

SuDS⁺

Community-led futures

Innovation Forum 2:
Co-design

21st March 2024



Innovation Forum 2: Co-design

Speakers invited from four of Defra's Flood and Coastal Resilience Innovation Programme (FCRIP) projects:

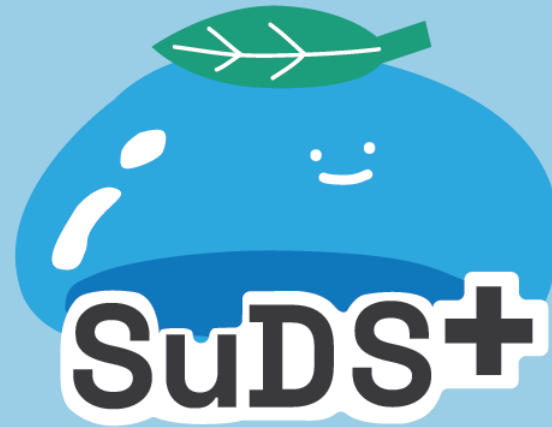
- Brian Weatherall (Durham County Council): [SuDS+](#)
- Sarah Ward and Helen Staddon (Westcountry Rivers Trust): [DRIP](#)*
- Tom Palmer (Southend-on-Sea City Council): [Catchment to Coast](#)
- Ruby Shepperson (Suffolk County Council): [Reclaim the Rain](#)



*Also representing work from Upstream Thinking: Rapid Response Catchments Project, Department for Education SuDS in Schools and Connecting the Culm.



Brian Weatherall



Stanley SuDS

Co-Design Process



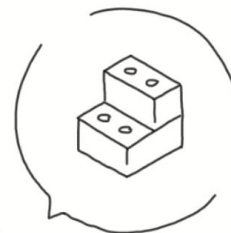
Implement and learn

What messages are we getting and how do we learn from them



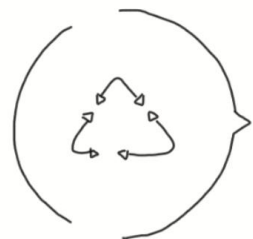
Build the conditions

Are the right people involved?
Are others needed?



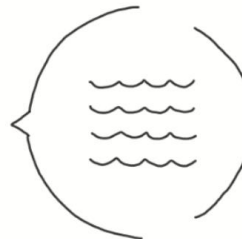
Test and refine

What's promising?
What's not working?
What can be fixed?



