



The longest way round is the shortest road home: communicating rain management

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If you are looking for new ways
to communicate with the public,
this report provides research
findings that will interest you.



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Citation and access

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Executive summary

What is this report for?

We know that changes in climate and water usage are resulting in more floods, more pollution, and more droughts. We also know that, in order to meet these challenges, we need to change what we do with water, and communicate these changes effectively with the public. The purpose of this report is to provide ideas based on empirical evidence for how this can be achieved.

Who is this report for?

Primarily this report is for organisations with statutory duties to care for water in the UK including the water companies, local authorities, the Environment Agency, and Defra. In the report these are referred to as ‘the water authorities’ as they have responsibility for managing different aspects of the centralised water system.

Another potential set of readers are Environmental NGOS such as wildlife trusts and rivers trusts. Like the water authorities, Environmental NGOS have an interest in high-quality water environments and engaging the public.

Why rain management?

Rain is the water most people understand; it falls from the sky and makes our gardens grow. Too little causes floods, too much causes flooding. Many people are already managing rain with water butts, so rain management is building on familiar ideas and activity.

Widespread public engagement with rain management could reduce the risk of drought, floods and pollution. Harvesting rain reduces demand on the mains supply. Using tank/ planters, rain butts and rain gardens filters



and slows the flow of water into waterways, and emptying rain containers ahead of forecast storms can provide extra capacity. Depending on the specific challenges on local water systems, public rain management could significantly augment the centralised water supply and sewerage systems.

What empirical evidence contributed to this report?

This report draws on evidence from public engagement undertaken within three consecutive research projects conducted in the flood-prone area of Hull and East Riding. The report does not cover all aspects of this research, but focuses on the parts concerned with how and why rain management is communicated with the public.

Who wrote this report?

This report has been written by community engagement experts and water management academics from the University of Sheffield Department of Urban Studies and Planning. The report is a summation of our work on communicating water management with the public at the end of three consecutive research projects.

Why are our findings relevant to communicating water management more widely?

Our findings are based on interactive communication with many people who professed little or no special interest in water management. In this respect our work is of relevance to many professionals and activists who are seeking to engender interest in water.

The people we worked with were drawn from five communities of widely varying socio-economic status. Moreover, although there are many special things about water management in Hull and East Riding, there are equally other special 'context' issues in every place. Findings drawn from across these five communities are therefore likely to be of relevance to many other communities across the UK.

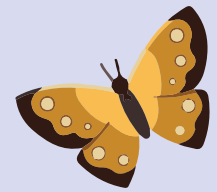
Summary of findings

- Face to face conversation is overwhelmingly how the public want to be communicated with. They consider 'word of mouth' to be more effective than generic information.
- Opportunities for conversations occur through interactive activities and events that bring people together in small groups who then cascade messages through word of mouth and collective activity.
- Language in common vernacular such as 'rain management' is more effective than trying to teach the public technical terms such as 'water efficiency', SuDS or 'flood resilience'.
- The public responds best to a communication approach that focuses on benefits that can be gained (e.g. water to grow plants) rather than negative consequences that can be mitigated (e.g. flooding).

Summary of recommendations

- Adopt rain management as the focus of communicating water issues with the public.
- Consider all contact with the public, including complaints and conflict, as opportunities to interact and build relationships with the public.
- Develop reciprocal relationships with community groups who understand communicating with their local communities better than anyone.
- Celebrate what the public are already doing to manage their water.

Introduction



There is an increasing need to engage the public with water management both in terms of efficiency and flood resilience. Whether it's signing up to flood warnings, installing rain tanks on the roof, or swapping parking spaces for swales, public understanding, acceptance, and participation is necessary for water to be managed effectively in this changing climate.

However, there is no single organisation tasked with this engagement, despite everyone involved acknowledging the difficulty of this challenge. Moreover, there appears to be no single method that has proven to be successful. This results in increasingly urgent demands for more to be done, without anyone sure what 'more' really is.

'The longest way round is the shortest road home' is an old proverb chosen because there are no shortcuts to effectively engaging the public with rain management. Drawing on the accumulated data analysis from three consecutive research projects, we describe a new approach to communicating with the public which in essence is as old as the hills – talking with people.



Background

A team of researchers at the University of Sheffield, was interested in whether the domestic use of rain tanks was a useful way to engage the public with water management.

Raintanks relate to the whole water cycle as they supply water but can also contribute to reducing flood and pollution risks. Exploring how to communicate about raintanks is therefore of relevance to communications about any part of the water cycle

We focused our efforts in Hull and East Riding. Although our efforts were focused on one set of activities in a particular place they have strong implications for others working on water management in a variety of localities.

Why rain tanks?

Domestic rain tanks / water butts have long been used as a means of irrigating gardens, and are increasingly a feature of domestic supply in areas of water scarcity globally. The potential for rain tanks to function like SuDS, managing urban rainfall and supplying water, is well understood. In 2018, we began discussions with UK water utility managers about whether domestic rain tanks could offer such additional water storage capacity, mitigating urban flood risks. These conversations revealed two sets of concerns, one technical, the other social. Firstly, the timing of water supply and demand created practical problems: put simply, for a rain tank to help prevent flooding, it needs to be empty at the start of a storm event. Water managers felt that this could not be guaranteed for many domestic rain tanks, particularly in the UK's wet winters. Secondly, widespread participation would be needed for rain tanks to have any impact on flood risk, raising questions about the public's desire to participate in such a programme. These two questions were explored together in the first project described in this report.

We use the term rain tank rather than water butt for the following reasons:

- Differentiation between usual commercial water butts and a wider variety of rain collecting/filtering containers
- 'Rain tank' is more universally understood whereas 'rain butts' is a term particular to the UK.
- Using the term 'rain tank' creates curiosity, eliciting the question, 'Are rain tanks the same as water butts?' which can be a conversation starter
- It encourages people to look at a familiar subject with new eyes.

Why Hull and East Riding?

Our initial research identified Hull and the East Riding as a target location for exploring domestic rain tank storage. The area has a history of severe surface water flooding; in 2007, over 100 mm of rain fell in a 24-h period, causing extensive pluvial flooding that damaged 8,600 homes and 1,300 businesses.

