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Sheffield

Mobilising Adaptation: Governance of Infrastructure through Co-production (MAGIC)

Professor Liz Sharp
Climate Resilience Conference, 7th
March 2023



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Research focus: Co-producing Green Infrastructure



Mobilizing
authorities and
publics to adapt
to stormwater
challenges with..



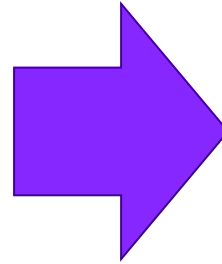
..Multi benefit
nature based
solutions to
address:

- Floods
- Pollution
- Drought
- Biodiversity
- Local greening

Critique of UK (and many countries') approach to stormwater management

REDUCTIONIST – many siloed parts.

MODERNIST - conception that the state / authorities can do everything



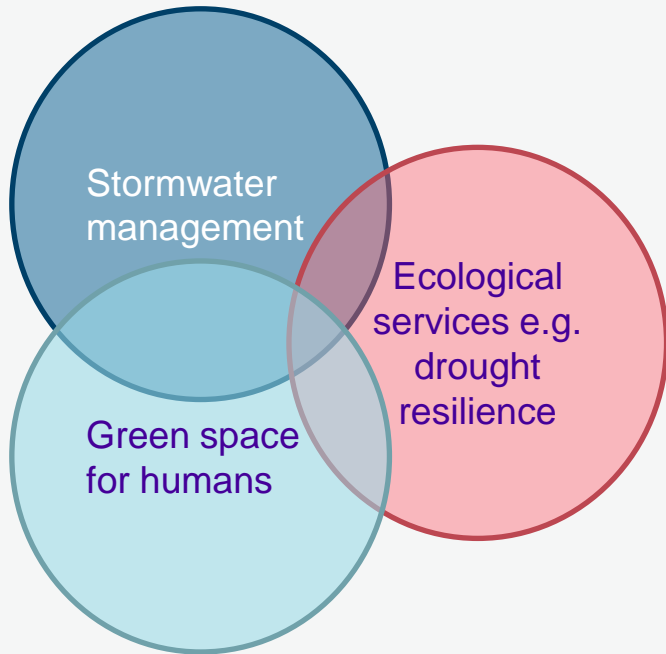
Research aim to aid transformation

JOINED UP - taking account of how green infrastructure can deliver multiple benefits