Immerse and align

What do we already know?
Where are the gaps



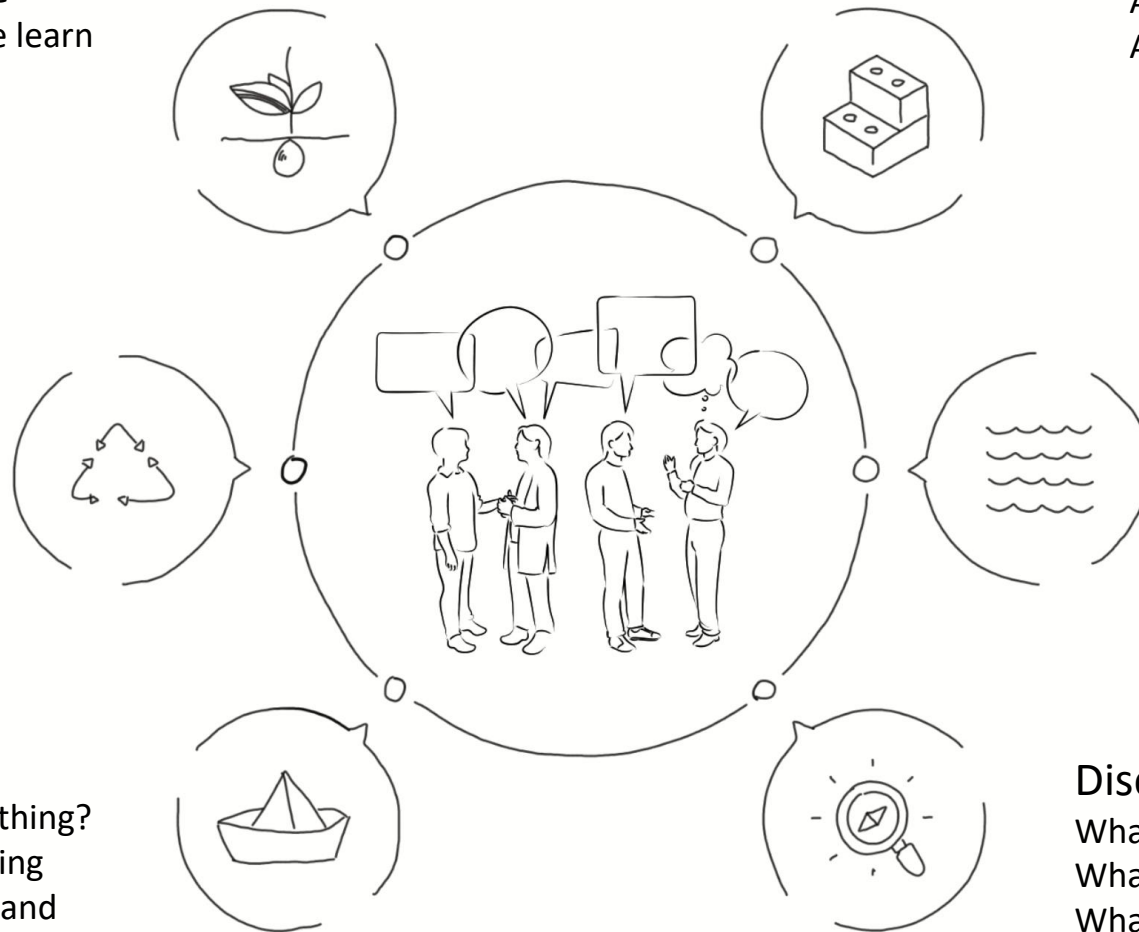
Design

Are we making something?
Design is about creating things, not meetings and plans.



Discover

What already works?
What are people hoping for?
What's never been tried?



Who should be involved?

- Work packages?
- Designers?
- Community?

Co-design requires relationships and trust, the better the connections the better the co-design process and outputs

Participation

- Co-design is about people taking part.
- That means offering ways for participation and expressing views, for example, through visual or verbal approaches.
- Moving people from meeting participants to active design partners.
- Value many perspectives
 - Understand different or opposing views
 - Find overlooked or ignored ideas or resources
- Learn through doing – try things rather than talk about them.

Design Process

- Prioritise shortlist
 - Community aspirations and voting
 - Location
 - Design within timescales
 - Technology available
 - Measurable benefits
 - Construction within timescales
 - Maintenance realistic

Site visit and assessment

- Desktop survey
- Walkover
- Topographical survey
- Drainage survey
- Utility details



Sarah Ward and Helen Staddon



**Devon Resilience
Innovation Project
DRIP**

Content also includes the Upstream Thinking: Rapid Response Catchments Project, Department for Education SuDS in Schools and Connecting the Culm



wrt.org.uk



21/03/2024

Upstream Thinking: Rapid Response Catchments

Helen Staddon

Senior Education and Engagement Officer

Sarah Ward

Senior Evidence and Engagement Officer (co-creation specialist)

UST: RRC



DEVON RESILIENCE INNOVATION PROJECT



- Led by Devon County Council
- Local authorities and partner organisations working together with Devon communities to reduce the impact of flooding and to respond and recover more quickly to flood events



Where?

Working with **10** small rapid response type catchments across Devon, **under 10km²**, across **8 communities**.

- Ashburton
- Bampton
- Beer
- East Budleigh
- Honiton
- Lympstone
- Walkhampton
- Whitchurch



Community Engagement

Appreciative Inquiry and Community Co-creation methodology

‘working together/with communities to identify, shape and install [co-design and co-create/co-produce] NBS for multiple benefit’

Tools for co-creation and engagement



Slowing the Flow: the card game! - A card game based around the different resilience options (NFM & Community). This can be played as a traditional trump card game or as a workshop tool to determine a community resilience hierarchy.



AR SandBox – Developing new software for a more interactive experience.

Other past/current projects: SuDS in Schools – 5W & DfE



5W (past: 'Westcountry Women Working With Water') - Taunton

DfE (present) - Stoke Climsland

- Exploring the roles of 'water' engineers & professionals
- Co-created session plans
- Co-developed co-design workshops
- Natural & urban water cycles
- Puddle Hunt
- SuDS experiments
- SuDS trump cards
- Co-design posters
- Install & co-create the SuDS (planting days)
- Follow-up citizen science activities (where possible)