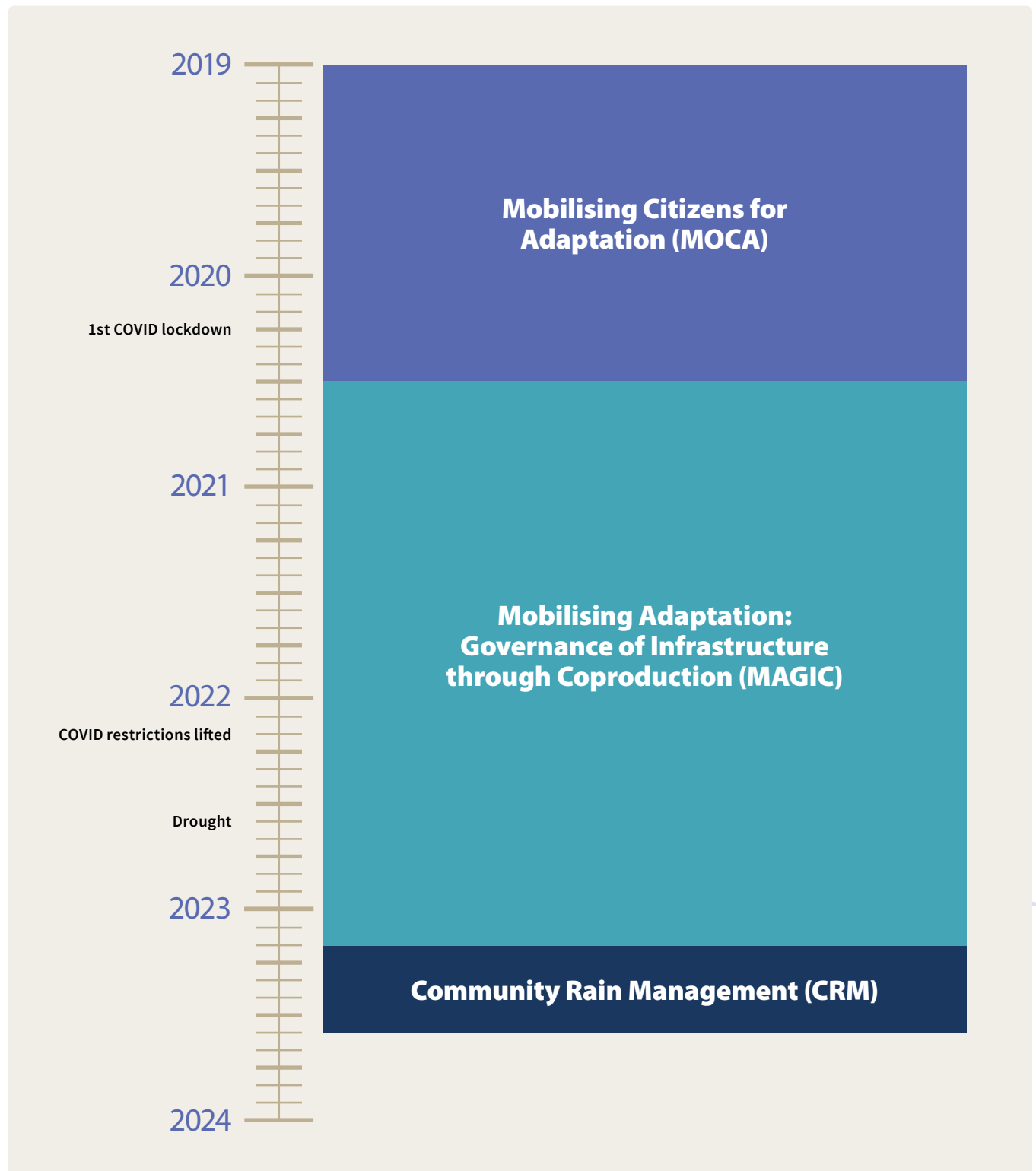
The geography of the area means that there are good reasons for creating above ground water storage capacity. The city sits in a clay bowl with a shallow substrate and therefore limited 'sponge' in which to position conventional SuDS.

Because of the difficulty of separating the estuarial, river and surface water flooding in Hull and East Riding, the flood risk management authorities (two adjacent local authorities, the Water and Sewerage Company and the Environment Agency) had formed the 'Living with Water Partnership' (LWW). At the time, this partnership was unique and had been in operation for 18 months when our research commenced.

The severity of the flood risk in the area, and the openness of the authorities to new approaches suggested that Hull and East Riding would make a suitable area to explore if/how domestic rain tanks could engage the public with water management.

The research projects and their main findings

This section describes the three research projects in turn. Focusing on issues regarding community engagement and communication, it describes the methods used and the key findings identified.



Mobilising Citizens for Adaptation (MOCA)

January 2019 – June 2020

This one-year, interdisciplinary project asked both technical and social questions about the feasibility of using domestic rain tanks for flood resilience. Guided by our Living With Water (LWW) partners, we focused our attention on two communities, Derringham (Hull) and Bilton (East Riding). Both areas had been flooded in 2007 and were where water investment was either planned, or already underway, but at inaccessible upstream locations.

Due to the focus of this report, the following describes the social aspect of MOCA; for a technical description please refer to (Sefton et al, 2022 - Appendix).

Aim: To explore ways in which residents in two areas of Hull would be prepared to install and empty rainwater tanks to help reduce flood risk.

Method: 32 in-depth interviews with members of LWW, community influencers and residents of two areas, Bilton in East Riding and Derringham in West Hull.

Summary of findings and recommendations:

Everyone interviewed was happy to install and empty a tank, as long as it was tailored to fit their circumstances. They were pleased and surprised there was something they could do to improve the flood situation, and very keen on the idea of rain tank-planters and rain gardens. They believed that if only other people knew about these things, they too would be enthusiastic, but recognized that reaching people in the first place was a challenge.

To meet this challenge, they had a wealth of suggestions: use visible demonstrations, communicate face-to-face, start campaigns with small groups and grow them slowly, provide top-down support, educate children, and focus on what people could positively gain, rather than the negatives they could potentially avoid. They also said that even the best campaign would not engage some groups of people, and yet, of the groups they identified, almost all were represented by those expressing this view. In fact, the only common factor across all resident participants was that they had, planned, or desired rainwater harvesting to water their gardens.



Engagement activity designed to recruit participants [credit: Laure Divisia]

Mobilising Adaptation: Governance of Infrastructure through Coproduction (MAGIC)

June 2020 – February 2023

MAGIC was a two-year £750,000 research project funded via the UK's "Climate Resilience Special Priority Fund" intended to run from July 2020 to July 2022.

Building on our learning from MOCA, Sheffield University proposed to lead a coproduction team including LWW, Hull University, TimeBank HER (a not-for-profit network of over 900 individuals and organisations exchanging skills and offering mutual aid across Hull and East Riding) and initially, the two MOCA communities, Derrignham and Bilton.

The overall aim of MAGIC was to develop a new approach to reducing flood risk in our urban areas which included addressing local and social concerns. Through action research we explored how to co-productively stimulate, plan, implement, and maintain small local Sustainable Urban Drainage Systems (SuDS) (e.g. rain tanks and rain gardens).

We intended to begin by co-designing and constructing 'local rainwater management systems' (small local SuDS) on publicly accessible land; these initial installations were to provide a starting point to engage

and support residents in developing their own rain management on private land later in the project. Of course, we hadn't factored in a pandemic which changed everything.

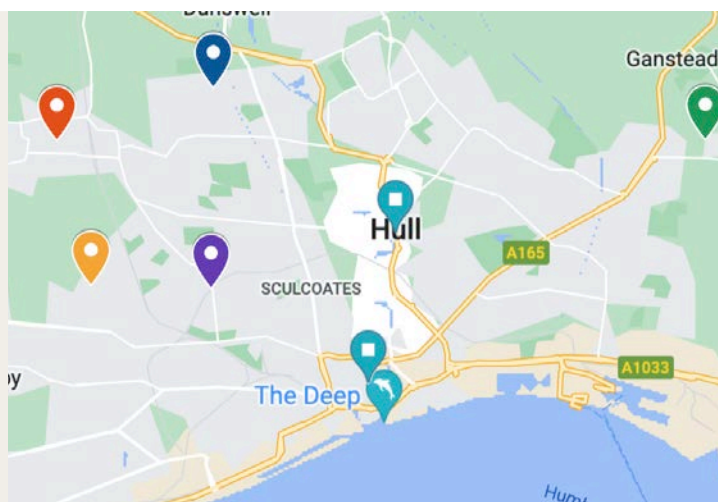
Due to COVID, the project we delivered was very different to the project we originally envisaged. Firstly, instead of working with the two geographical communities we'd worked with during MOCA, we worked with the community of users of five different buildings in the public domain (see figure 1 below).

