recommendations on a package of flood protection and prevention measures and on how these should be funded. The local council is very aware that:

- **If it does nothing, flooding in Springhill will get worse** due to climate change and development pressure.
- **It needs a clear flood risk investment plan now.** The longer this is delayed, the more costly it will be to tackle flooding and the greater the impact of future flooding.
- **There is not sufficient existing budget to do all that is needed**. This means that there are difficult financial decisions to be made.
- **All sectors of the community need to be involved** in assessing the options, costs and consequences of a flood protection investment plan, as spending on flooding could reduce budgets in other areas. There are potential options for increasing the size of the budget available for flooding, but these are likely to be controversial and would need the consent of enough of the local population to be viable.

The Flood Exchange meeting today is considering a range of options for flood risk protection and prevention in Springhill. The meeting is being asked to make recommendations on a package of measures that will command widespread support.

B. Options to be considered

There are two sets of decisions under consideration today:

1. Which options to pursue to help with flood risk management
2. How these can be funded.

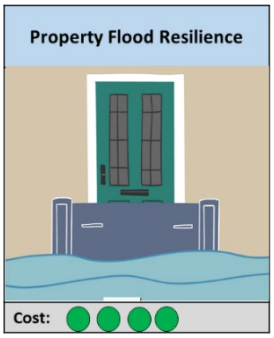
Over the next few pages, you will find explanations of the options available under both of these headings. If you have any ideas not mentioned here that you think your character might support, please also feel free to suggest these to the meeting.

Options for flood risk management

In total, there are eight options under consideration at the meeting.

Do nothing.

Continue with 'business as usual' and do nothing additional to reduce flood risk and respond to the impact of climate change.

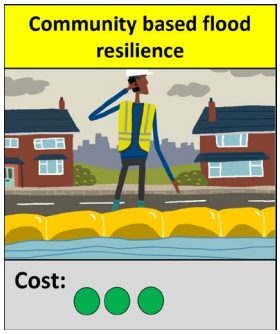


Property Flood Resilience.

Property Flood Resilience is about reducing the impact of flooding. The aim is to minimise damage and disruption. Measures are tailored to each property, such as fitting solid floors, flood-proofing wall and raising electrics. Barriers can be fitted to doors and windows and non-return valves installed on drains to prevent floodwater or sewage backing up. This makes ground floors more 'water resilient'.

Community Awareness Building.

A programme of activities and information to build whole community awareness of flood risk and the likely impacts of climate change. This would include the ongoing work of local flood and climate action groups, school projects, involving community groups, businesses and developers in discussions and practical activities to slow the flow.



Community-based Flood Resilience

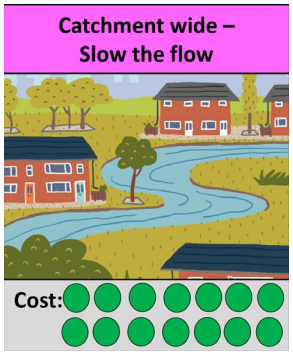
Trained community or neighbourhood volunteers taking more responsibility for flooding on their local patch. This may involve a range of activities, including deploying temporary flood barriers when there is a warning of heavy rain, checking and reporting blocked drains, building neighbourhood awareness of the threat, and helping neighbours in an emergency.

Repurpose Springhill Park for Water Storage.

Springfield Park (at the top of the catchment) is adapted to become a major water storage and 'slow the flow' area. This would involve constructing several ponds, extensive tree planting and the creation of wetland areas. It would mean around half of the park could no longer be accessed for conventional recreation and sports.

Sustainable Drainage for Homes and Businesses.

Water management that builds in more resilience to flood and drought conditions. The idea is to store and slow the flow of rainwater from properties, gardens and open spaces. This can help reduce flash flooding as the peak flow is reduced. Measures include water butts to catch rainwater from roofs, the diversion of roof downpipes into water storage or soakaways, green roofs, and making hard surfaces more permeable so that rainwater can soak through.



Catchment-wide Slow the Flow Scheme.

A large-scale remodelling of the catchment to catch and store water and 'slow the flow'. This will draw on extensive catchment modelling. Measures such as attenuation ponds and large-scale water storage tanks, tree planting, the creation of porous urban surfaces, rain gardens, leaky dams on water courses, reprofiling of rivers and streams and more green space can all contribute to a landscape that is more able to absorb and slow the peak flow of heavy rain.