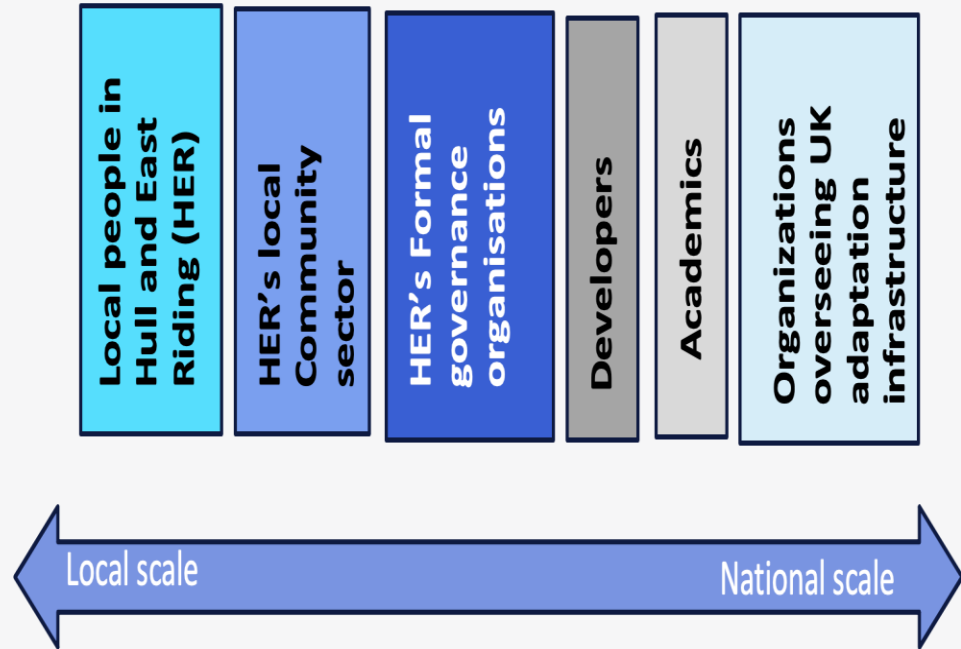
INCLUSIVE - public have a role

Joining up

1. Functions



2. Scales & Sectors

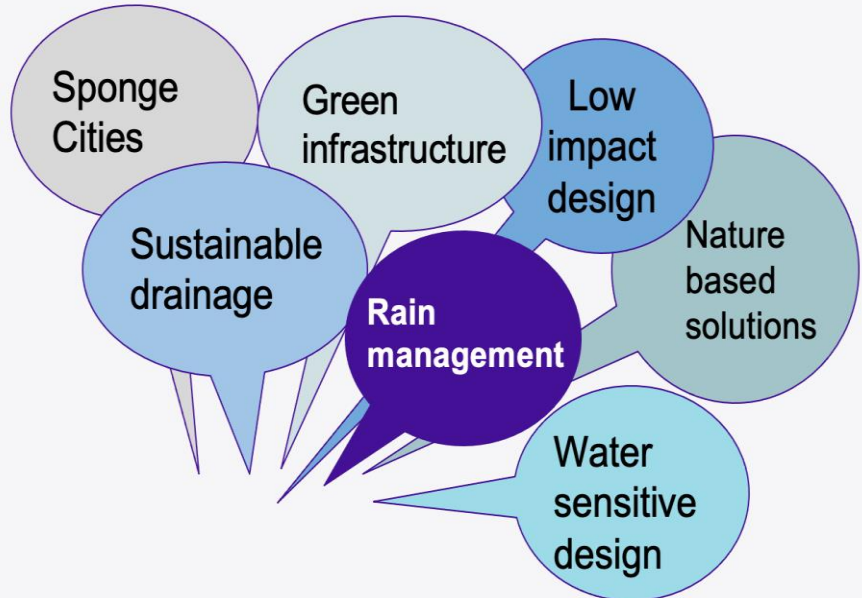


Being inclusive via

Action research

Communicating by doing with, not to”

- Local people as local experts
- A point for ongoing constructive conversations



Understandable language

Case study- Hull and East Riding

- Urban flood risk investments;
- Contrasting neighbourhoods
- Institutions working in partnership



Images by Pixabay and OS maps

Hull and East Riding facts

- Delta city built on the river Hull in Humber Estuary
- Apx 300,000 population plus surroundings
- 20% of England drainage via the estuary.
- 84% of water drainage to sewers
- 100% reliant on pumping