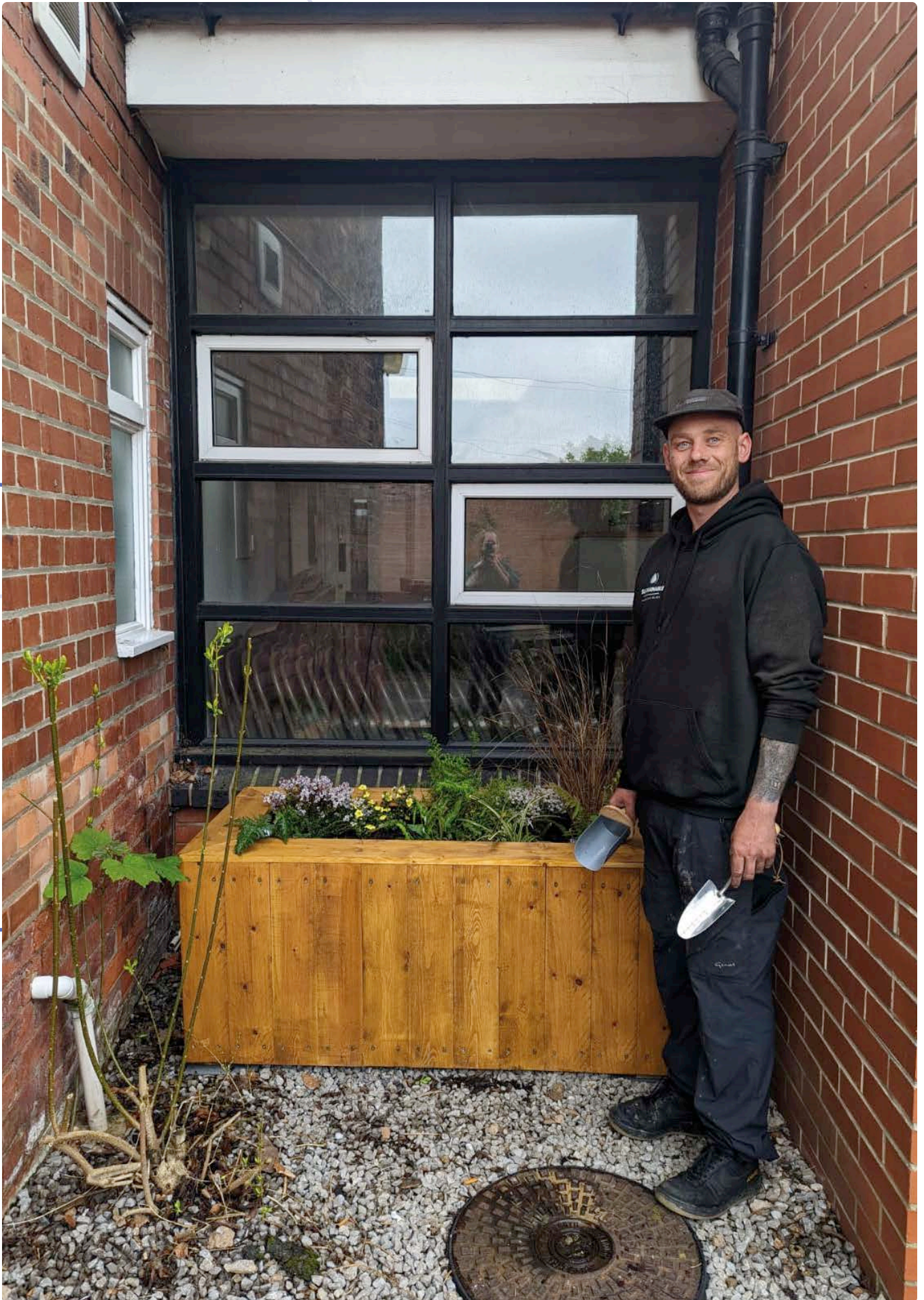
Secondly, due to time constraints, we were unable to support individual households to install rain tanks and similar on their own properties.

MAGIC was a complex project with a variety of research activities not all of which are described here because not all directly involved public engagement. However, MAGIC's initiation of a Hull based workers cooperative, Susdrainable, which designs, builds and installs small scale domestic SuDS, does require mention. Susdrainable built four out of the five MAGIC community rain management systems and consequently, became integral to the community engagement process.

Figure 1

- 📍 Sewell's Garage
- 📍 Cottingham Civic Hall
- 📍 Thorpes Resource Centre
- 📍 Bilton Primary School
- 📍 Priory Baptist Church





Dan Gailbraith, founder member of Sudrainable completing a MAGIC stormwater tank-planter at Cottingham Civic Hall.

Choice of MAGIC sites

Two of the buildings were known to us from conducting the MOCA project, the other three buildings were identified by our partners. The following criteria were used to assess the suitability of buildings:

- Location: Situated in the public domain, with significance to local community and good footfall.
- Technical: Accessible, well-maintained roof and down-pipes on public-facing parts of building.
- Community of users: Identified group of local residents who use the building regularly.

- Autonomy: Access to individual/group with ability to make decisions about making changes to the building and installing rain management systems.
- Community engagement: Contact with key individual/s who could support engaging users of the building.

All buildings met all criteria, with one exception. While the primary school did not meet the technical criterion it was chosen because the headteacher's ambition to create a wildlife outdoor classroom with a pond fitted with LWW's flood resilience plans for the area.

The five MAGIC sites, their location and installation description

Building	Location	Description of Installation
Bilton Community Primary School	Village, on the border between Hull and East Riding, adjacent to suburban residential areas.	Pond and outdoor wildlife classroom.
Cottingham Civic Hall Run by a committee of community trustees	Cottingham, East Riding. A large and well provided village.	Storm water planters and rain tank planters. Plus rain tank planter in nearby Memorial gardens.
Priory Baptist Church	Derringham, suburb of Hull. Mixed council and private residents.	Three rain tank planters and a bin shelter with a green roof.
Sewells OnTheGo Family-run convenience store and petrol station	Chanterlands Avenue, the old area of Hull, considered by some to be the arty area.	Rain tank planters surrounding the picnic area, wall mural, and signage on the picnic tables.
Thorpe Resource Centre Run by community youth workers / trustees.	Orchard Park, an area of Hull with a reputation for deprivation and crime.	Community murals. Bench and rain tank planters. Grass area surrounding carpark planted with fruit trees and plants.



Guiding principles for community engagement

The following principles underpinned all communication and engagement:

- Listen to the key individuals who are trusted by their community and be instructed by them.
- Find out what people are positive about rather than focusing on problems.
- Develop tailored, inclusive engagement activities and events with key individuals for each community.



Once buildings were chosen, an engagement plan was devised with the key individuals at each site:

Site	Key Individual	Relationship	Co-design and decision process
Priory Baptist Church	Reverend	Built during MOCA and maintained throughout MAGIC	We discussed with the Reverend what the church needed and this was approved by her church council.
Sewells	Owner	Built during MAGIC	Owner gave permission for his staff to be engaged and took their ideas on board. He also had ideas but mainly followed MAGIC recommendations.
Bilton Primary School	Headteacher	Relationship with school built during MOCA, but new headteacher took post during MAGIC	Headteacher decided what the school needed and strongly directed the content of the installation but was guided by professionals - GreenEstate.
Cottingham Civil Hall	Trustee	Member of TimeBank, so relationship with MAGIC partner.	Trustee arranged meeting with committee who agreed to workshops with volunteers. We shared the results of engagement with committee. Subsequent design was approved through ongoing negotiation with committee via trustee.
Thorpe's Resource Centre	Trustee	Relationship with MAGIC partners.	Three trustees arranged two days of engagement with users of the centre and local residents. We shared the results of engagement with trustees. Trustees approved of subsequent design through ongoing negotiation.