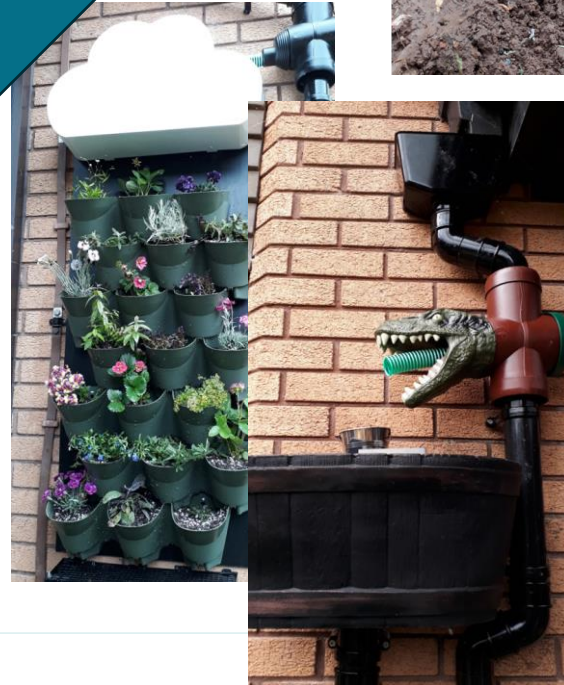
SuDS in Schools – 5W



Sensitive content edited



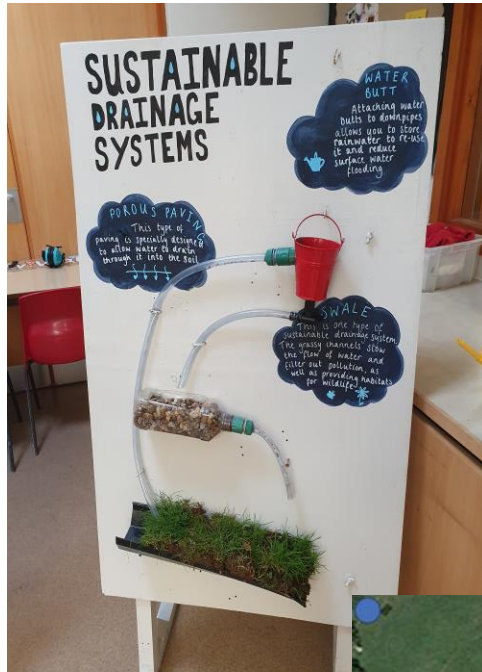
From these to these



https://issuu.com/westcountryrivers-trust/docs/taunton_er_summary_-_project_end

<https://www.watfnetwork.co.uk/68-1475-944>

SuDS in Schools – DfE (work in progress!)



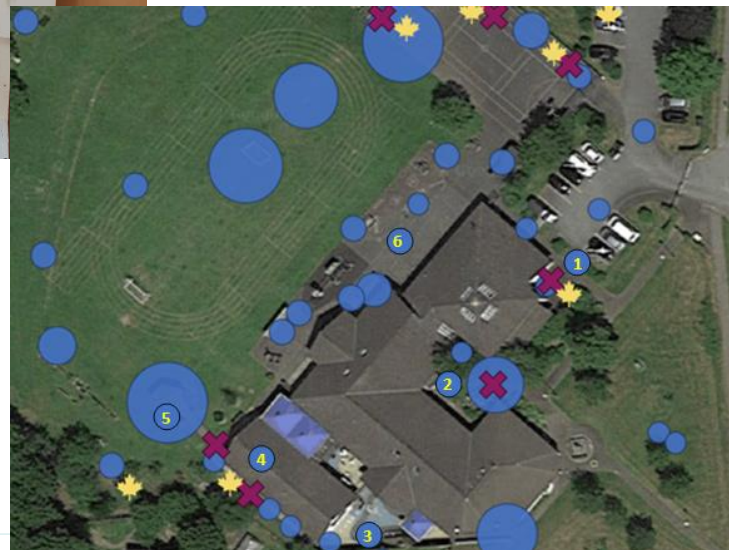
Sustainable Urban Drainage Systems (SuDS) in Stoke Climstland Primary School

Your job is to create a special rain garden in the school courtyard using the bird's eye view of the area.

Hints:

- Where's the water? Think of the location of downpipes, drains and any other notable features.
- Colourful Choices: Add plants with bright colours to make the garden look pretty.
- Paths and Pebbles: Add paths and pebbles for walkways. Quietly and bee friendly: include flowers that attract butterflies and bees.

Draw your ideal rain garden and tell us what you want and why!

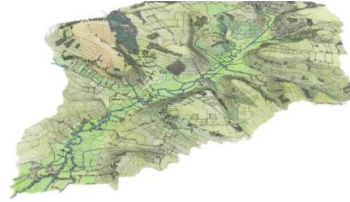


Tools from other past projects: Connecting the Culm – online and in-person



View of the Culm: south west from Cullompton to Exeter

Click to view an interactive version of the illustration showing the issues affecting the Culm.

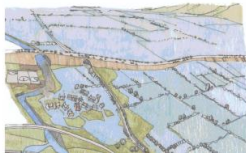


View of the Culm: north east across the Culm valley

Click to view an interactive version of the illustration showing the issues affecting the Culm.



Upper Culm valley: present



Upper Culm valley: future



Connecting the Culm

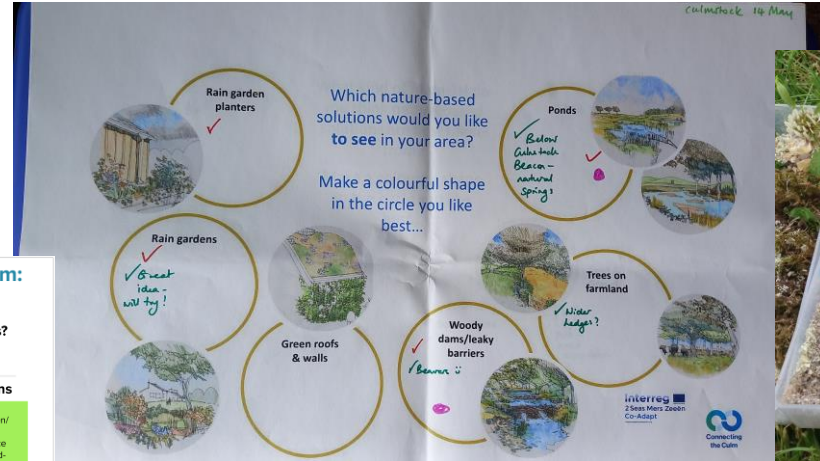
Working with nature along the Culm: Nature-Based Solutions

What are your priorities for nature-based solutions?
Create a post-it, type the item you choose, add it to the target

Types	Functions	Locations
Rain gardens Planters Ponds/streams Bunds/banks Trees Green roofs Green walls Woody dams Leaky barriers Others?	Hold water River health+ Habitats Growing food Providing shade Amenity	All homes In my garden/ allotment Public space Private land- scapes Private int...