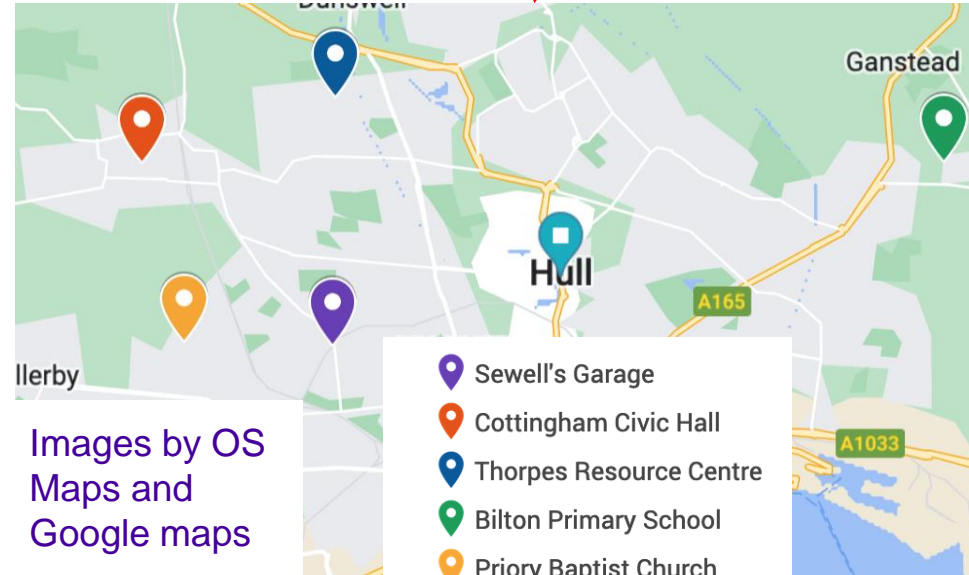
Building engagement

- Five buildings with a significant public footfall
- Engaged owners, workers and users in designing, building and celebrating adaptation
- Supported development of a local cooperative to lead in the construction of adaptations



hulldaily mail.co.uk

Hull petrol station area transformed into rain water garden
The Sewell On The Go filling station is looking rather different



Images by OS
Maps and
Google maps

MAGIC Building engagement

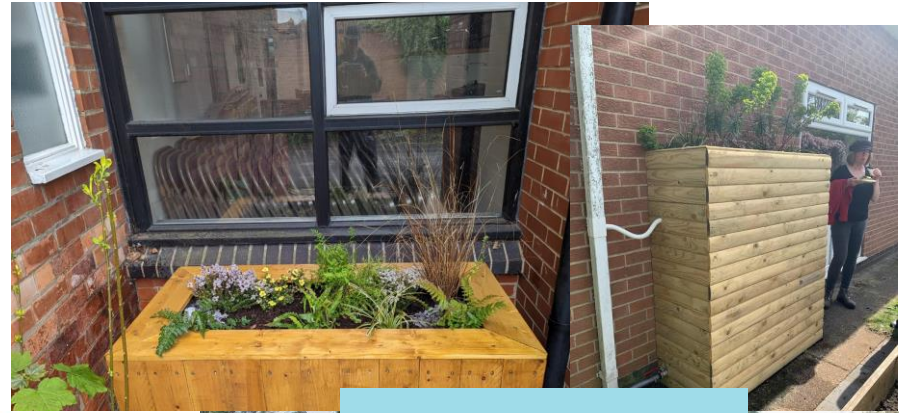
Site	Adaptation	Engagement
Bilton Primary School	Pond / outdoor classroom (with future potential link to roof)	Pre-discussion with head and schoolkeeper. Assignments with children during construction. Celebrate with Festival of rain 1/7/23
Thorpe Centre Orchard Park	Green roof, stormwater planters and raintank	Engagement days with workers/ users at centre. Days painting murals & planting days with centre users, including 24/11/23
Derringham Baptist Church	Raintank planters	Engagement via interviews with users from different groups attending the church and a 'Garden Rain Party' 30/04/23
Sewells Garage Chanterlands	Raintank planters	Interviews with owner and workers at the garage & workers at local shops. "Mermaid's tea party" celebration 19/5/23
Cottingham Town Hall	Raintanks and stormwater planters	Consultation event with community running the building. Rain dance celebration on 30/7/2023

Engagements



How can we live well with water?

Water gives and sustains life. The hidden rainwater tanks and planters around you explore how we can work with water in beautiful and useful ways.



Adaptations



The adaptation context

1. Interviews with new housing developers
2. Interviews with local and national policy makers

Considers integration across scales and benefits





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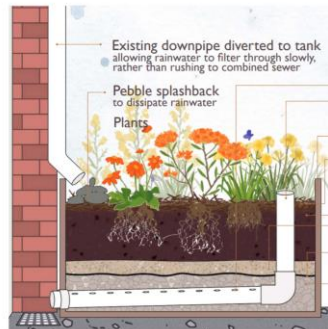
Achievements and reflections