Engagement activities

Under guidance from key Individuals, we tailored activities and events to engage the community of users at each site.

Site	Engagement events and activities
Priory Baptist Church	<p>Post-installation:</p> <p>The Garden Rain Party was held in the church grounds. It was attended by local residents, church members and representatives from local community groups. MAGIC provided the refreshments and the church band provided live music. MAGIC also provided a number of mainly child focussed interactive activities.</p>
Sewells OnTheGo – convenience store, petrol station, and Subway take away.	<p>Pre-Installation:</p> <p>Community artist took field notes from staff members about what they would like the rain management system to include in terms of appearance, materials, and plants. The mural artist asked local shopkeepers what images they would like included in the wall mural.</p> <p>During Installation:</p> <p>MAGIC team members and the mural artist collected ideas for the design from customers and local shop-keepers. Questions from curious passers-by to Susdrainable and the mural artist often resulted in lengthy conversations about rain management.</p> <p>Post-Installation:</p> <p>To celebrate completion of the installation, The Mermaids Tea Party was held in and around the picnic area on forecourt. Attendees were local residents, regular customers, a community gardening group, and Sewell managers and staff. MAGIC provided live music and cakes, Sewells provided sandwiches and drinks. MAGIC provided interactive activities.</p>
Bilton Community Primary School	<p>Pre-Installation:</p> <p>Informed families via the school newsletter about the MAGIC project, the wildlife classroom and pond.</p> <p>During Installation:</p> <p>Before the Easter break, the school gave a MAGIC activity booklet to families, inviting them to take part in a competition to upcycle unwanted objects into plant pots and grow a plant. Judging to take place at a summer school event. A second activity booklet about rain play and a leaflet about rain gardens was given to families along with updates on the wildlife classroom and an invitation to The Festival of Rain, an event to celebrate the completion of the wildlife classroom.</p> <p>Post-Installation:</p> <p>In the week preceding the festival, a community theatre company worked in the school with a group of older children to devise a play about the value of rain management. The Festival of Rain took place on the school field. It included interactive activities, the plant pot competition judging, and the children performed their rain play for the parents.</p>

Site	Engagement events and activities
Cottingham Civic Hall	<p>Pre-Installation:</p> <p>Two workshops were held at the hall on consecutive Sundays. Attendees were trustees and volunteers. Refreshments were provided by the hall. Through interactive activities, attendees explored their aspirations for the hall and ideas for rain management. MAGIC provided facilitators, A2 line drawings of the hall, and technical information.</p> <p>Post-Installation:</p> <p>The Cottingham Rain Dance was held inside (no outside area). Susdrainable gave guided tours of the tank planters. MAGIC contracted a Carnival company to facilitate children making rain-related costumes for a parade through Cottingham. MAGIC arranged refreshments and interactive activities. The Hall invited a local dance school to perform rain related dances and other local contributors e.g. Friends of the Earth group.</p>
Thorpe's Resource Centre	<p>Pre-Installation:</p> <p>Interactive activities with local residents and interviews with regular users of the centre, the nursery manager and a local councillor.</p> <p>During Installation:</p> <p>Pizza and planting event during which local families helped plant fruit trees around centre, draw images for wall mural design. Refreshments were provided by MAGIC and served by the centre. Interactive activities were provided by MAGIC. Mural artist supported young people to design and paint sections of the mural.</p> <p>Post-Installation:</p> <p>In response to vandalism, a celebration event was postponed from summer to autumn and adapted to be a re-planting party. Refreshments were provided by the centre and interactive activities including plants were provided by MAGIC.</p>



Above: Entry to the upcycled plant pot competition at Bilton Primary School.



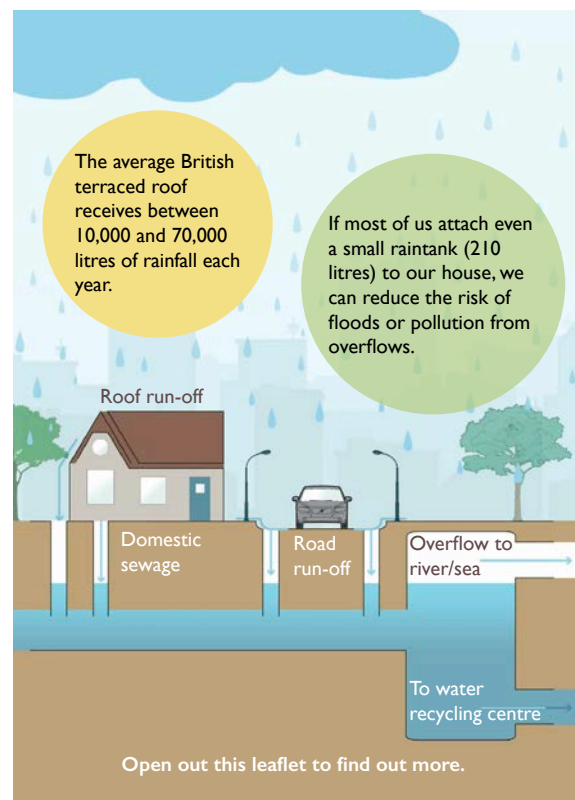
Right: Mural artist facilitating young people to design and paint murals at Thorpe Resource Centre

Leaflets and activity booklets

Initially, leaflets and activity booklets were developed to engage families at Bilton Primary School. However, because Susdrainable were engaging with the public, we developed a series of three prototype leaflets and a family activity booklet to support Sudrainable's engagement activity. The title's for these leaflets are:

- Create your own beautiful rain garden
- Connect to nature by collecting rainwater
- How can we manage water together
- How to Celebrate Rain (family activity booklet)

Please see appendix for more information.



Signage

Originally, we intended to co-design signage with communities, however, due to time constraints resulting from COVID, the signage was designed by the MAGIC team and installed November 2023.



Buidling	Style and position	Target audience
Priory Baptist Church	1 x A3 landscape: On the side of the bin shelter, facing the entrance to carpark.	All people entering church carpark and church by main entrance.
Cottingham Civic Hall	1 x A3 landscape: On the wall adjacent to the large rain tank at the corner of the hall beside the pavement.	Passers-by on a busy pavement corner.
Bilton Community Primary School	(a) 2 x A3 landscape: Either side of boundary fence, at the entrance to the school. (b) 4 inch square images of different pond wildlife on top of wooden posts in the ground around the pond.	(a) Parents picking-up and dropping-off children. Anyone entering the school. (b) Children using the wildlife area.
Sewells OnTheGo petrol station, Subway	Two circular signs on the tops of circular picnic tables in picnic area. The design is in quadrants to face each seating position.	Anyone using the picnic area, especially those sitting at the main tables.
Thorpes Resource Centre	2 x A3 landscape: One by the main entrance used by the nursery. One on the back of the building by one of the rain tank planters.	Parents using the nursery and local residents.



Evaluation of MAGIC engagement

The following methods were used to collect data on the public response.

- a) Comments Table: At each celebration event, there was a table covered with drawing paper, pens and the following questions:
- What do you love about rain?
 - What do you understand is happening here today?
 - How will you manage rain in your home?