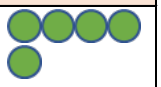
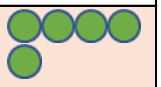
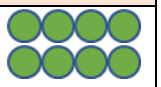
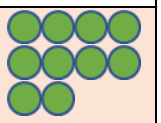
Please note: *The option of a catchment-wide scheme is likely to include the options of sustainable drainage and water storage in Springhill Park alongside other similar solutions across the catchment.*

Remove Permitted Development Rights.

Permitted developments rights across Springhill would be removed. These rights relate to changes that householders can make to their properties, garden areas or outbuildings without planning permission. This would include new extensions and hard surface driveways. Any such change would now require an application for planning permission. Householders would have to show how they were complying with Sustainable Drainage Policy set out in the Local Plan.

Potential funding sources

The meeting has been asked to consider several potential sources of funding, most of which will be contentious. As a group, you will need to weigh up the money available under different funding streams and which of the flood management options this would enable you to fund.

Funding source	Funding available
Use existing local authority budget for flood risk management	
Increase council tax to pay for flood risk measures	
Reallocate budget from other areas of council spending – e.g. social services, recreation and public space	
Use the 'community infrastructure levy' (levied on new developments – funds can be used for community benefit projects)	
Government grants – time consuming and no guarantee of success *To pursue this option you need to allocate 1*  *. Later in the game you will find out whether or not uour funding bid is successful. You will ony be able to allocate this budget if your bid is successful.*	
Self funded by residents, businesses or community projects	

C. Your role: Water company employee

Your work for the water company responsible for the Springhill area. Within this, you work within the team that is responsible for the management, maintenance and improvement of wastewater infrastructure. Your team covers a large area, of which Springhill is a small part. Springhill has demanded more attention from you than other areas because of the flooding incidents it has experienced and the demands from the Flood Action Group for urgent action.

Unfortunately, your knowledge of water systems and the causes of flooding suggests that there is not simple or quick fix to the situation. In Springhill, major incidents are caused by intense storms that can be very localised and difficult to plan for. The water that causes flooding is mostly surface water that overwhelms the drainage system and causes sewage to come up. Any solution would need to significantly reduce surface water run-off, particularly down the hills.

You feel that public understanding of climate change and its implications for water management is very basic – most people are finding it hard to follow the technical discussions that you know need to happen for effective solutions to be found. This means that people sometimes make or support proposals that are not going to make a significant difference. For solutions to work, the volume of water that is being held back needs to match the excess volume of water that causes flooding; and the capacity of water storage has to be available when it is needed most. For instance, a water tank would need to be empty before a sudden storm to be able to play a role in reducing flooding.

More broadly, planning for climate change is increasingly on the company's agenda, but you are aware that much more work needs to happen. From your perspective, this includes planning for drought as well as for flooding. The company is under pressure to reduce leakage and waste of clean water. As far as wastewater is concerned, your planning needs to take account of increased pressure on the system from new developments. Against that background, you have concerns about the timescales proposed for further new business and housing developments in and around Springhill. At the same time, you know that new developments do provide opportunities – requirements to reduce runoff from brownfield and greenfield sites mean that the surface water situation can actually be improved as sites are being developed.

Overall, the company is struggling to meet all of the needs and expectations of communities in its area of responsibility and is keen to work with others to find and implement acceptable solutions.

Self-Introduction

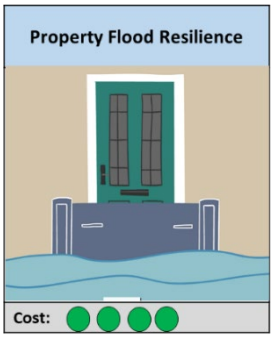
At the start of the simulation, you will be asked to introduce yourself and explain your key priorities. To help you get into the role, you can read out the introductory text below. If you are happy to make up your own introduction based on the information you have been given, please feel free to do so (but take care to keep it concise).

"Hello, I am [insert your name], and I work for the water company covering this region. I know that the causes of flooding in this area are complex and do not have simple solutions. It is important that any decisions we take are evidence-based. As a company, we are particularly interested in solutions that address flooding alongside other water management challenges in the face of climate change."