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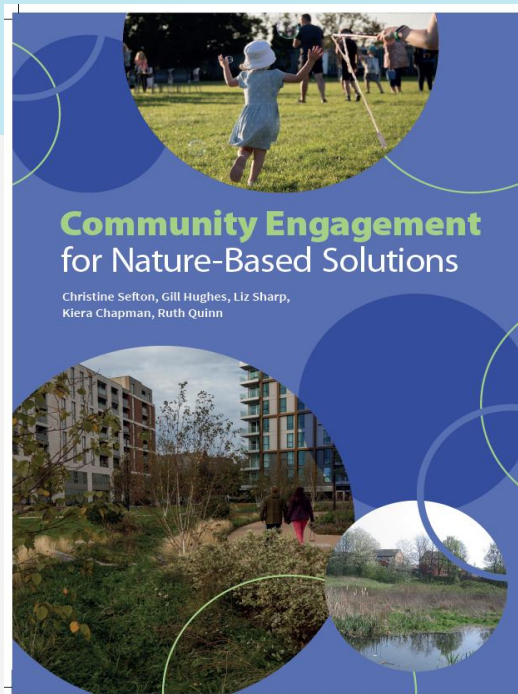
Outputs

FILM: Holding back the rain (see Community Action for water youtube channel,

<https://youtu.be/J0meqLHm0Yg>)

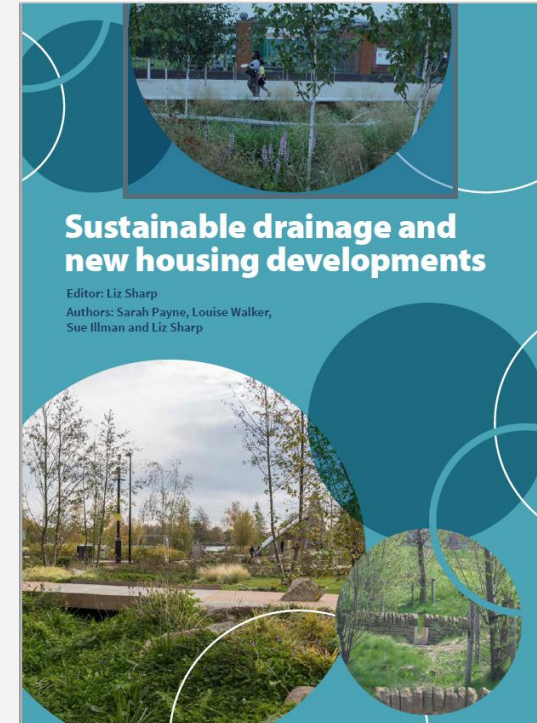


PUBLIC INFORMATION/
leaflets – see web
site e.g. raingarden
planter See
<https://www.communityactionforwater.org/>



GUIDANCE 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

REPORT Sharp, L (ed) 2023,
Sustainable Drainage and New
Housing Developments, Sheffield,
University of Sheffield DOI DOI
10.15131/shef.data.22134440



Outcomes in Hull and East Riding

AUTHORITIES

- Engaging communities via new specialised engagement staff
- 1000 raintanks to give out
- Options for **raintank register** being explored (to enable emptying request ahead of forecast storms)



COMMUNITIES

- 5 rainwater management installations with interpretation
- Exploring the legacy of our communications via KE funding



In 2016 Wamsler stated (of Bavaria):

“targeted city–citizen collaboration for climate change adaptation is practically non-existent”

Wamsler, Christine, 2016, From Risk Governance to City-Citizen Collaboration: Capitablizing on individual adaptation to climate change, *Env. Pol. Gov.* 26, 184–204 2016 DOI: 10.1002/eet.1707

MAGIC’s contribution – developing and trialling the concept of “rain management” in which:

- Everyone helps to ‘make the city’ via homes / gardens / workplace – shared responsibility
- Managing the rain gives multiple benefits for citizens ... but not much said

Wider rain management in UK? The MAGIC evidence

Needed

To deliver:

- **Local buy-in** to more rain management on public land
- **Public mandate** for more spend on rain management to adapt
- More rain management on **private land** - commercial or domestic.

Challenges

1. **Benefits dispersed** among many agencies
2. **Authentic communication** is not prioritised, and tends to catastrophise
3. **Evidential standards** need to recognize cumulative change

Opportunities

- Mobilise via **community passions** – e.g. healthy rivers or growing food
- Research question about how society delivers **multi-benefit projects**



Thank you for listening

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