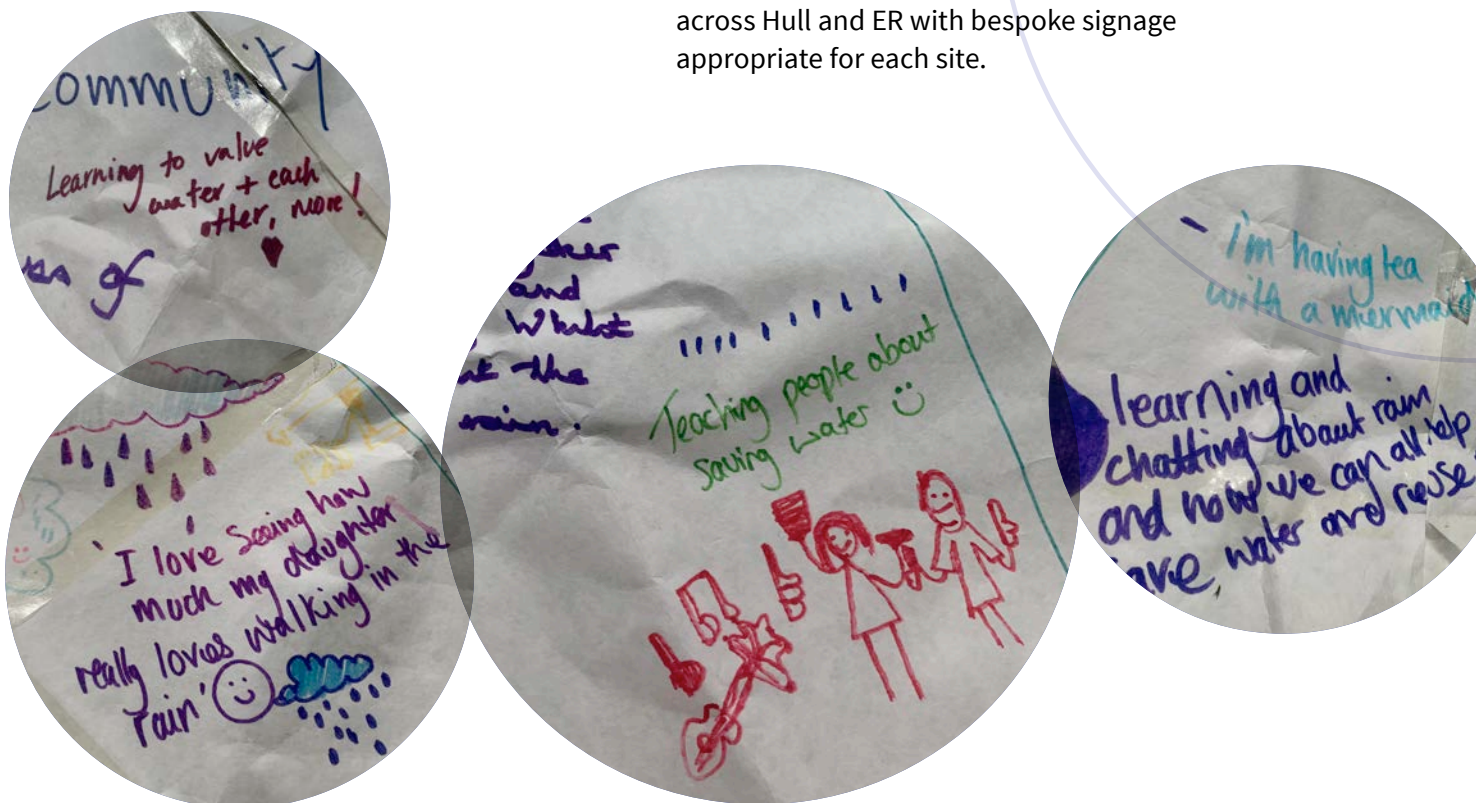
One of our team, invited and facilitated people to write or draw their response to the questions.

- b) MAGIC Film: A Hull based film company was commissioned to record the project. This included interviews with members of the public attending MAGIC events or participating in MAGIC engagement activities.
- c) Interviews: Once the installations were complete, interviews were conducted with key individuals representing the community of users at each of the five sites.

MAGIC Outputs

During the course of the MAGIC project, the team:

- Developed a Community Action for Water website www.communityactionforwater.org
- Initiated Susdrainable – a workers cooperative which designs and fits small scale private rain management systems
- Co-developed a WEA course about rain management
- Produced ‘Sustainable drainage and new housing Developments’ a report about what housing developers think and do about urban rain management, (Sharp et al, 2023)
- Published a Community Engagement Guide for practitioners (Sefton et al, 2022)
- Produced prototype leaflets on three aspects of rain management plus a family activity booklet.
- Commissioned a film about MAGIC engagement www.youtube.com/watch?v=J0meqLHm0Yg&t=738s
- Installed rain management systems on five public/community buildings across Hull and ER with bespoke signage appropriate for each site.



MAGIC conclusions and recommendations

The public is all of us:

Engagement starts from the very first conversation and includes everyone. Engagement is not a separate activity that runs alongside practical aspects of the project; it includes everyone from site cleaners and management, from construction workers to engagers. e.g. The friendliness of Susdrainable workers went a long way to smoothing out potential difficulties and encouraging further installations.

Use common vernacular over technical language:

Engaging the public is difficult enough without teaching people a new language as well. e.g. switch from using terms like SuDS and water efficiency to rain management.

Continuity of engagement builds trust:

Regular communication with the same individuals enables relationships and trust to develop so that when circumstances change, or potential difficulties arise, everyone involved is happy to adapt and misunderstandings are avoided.

Focus on positive gains, not the avoidance of negative consequences:

Finding out what communities want from rain management opens more doors than telling them which disasters they might avoid. e.g. The school would not have engaged if we had focused on floods rather than wildlife.

Focus on buildings rather than areas:

Building focussed engagement is likely to fit the time and resource constraints of practitioners more than conventional approaches to community engagement.

Outdoor wildlife classroom
at Bilton Primary School



Community Rain Management (CRM)

February 2023 – June 2023

This five-month project was funded through the University of Sheffield's impact fund.

Aim:

Explore the following:

- To what extent did MAGIC communications enhance local understanding of collective rain management and encourage home rain management?
- How can we maximise the impact of the MAGIC legacy in terms of:
 - Encouraging home rain management
 - Developing positive ways to communicate rain management for use by water authorities.
- How can we scale-up and roll out effective rain management communication in the Hull and East Riding area, and across the UK?

Method

- Pavement engagement with passers-by at each of the five community buildings with a variety of interactive activities requiring different levels of attention. Activities were designed to inspire conversations about the MAGIC installations, signage and leaflets. Depending on the circumstances of each site, the presentation and choice of activities differed.
- Focus groups with small groups of volunteers/staff at two of the five sites.
- Interviews were conducted with representatives from organisations at a local level, exploring approaches and methods for rolling out rain management communication.
- Interviews were conducted with representatives of national organisations with an interest in communicating water management to hone the contents and format of this report.



Pavement Engagement

Engagement activities were developed to be adaptable depending on the circumstances at each site. Four activities were developed that required different levels of engagement and time.



Activity 1: (1 minute)

Choose the image that 'says' domestic rain management to you:

Water butt



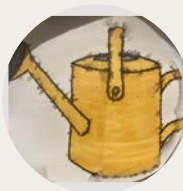
Seedling



Wellies



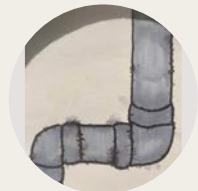
Watering Can



Raindrop



Drainpipe



Activity 2: (3 minutes)

Choose the statement that you think would motivate people to answer the question:

How can we manage our rain better?