Materials	Senses
Wood Soil Plants Sand Gravel Recycled Synthetic	Sight

Other c...



<https://connectingtheculm.com/library/illustrations/#>



<https://connectingtheculm.com/>



Thank You
Any questions?

wrt.org.uk

Tom Palmer



Catchment
to Coast



Catchment to Coast

SuDS+ Innovation Forum

Project Website: www.catchmenttocoast.co.uk

Tom Palmer, Senior Engineer, Southend City Council

21st March 2024

Catchment to Coast: Sites



Daws Heath Development Area

Belfairs Wood

7 Juniper Road

Shoebury Upper

Benfleet Creek

Manchester Drive Allotments

Silverdale Avenue

Eagle Way

Highlands Boulevard

Two-Tree Island

Southend Seafront

Shoebury Mid



Shoebury Development Area

Stanford-le-Hope

Ruskin Road Area

Leigh High Street

East Tilbury

-  Upper Catchment
-  Mid Catchment
-  Lower / Coastal

Catchment to Coast: Interventions Overview



Catchment to Coast

Area	Catchment Name	Site Name	Priority Measure/s	Key Areas of Innovation
Upper Catchment	Prittle Upper	Belfairs Wood	Wet woodland, Leaky dams	Use of high-level modelling, use of multiple designs and materials for leaky dams, use of mycelium filtering
		Daws Heath Development Area	MicroSuDS process on new development, Hydrocitizenship	Development of a process to deliver Micro-SuDS within a new development, including rainscaping community buy-in, Hydrocitizenship and My Blue Footprint
	Stanford-le-Hope	Stanford-le-Hope	Leaky dams with mycelium	Use of high-level modelling, use of multiple designs and materials for leaky dams, use of mycelium filtering
	Shoebury Upper	Shoebury Upper	Regenerative agriculture	Using multiple and combination regenerative agriculture methods with high resolution data collection
Mid Catchment	Prittle Mid	Manchester Drive Allotments	Water storage and re-use, Hydrocitizenship	Capturing, treating (mycelium and filtration) and storing SW runoff for use on allotments, community buy-in and Hydrocitizenship
		Silverdale Avenue	Residential SuDS retrofit, Hydrocitizenship	High resolution data collection on SuDS retrofit and water storage/re-use measures, community buy-in, Hydrocitizenship and My Blue Footprint
		7 Juniper Road	Residential SuDS and water re-use measures retrofit	High resolution data collection on SuDS retrofit and water storage/re-use measures, community buy-in, Hydrocitizenship and My Blue Footprint
	Shoebury Mid	Shoebury Mid	Highway SuDS retrofit	High resolution data collection on SuDS retrofit measures within the public highway, community buy-in and Hydrocitizenship
		Shoebury Development Area	MicroSuDS process on new development, Hydrocitizenship	Development of a process to deliver Micro-SuDS within a new development, including rainscaping community buy-in, Hydrocitizenship and My Blue Footprint
		TBC	SuDS and water re-use on new development	High resolution data collection on SuDS and water storage/re-use measures, community buy-in, Hydrocitizenship and My Blue Footprint
	Stanford-le-Hope	Ruskin Road Area	SuDS retrofit, water storage and reuse measures, Residential SuDS retrofit, Hydrocitizenship	Capturing, treating and storing SW runoff for council parks team usage, community buy-in and Hydrocitizenship and My Blue Footprint. Capturing, treating and storing SW runoff for communal use, community buy-in and Hydrocitizenship and My Blue Footprint
Lower Catchment	Coalhouse Fort	East Tilbury	Surface water flood warning beacons	Community flood warning beacons, use of existing data delivery platforms (bus time update system)
	Two-Tree Island	Two-Tree Island	Multiple and combination of green defence retrofit	Use of nature-based solutions in unique combinations and in untested environments
	Benfleet Creek	Benfleet Creek	Mycelium beds, wetlands and slow sand filters on CSOs	Use of mycelium beds, wetlands and slow sand filtration to treat storm overflow discharges with high resolution data collection
	Leigh	Leigh High Street	Biotiles along sheet piling frontage	Use of piling and frontage materials including bespoke habitat areas which will be newly designed as part of this project
	Southend Seafront	Southend Seafront	Surface water flood warning beacons	Community flood warning beacons, use of existing data delivery platforms (bus time update system)

Co-Design (1): Manchester Drive



Catchment to Coast

Diversion of existing surface water sewer to capture, treat and re-use flows

- Water to enter attenuation area via swales
- Water stored flows to tanks for re-use in allotment
- Use of planting, UV filter, mycelium and/or slow sand filter to treat water

Goal is to reduce flood risk, improve water quality, provide water for communal use, improving understanding and appreciation of water

Legacy: demonstrate SuDS on the highway is possible, quantify water quantity and quality improvements