Your views on the options

You do not support this option.

You are not in favour of doing nothing. Given climate change predictions, this is not a sustainable option for your company.



You are not sure about this option.

While you understand that some affected homeowners are keen on this option to prevent the worst damage to their properties, you also know that this tackles symptoms rather than the drivers of flooding in Springhill. People in affected areas would still have their streets flooded, including potentially with sewage, and you know that this would continue to cause unhappiness. Overall, it does not seem to you to be the best use of limited resources.

You support this option.

You feel that public agencies – including water companies – can and should not carry all the burden of climate change adaptation. People at all levels need to play a part in reducing the pressures within the system. You are in favour of awareness-raising to promote this message.

You are not sure about this option.

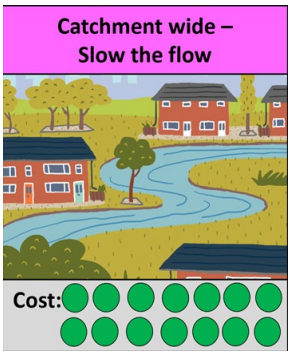
Although you like the idea of community-level action and protection of whole streets/neighbourhoods rather than individual houses, you have some concerns about this option: 1) you would worry about where excess water will be diverted to; and 2) you know that major flooding incidents in Springhill tend to come from cloudbursts, often with very little warning. You are not sure this allows sufficient time for people to get organised and put temporary barriers in place.

You support this option.

You are in favour of this option because it will contribute towards flood prevention. You know that as it stands, the park's large lawned area – which sits on top of clay - allows for significant and fast water run-off. Planting trees, creating wetlands and reshaping contours within the park would help to address this issue and turn the park from a liability to an asset in terms of flood risk management. You also hope that this might become a demonstration project for other areas within your responsibility.

You support this option.

You would like to see this happen. Sustainable drainage schemes would make some contribution towards mitigating flood risk as well as raising public awareness throughout the town. In addition, water butts, ponds and rain gardens have potential to help with conditions of drought, thus decreasing another pressure on the water system that you are worried about. You are aware, though, that such measures would need to be widely adopted to make a tangible difference.



You support this option.

This is your favourite option. In the long term, you feel that a number of measures across the whole catchment is the only way of significantly reducing flood risks. You are conscious, however, that the costs for such a scheme might be prohibitive at this moment. If it is not possible to fund this now, you are strongly in support of taking immediate smaller-scale measures that might eventually build up across the catchment (see options above).

You are not sure about this option.

You are not sure this is a good option. Although you know that some feel that any development makes the problem worse, you also know that development can actually improve drainage and water storage if the right conditions are attached.

You are not in favour of taking away development rights but would like to see enforcement of rules that stipulate appropriate drainage systems to be put in place.

Your views on funding sources

Use existing local authority budget for flood risk management

You want to use this funding source.

This is not controversial – of course this budget should be used. You would like to see this used in the most effective way possible.

Increase Council tax to pay for flood risk measures

You are not sure about using this funding source.

Unfortunately, the reality of climate change will mean spending more on adaptation. To you, Council tax is one of the ways in which the budget might be increased. Another option that is being discussed within your company is making water meters compulsory and increasing charges for those with high water usage. This is something else that you might suggest as a way of contributing towards the budget.

Reallocate budget from other areas of Council spending

You are not sure about using this funding source.

You are aware that this might become necessary but are reluctant to make a strong argument for it. You know that it might have negative impacts on other people within this community.

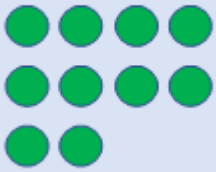
Use the 'Infrastructure Levy'

You want to use this funding source.

This seems to you a good way forward: With the right regulations, development can make a positive contribution towards sustainable water management, and you are in favour of using the extra money from the levy to fund the more ambitious measures that are on the table.

Apply for government grants

Minus 1 now with potential – but no guarantee – of significant funding later



You want to use this funding source.

You are aware that now is the time for ambitious action, and that this will require substantial resources. Given the lack of sufficient funding for all of the measures that need to be taken, you are in favour of applying for government funding and willing to invest some resources into doing this well to maximise the chance of success.

Self funding by residents, businesses or community projects

You want to use this funding source.

You support this where individuals and businesses are able to self-fund or make a contribution.