

Storm Overflows: a better way

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Wessex Water

YTL GROUP



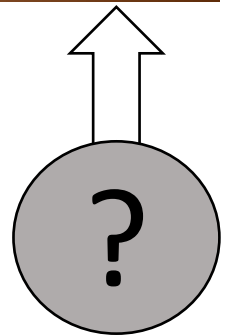
*“media and political feeding frenzy on sewage makes it difficult to separate fact from hyperbole and form a **balanced judgement of the best way forward**”*

Martin Hurst, Head of Water, Sustainability First
October 2023

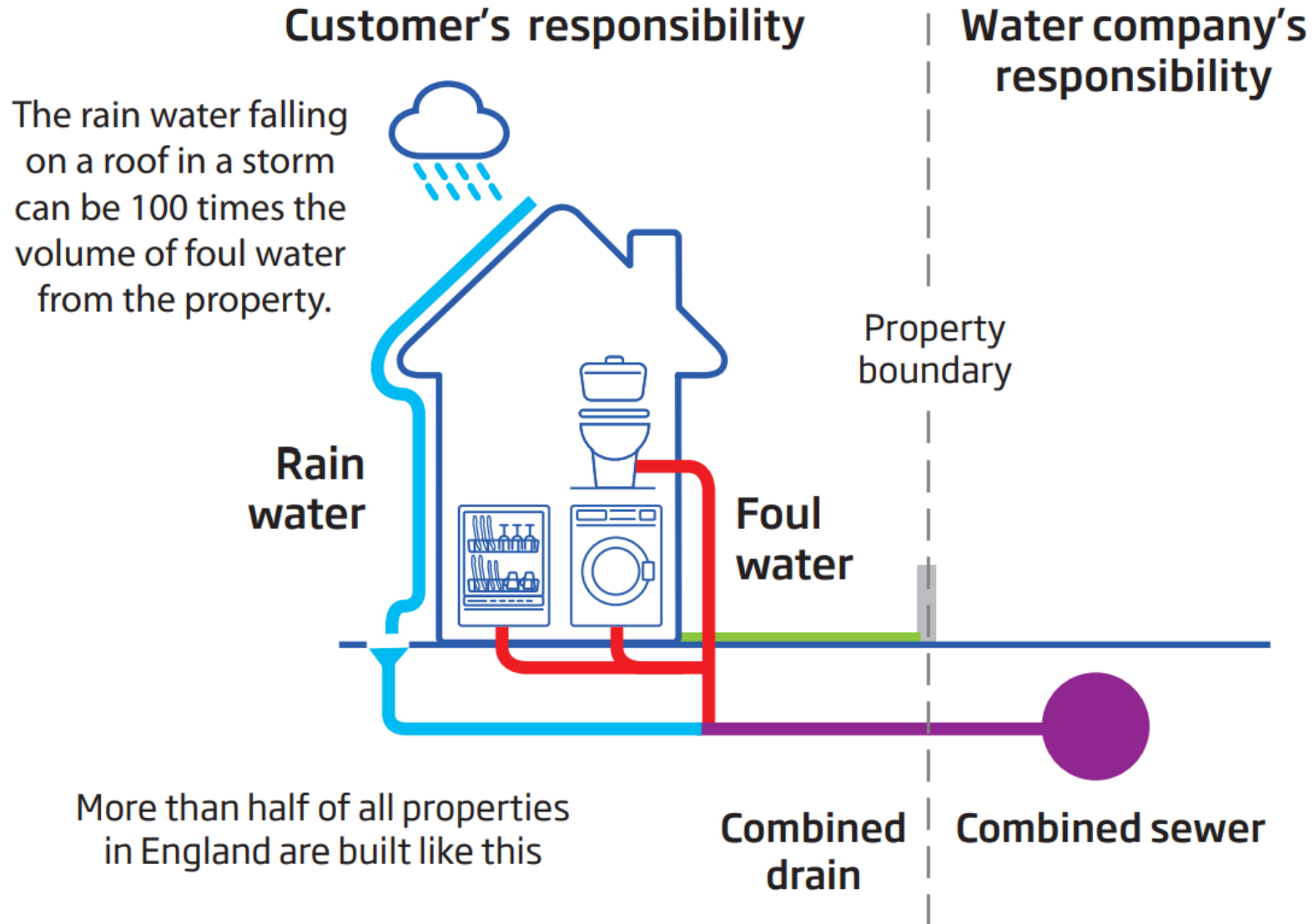
How do you view it?

a societal rainwater
management problem?