Co-Design (2): Shoebury Mid



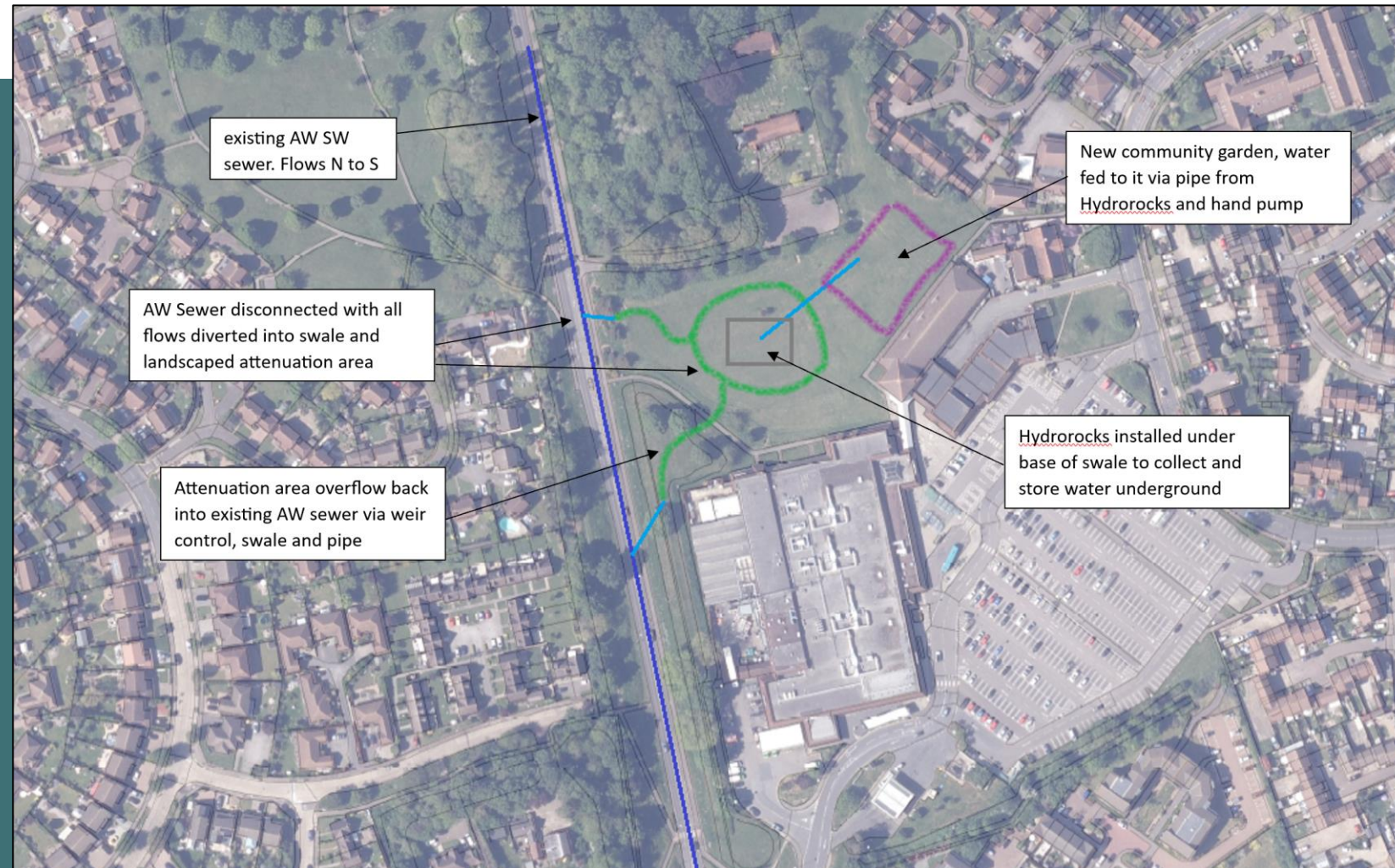
Catchment to Coast

Diversion of existing surface water sewer to capture, treat and re-use flows

- Water to enter attenuation area via swales
- Water stored flows for re-use in new community garden
- Use of planting, UV filter, mycelium and/or slow sand filter to treat water

Goal is to reduce flood risk, improve water quality, provide water for communal use, improving understanding and appreciation of water

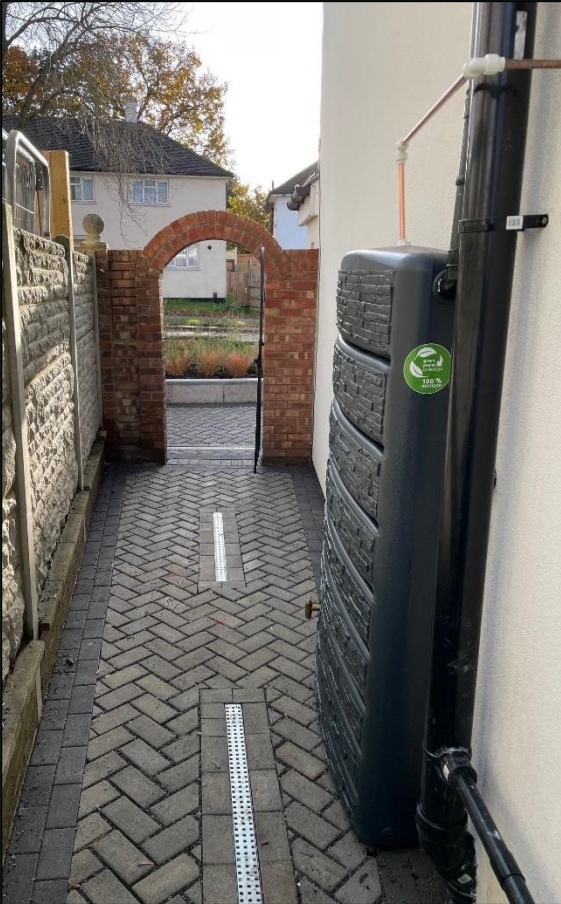
Legacy: Achieve community adoption of site, quantify water quantity and quality improvements