A
**All water, everywhere
begins as rain**

B
**Everything living
needs rain**

C
**The water in your taps
was once rain**

D
**Too little rain can
be dangerous**

E
**Too much rain can be
dangerous**

F
**Rain can cause
flooding**

G
**Climate change is
causing crisis with rain**

Activity 3: (5 minutes)

Using the paper bunting triangles provided write your answers to the following:

Q1: What does managing our rain better mean to you?

Q2: How can we communicate rain management to people?

Activity 4: (6 – 10 minutes)

Look through leaflets and the activity booklet and choose what works or needs improving.
Write your comments on the white labels and stick them onto the relevant bit of leaflet or booklet.

Activity 5: (3-5 mins)

Plant wildflower seeds in tiny terracotta pot. Take home and water with rain.

Recording results

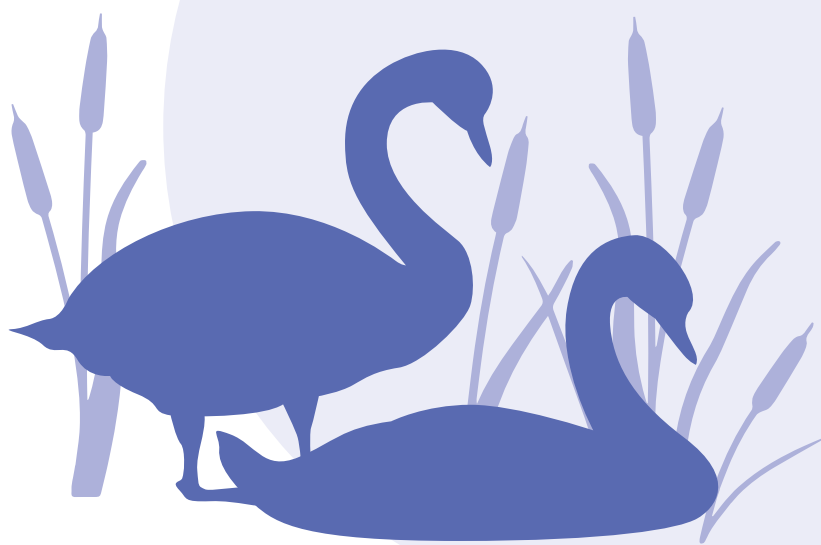
Inviting people to take part in non-threatening activities, enabled conversation. Recording the results of the activities along with notes on people's reasons e.g. which image people preferred, enabled us to make notes about people's views without inhibiting conversation. These notes were written up immediately after sessions.

Number of contributors

Pavement engagement with members of public	Community focus groups	Interviews with engagers from organisations in Hull and East Riding	Interviews with reps of national engagers
Baptist Church (7)	Baptist Church volunteers and regular users (6)	Living with water	YW
Sewells – OnTheGo (20)(plus an interview with the site manager)	Bilton Primary School staff (6)	Susdrainable	EA
Thorpe's Resource Centre (47)		University of Hull	WW
Bilton Primary School (7)		Flood innovation centre	CIRIA
Cottingham Civic Hall (20)			
Total:	12	4	4

Demographic information about each of five areas

While it was inappropriate to ask participants about their status, we aimed to approach a mixture of older and younger looking adults, presenting as both male and female. In some circumstances, such as the Baptist Church in Derringham, more people presenting as female rather than male participated because our pavement engagement coincided with a mother and toddlers group. However, in most cases, a variety of people participated. The following table gives the index of mass deprivation decile for each area in which the five MAGIC rain management systems were installed, indicating that the areas represent both those often regarded as ‘hard to reach’ and those regarded as relatively affluent.

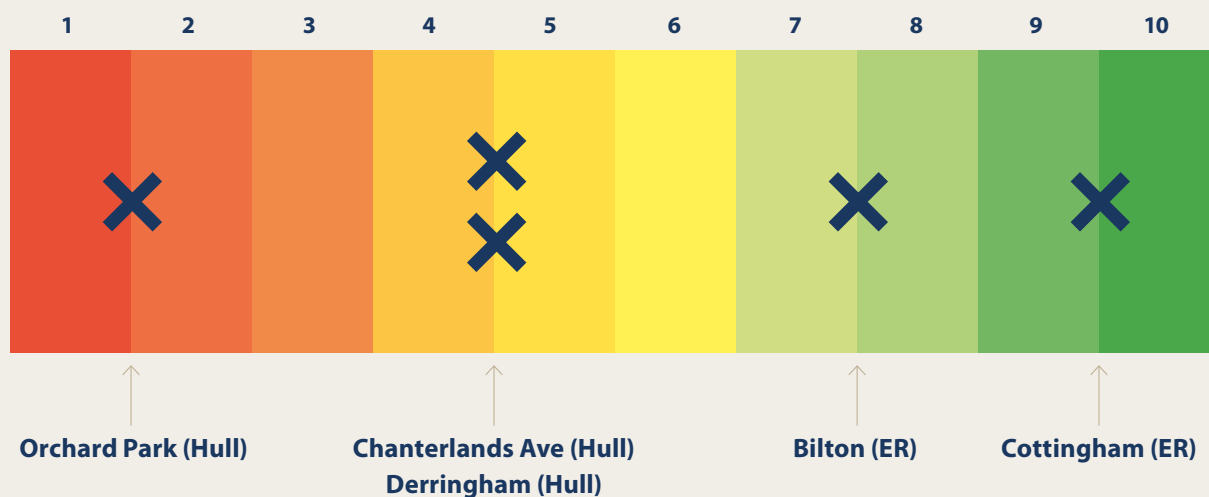


The index of multiple deprivation decile for each case study area

Highest levels of deprivation

1 = most deprived, 10 = less deprived

Lowest levels of deprivation



Source: Ministry of Housing, Communities and Local Government, <https://imd-by-postcode.opendatacommunities.org/imd/2019>

Findings

Unanimity: Across all five sites, there was almost no variation in people's responses. Given the differences between areas and circumstances of engagement (e.g. people in food-bank queue and customers at a market) the lack of variation in data is significant.

Installations: Not one person who was not engaged during MAGIC (e.g. attended events, or took part in activities and workshops) were aware that the new installations were rain managing systems.

Signage: Not one person who was not engaged during MAGIC (e.g. attended events,

or took part in workshops) knew the signs were related to the installations. Only two people had read the signage prior to being invited to do so.

Film: Not one person had watched the film unless they had been directly invited to do so. However, at three of the sites, it was unclear if key individuals had shared the film link with their community and /or co-workers.

Response to interactive activities:

While the purpose of the activities was to inspire conversation, the response to activity 1 and 2 are interesting in their own right.

Activity 1:

This was meant to be fun and so individuals were not restricted from choosing more than one image. Three of the contributors were children and they chose the raindrop and watering can.

Water butt

31



Seedling

5



Wellies

4



Watering Can

10



Raindrop

4



Drainpipe

9



While clearly the water butt was the image most people identified as meaning domestic rain management, contributors also said things like: "I know the water butt is the 'right' answer, but I would prefer to choose the plant, because I collect rain for my garden." This demonstrates a preference for what is positive and personally relevant.

Activity 2: Most people were compelled to choose at least two statements. However, as can be seen below, the most popular statement was 'Everything living needs rain', arguably the most positive statement.

Choose the statement that you think would motivate people to answer the question: How can we manage our rain better?