Co-Design (3): Juniper Road Retrofit House

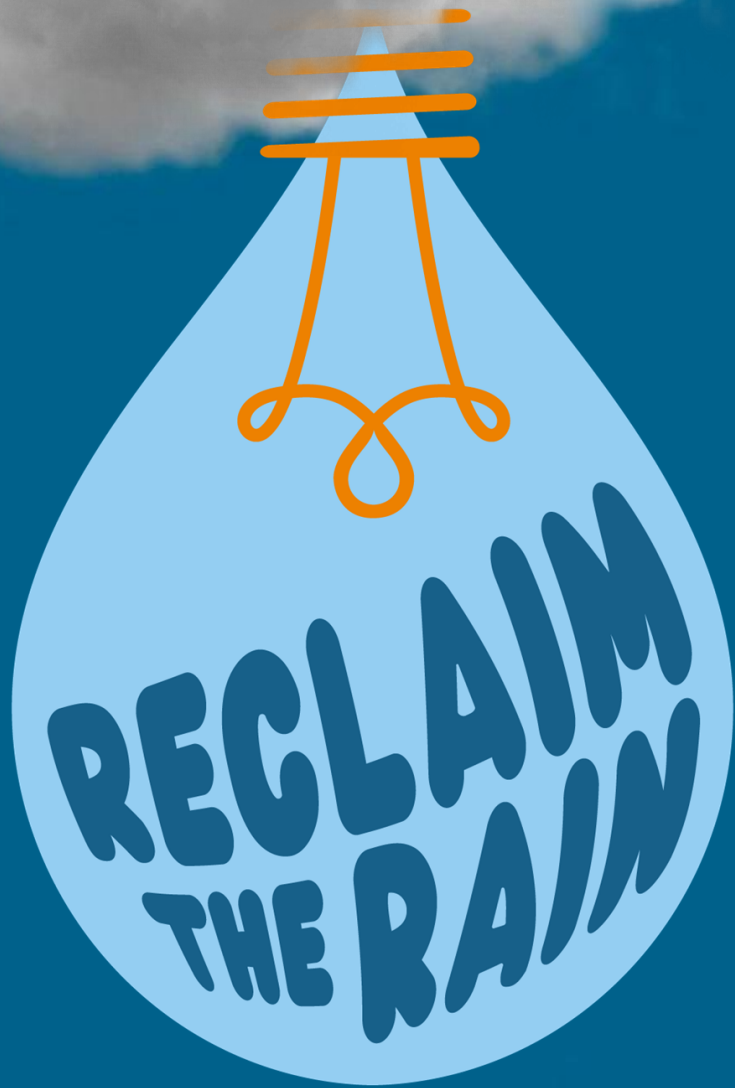


Catchment to Coast





Ruby Shepperson



Reclaim the Rain

Co-creation and community engagement

Ruby Shepperson – Suffolk Project Manager

Project Overview

FCRIP objectives:

1. Test new, innovative ideas.
2. Improve **resilience** of 25 areas to the effects of flooding and coastal erosion.
3. Build an evidence base on costs and benefits of innovative ideas.
4. Use the evidence gained to inform future flood and coastal erosion risk investments.

“Reclaim the Rain is working with six rural communities, three in Norfolk and three in Suffolk, to explore ways of improving their **resilience to flooding and drought**. By using their expert **local knowledge** we’re coming up with creative initiatives to **reuse water** and help protect against flooding.”

Engagement is Crucial

Without community engagement, Reclaim the Rain cannot succeed.

- Find value with communities
- Hear everyone's opinions

To do this effectively, we needed branding...



Visual Identity & Digital Marketing



Reclaim The Rain

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Do you have bright ideas on how we can reclaim the rain? Share your thoughts on how we could capture and reuse ...see more



RECLAIMTHERAIN.ORG

Share your bright ideas with us!

CONTACT US

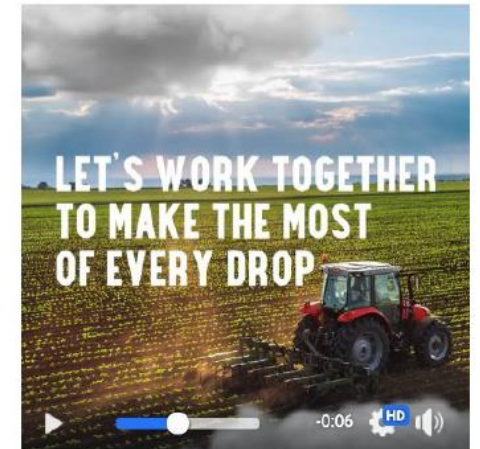


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We want to hear from rural landowners across Norfolk and Suffolk who would benefit from an extra source of sustainable water. As the driest part of the UK, lets work together to capture and reuse as much rainwater as possible to build resilience against water shortages and flooding in our region.



RECLAIMTHERAIN.ORG

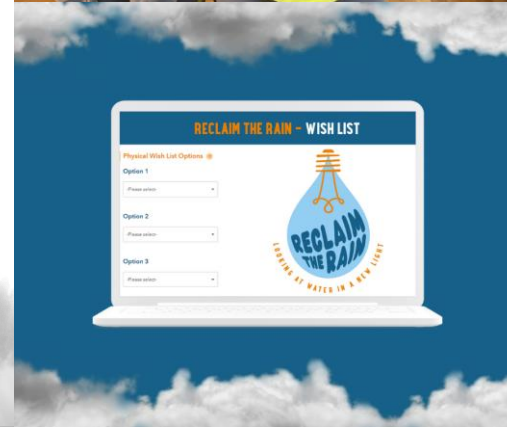
Tell us how we can reclaim the rain.

LEARN MORE

Getting Started

Use of techniques **familiar** to, and **popular** with communities – just ask!

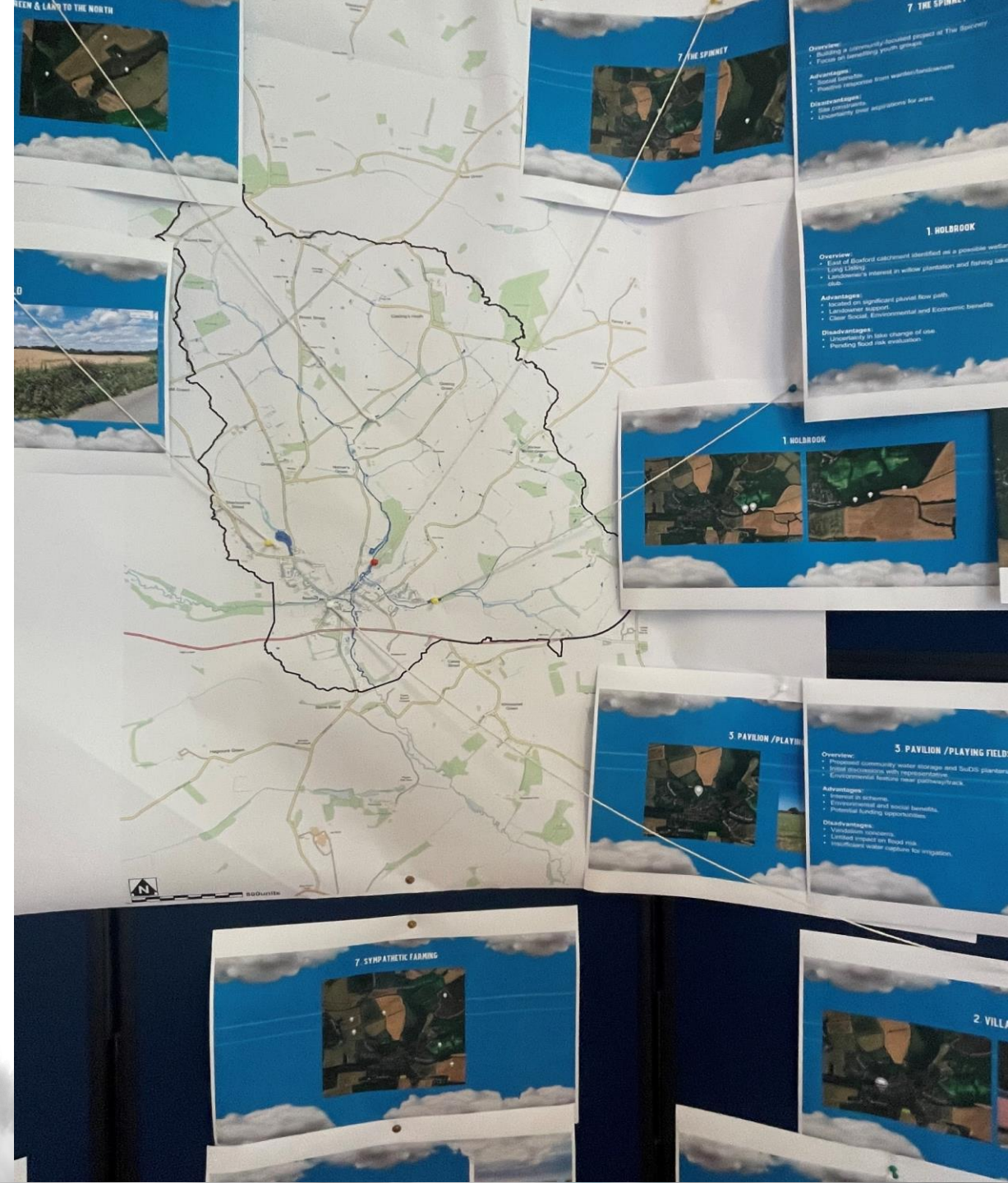
- Face-to-face workshops
- Community surveys/questionnaires
- Local newsletters and social media pages
- Community events
- Door knocking



Co-creation Underway

The audience has evolved and so methods of communication have changed over time.