A All water, everywhere begins as rain

6

B Everything living needs rain

20

C The water in your taps was once rain

3

D Too little rain can be dangerous

4

E Too much rain can be dangerous

3

F Rain can cause flooding

5

G Climate change is causing crisis with rain

6

What people said or wrote

Signage: People who had not been engaged through MAGIC events and activities had not read the signage; some had not noticed the signs at all, others had seen the signs but not read them. However, when they were invited to read the signage, they were all very positive, both about the design and the content: “It’s really bright and colourful. It’s also interesting”. Having read the signs they were also very positive about the concept.

Their advice for how the signage could be more effective usually included repositioning it to be more directly associated with the rain tanks with additional signs to indicate there were rain tanks within the planters. One suggestion was to put a Perspex side on one of the rain tanks to show how the mechanism worked. Everyone said that without a reason (such as being invited) they would probably never have read the signs.

Leaflets: When people were invited to look through the leaflets and activity booklet, they were very positive about both the design and the content: “The leaflets are nicely put together, there’s not too much information; I’ve not looked through them and thought ‘that’s too much to read’. The leaflets [are] very informative without being too much.” Not surprisingly individuals found different things interesting, some liking facts, others the activities. Parents took activity booklets for their children, and gardeners took leaflets about rain gardens and rain tanks. However, almost everyone said that if they hadn’t first had a conversation with someone about the subject, they would not have picked up this material, and if it came through the door it would probably be ignored.

Film: The only people who had watched the film were members of the church who had watched the film during a church meeting and members of staff at the school who had watched the film prior to the CRM focus group. Those that had watched the film were very positive about it and thought it explained the subject well and gave relevant local context. However, they thought it was too long and that, even if shortened, it would

be difficult to get the public to view it without providing an engagement context for a viewing to happen.

Installations: Unless people had been part of the engagement process co-designing the installation, they were unaware there were rain tanks in planters. However, everyone was very positive about the aesthetics of the installations. They particularly appreciated the plants and the murals. Once they had been invited to read the signage and/or had a conversation about the rain management aspect, they were very positive about the concept. Often, they would begin considering how they might have something like this in their home, or local park, or allotment.

Observations: During conversations, people were often very keen to explain how they already collected rainwater, or had plans to do so. Many people wanted to describe what they were doing in detail; some methods of collection were both ingenious and comprehensive, involving multiple containers. This demonstrated a fundamental value for rainwater, an enthusiasm for the concept of managing it, and a wish to have their efforts acknowledged.

Another subject that was frequently mentioned in conjunction to rain management was grandparents. Either people affectionately remembered their grandparents collecting rainwater for the garden, or had (or were) grandparents that were teaching the grandchildren to collect and water the garden with rainwater. Implicit in this connection is the idea that domestic rain management is something we’ve always done and is valuable.

Ideas and advice from the public

Almost everyone, regardless of age, site or gender said it was face-to-face conversation that engaged them. That the way to communicate with the public was through events with activities for the children and demonstrations of different types of water management. They said that the information material (e.g. signage and leaflets) was interesting, relevant, and important but it would only get attention after people had been communicated with through word of mouth.

The second most popular suggestion was to communicate via social media, local radio or news items by trusted individuals e.g. local influencers, and celebrities like David Attenborough. However, they cited issues such as water company's putting sewage into waterways as problematic because it appeared inconsistent.

Ideas and advice from local engagers

Engagers agreed with the public that face-to-face conversations were the most effective way to engage with people. They suggested the best people to initiate those conversations were key individuals that had their community's trust and professional engagers, and they applauded LWW's recent creation of a full-time community engager. In line with public thinking, they considered the challenge was creating opportunities to initiate conversations, suggesting events and interactive activities for families were usually the most effective.

One barrier to communicating with the public that they identified was engagement activity that lacked continuity; a little but often is more effective than a lot all at once: "The more people we work with, the more people we have conversations with, the more the message cascades." Another barrier was lack of consistency. For example, authorised spills of sewage into waterways makes it hard for engagers to ask the public to value water.

The timeframe and methods for assessing communication with the public was also identified as problematic. Engagers pointed out that public behaviour in terms of slowing the flow of water entering the sewage system, was very unlikely to be measurable in the short term and that interim indicators of success such as numbers of people enquiring about rain tanks would be more useful. One engager suggested that conducting citizen science projects to measure changes in public water usage might be an effective way to engage the public at the same time as measuring change if it was over enough time.

Along with the public, engagers considered well-crafted information was necessary to support engagement, but that information alone does not engage the public. They also agreed with the MAGIC focus on positive gains rather than the mitigation of negative consequences.



Conclusion

The MAGIC installations and signage alone are not encouraging the public to engage with rain management. However, the process by which the installations were developed and built did engage the communities involved. The reason why the process of developing the installations engaged people was because it initiated conversations that framed water management in positive, relevant terms.

While it might appear a mistake to hide rain tanks when we are wanting to promote them, the aesthetics were greatly appreciated by the public, which paved the way to have positive conversations about water management. Likewise the inclusion of nature also meant people were positive about the installations and related to rain management positively. This means the process by which these installations were effective engagement tools can be developed to engage the public across the UK.



Summary

Face to face conversation is overwhelmingly how the public want to be communicated with. They consider 'word of mouth' to be more effective than generic information.

Opportunities for conversations occur through interactive activities and events that bring people together in small groups who then cascade messages through word of mouth and collective activity.

Language in common vernacular such as 'rain management' is more effective than trying to teach the public technical terms such as 'water efficiency', SuDS or 'flood resilience'.

The public responds best to a communication approach that focuses on benefits that can be gained (e.g. water to grow plants) rather than negative consequences that can be mitigated (e.g. flooding).

It's far better to have lots of small conversations regularly over a long period of time, than big campaigns with long gaps in between.

Continuity of engagers builds relationships and trust. Changes in personnel can be confusing.

Conversations on the ground need to be supported by the messages implicit in top-down policy.

Recommendations

It's not information that engages the public, it's conversation. So the main question for water authorities wanting to engage the public is: How do we initiate and sustain conversations with people?

There are no shortcuts to effectively engaging the public with rain management. As MAGIC demonstrates, even well-crafted, locally relevant, positive information will not engage the public if it is not accompanied by human beings prepared to have face-to-face conversations. Human beings that are friendly, well informed, and trusted by their communities, who have resources to converse regularly over time periods measured in years not months.

Unfortunately, most water authorities are unable to employ human beings with this kind of remit. We suggest a possible solution is for water authorities to develop mutually beneficial partnerships with community groups.

The potential for joint action between these different sectors arises because they share: (a) a concern for improving the environment in its widest sense (b) complementary resources: community groups have personnel, reach and local credibility; water authorities have sufficient scale to invest in facilitating the development of 'tailorable' resources, and to listen and support the ambitions of community groups.

Local environmental groups and even suppliers of materials for community rain management (e.g. garden centres) could also be included in this joint action. However, environmental groups and garden centres tend to attract people belonging to particular demographic groups which do not usually include those often referred to as 'the hard to reach'. If water authorities are serious about communicating with all communities, it is community groups with whom they should focus their efforts.

Joint action between water authorities and community groups would enable conversations with the public initiated and sustained by community groups rather than by water authorities. Community groups are in a good position to do this because they (a) are locally based (b) have people who can have conversations in ways that water authorities currently cannot justify and (c) are trusted within their communities in a way that larger institutions are not.

For their part, water authorities would invest time in building relationships with key individuals within community groups. With guidance from these expert engagers, they will facilitate them to develop tailored resources (e.g. event equipment and interactive activities, locally relevant signage and interpretation) that benefits local communities.

These resources would focus on initiating and sustaining conversations with the public about matters that are relevant to each community, presenting opportunities for water authorities to find ways in which rain management plays a part. While specific water authorities may wish to emphasise the issues most relevant to their remit, the community groups would sense-check such a focus according to their own priorities, ensuring that whatever resources are selected to work with the public resonate in their locality and with their community's ambitions.



This type of joint action supporting a conversational approach to communicating with the public also has the potential to address two factors that are often problematic: **(a) Message consistency**, and **(b) Measuring success**.

(a) Message consistency: Apparent discrepancies between what the public are asked to do and the actions of water authorities can make conversations on the ground challenging; how do you ask people not to tarmac their drives when their local council gives planning permission to developers to build on flood plains. Nuanced conversations between water authorities and community groups developing common goals enable complexities to be acknowledged and solutions to be sought.

Speaking the same language also aids nuanced conversation. Therefore, we recommend adopting rain management as the focus for communicating water issues with the public, rather than attempting to teach the public water industry terminology.

(b) Measuring success: Evaluating public communication projects is necessary but has to be appropriate. Expecting the amount of water entering the sewage system to be significantly less after a six month public information campaign is unrealistic and potentially misses the opportunity to build on what might have been an effective campaign if left to run longer. A partnership between water authorities and community groups has the potential to pave the way for citizen science projects that could simultaneously facilitate measurement of water usage/quality etc. at the same time as initiating and sustaining conversations with the public.

An aspect of success often overlooked by water authorities is the initiatives taken by individuals, households and community groups to manage water. Across the UK the public are already rain harvesting, litter-picking out of drains and digging out concrete from their gardens. Unfortunately, current campaigns by water authorities, not only ignore these efforts, but imply that the public are not doing anything. Joint action between water authorities and community groups would enable public rain management initiatives to be suitably celebrated.

As stated at the beginning of this report, there are no shortcuts to communicating water management with the public. However, joint action between water authorities and community groups that support a conversational approach to communication could be the shortest long way round to achieving this goal.



APPENDIX: Reference Material

Holding Back the Water

A film about the MAGIC project and engaging communities in Hull and East Riding with rain management systems.

www.youtube.com/watch?v=J0meqLHm0Yg&t=738s

MAGIC Publications

Community Engagement Guide for practitioners: Sefton, C; Hughes, G; Sharp, L; Chapman, K; and Quinn, R; (2023), Community Engagement for Nature-Based Solutions, Sheffield: University of Sheffield, DOI 10.15131/shef.data.21997478

Sustainable drainage and new housing developments: Editor: Liz Sharp Authors: Sarah Payne, Louise Walker, Sue Illman and Liz Sharp. Published by the Department of Urban Studies and Planning, University of Sheffield DOI 10.15131/shef.data.22134440



Websites

Community Action for Water (CAFW)

www.communityactionforwater.org

Developed during the MAGIC project that seeks to celebrate and support communities and individuals to take action to protect and improve our water environment in many different ways.

Susdrainable

www.susdrainable.coop

A workers cooperative initiated through the MAGIC project, which designs and fits small scale private rain management systems

GreenEstate

greenestate.org.uk

The Community Interest Company located in Sheffield, who created the rain management - outside classroom at one of the five MAGIC sites.

Literature

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Coulthard, T. J. and Frostick, L. E. (2010) 'The Hull floods of 2007: implications for the governance and management of urban drainage systems', Journal of flood risk management, 3(3), pp. 223–231. doi: 10.1111/j.1753-318X.2010.01072.x.

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Quinn, R., Roug'e, C., Stovin, V., 2021. *Quantifying the performance of dual-use rainwater harvesting systems*. *Water Research* X. 10, 100081. <https://doi.org/10.1016/j.wroa.2020.100081>.

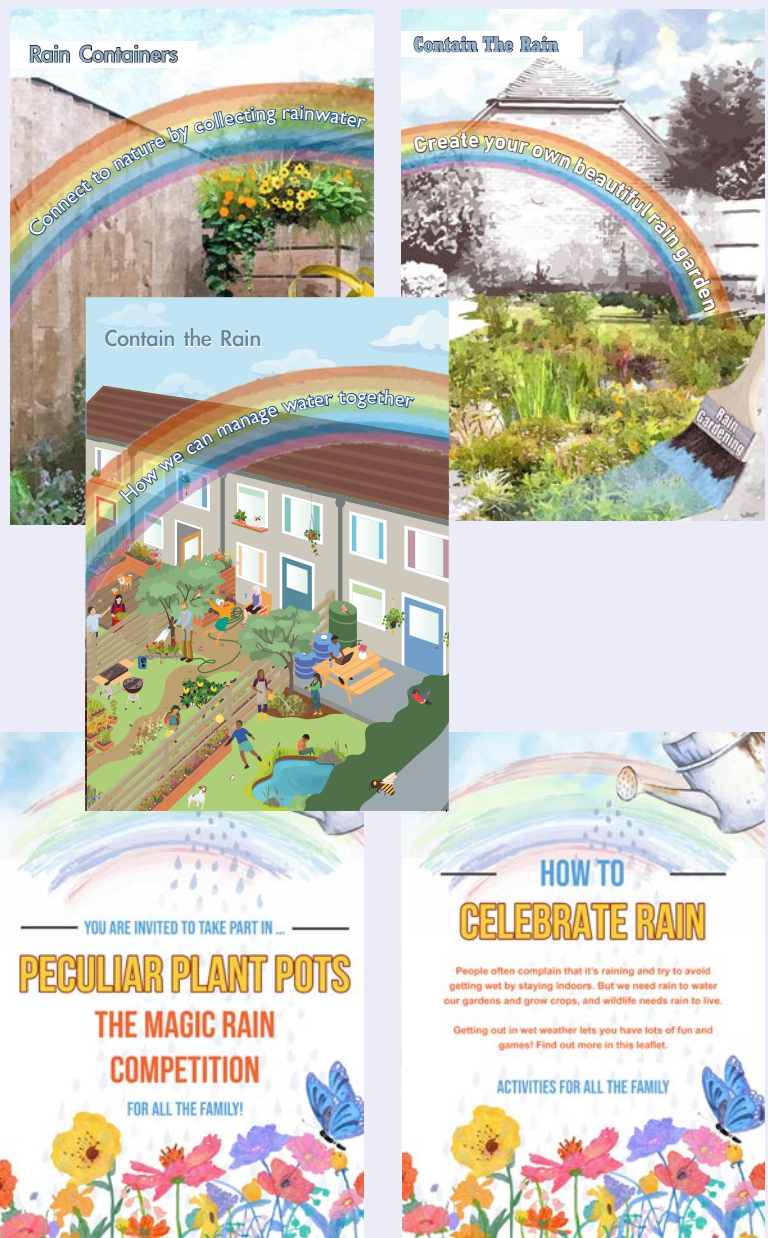
Zhang, X., Hu, M., Chen, G., Xu, Y., 2012. *Urban rainwater utilization and its role in urban waterlogging problems – A case study in Nanjing, China*. *Water Resour. Manage.* 26, 3757–3766. <https://doi.org/10.1007/s11269-012-0101-6>.

MAGIC leaflets and family activity booklets

Prototype leaflets and booklets were developed during MAGIC can be found here:

www.communityactionforwater.org/takeaction

- Create your own beautiful rain garden
- Connect to nature by collecting rainwater
- How can we manage water together
- How to Celebrate Rain (family activity booklet)
- Peculiar Plant Pots (activity booklet designed for a specific school event)





www.communityactionforwater.org