- Smaller groups of committed individuals
- Increased landowner involvement
- External consultants and service areas
- Update-style communications.



Co-creation Going Forward

- Volunteering
- Education
- Site visits pre- and post-delivery
- Evaluation, monitoring, and evidence

RECLAIM THE RAIN

Calling Boxford residents, we've broken ground! In January, Reclaim the Rain, with the support of our Community Working Group (CWG), landowner Alan Keeble and J.S. Wright & Sons Cricket Bat Company, kicked off delivery by planting young willow trees at Bower House Farm, which is part of one of the significant surface waterflow paths, contributing to the village's flood risk. Due to the trees' high-water uptake, the willows will play a vital role in reducing surface water flood risk to Boxford. Beyond flood mitigation, the trees support infiltration, prevent soil erosion, and enhance water quality.

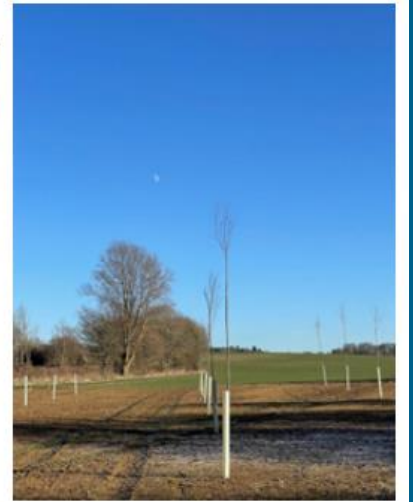


This first phase of delivery was only made possible through collaboration. Alan Keeble shared he is *"pleased to assist Reclaim the Rain in this very worthwhile project, [to support our aim] to reduce flood risk to residents of Boxford."*

J.S. Wright & Sons expressed their support of the project aims to reduce surface water flooding and that *"joining forces with Reclaim The Rain on our combined first cricket bat willow planting scheme has provided a great opportunity to expand our ambitions, to put more willow into the ground and keep the sustainability of our product growing year on year."*

Theresa Munson made the original bid to Reclaim the Rain at the start of the project and continues to support us now. Theresa shared that *"it was really exciting and encouraging on such a bright, sunny morning to see the first signs of a project coming to life. At times it felt like a long haul to get to that point, but it certainly reignited the hope and aspirations we've all had for Reclaim the Rain and what it might do for our community."*

The trees are just the beginning... The team and CWG have lots more planned for the eastern flow path and are still working together to identify areas in the north of the catchment where we can make a difference, not only to water resilience, but to people and the environment too. We welcome the opportunity to address any questions or ideas you may have, so please don't hesitate to get in touch (reclaimtherain@suffolk.gov.uk) or check out our website for more information www.reclaimtherain.org.

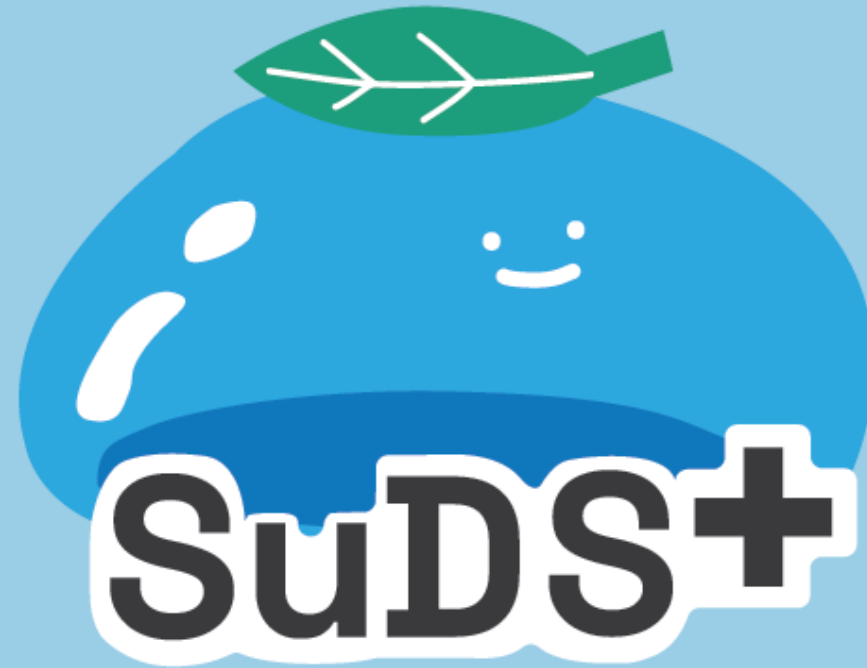


Lessons Learnt

- Flood risk resonated with people well, but **water scarcity did not cut through**.
- Points to the challenge of explaining very **complex issues** to lots of people.
- Balancing community **priorities** with project aims.
- **Community uniqueness** informs methods for effective co-creation.
- Early identification of **community characteristics** can save time spent on engagement.
- Trying to do *'too much'* and getting *'little'* back.

Thank You

Build for a more water-secure future across
Norfolk and Suffolk.



SuDS+ Innovation Forum

<https://stanleysuds.co.uk/innovation-forum>