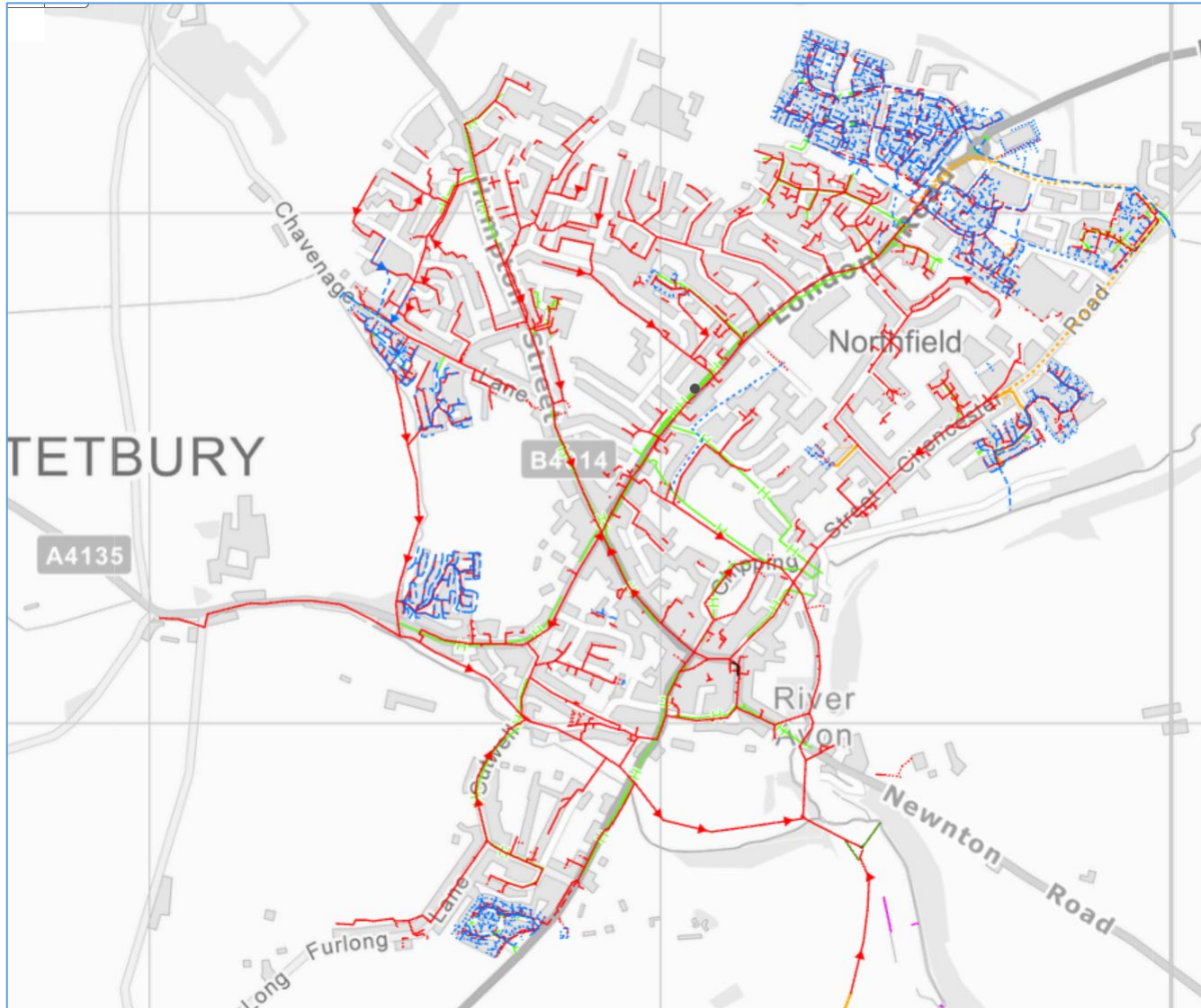
a water company poo
problem?



The one-pipe drainage problem



The one pipe drainage problem



Green lines - rain off highways

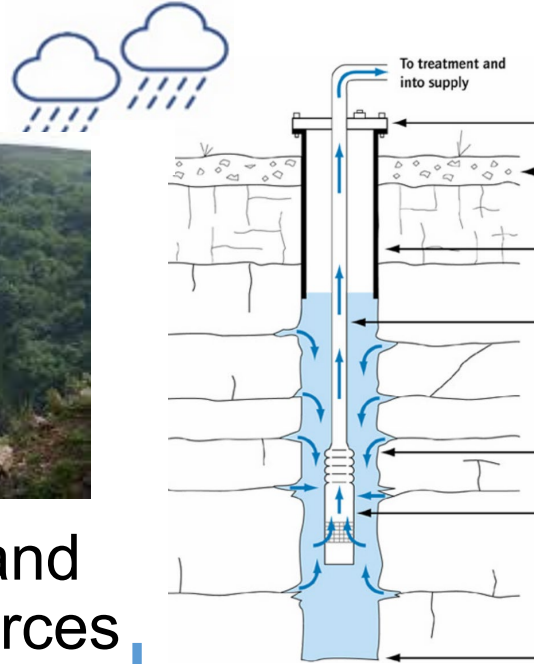
Blue lines - rain off properties

Red lines - rain and sewage or just sewage (where there is a blue line)

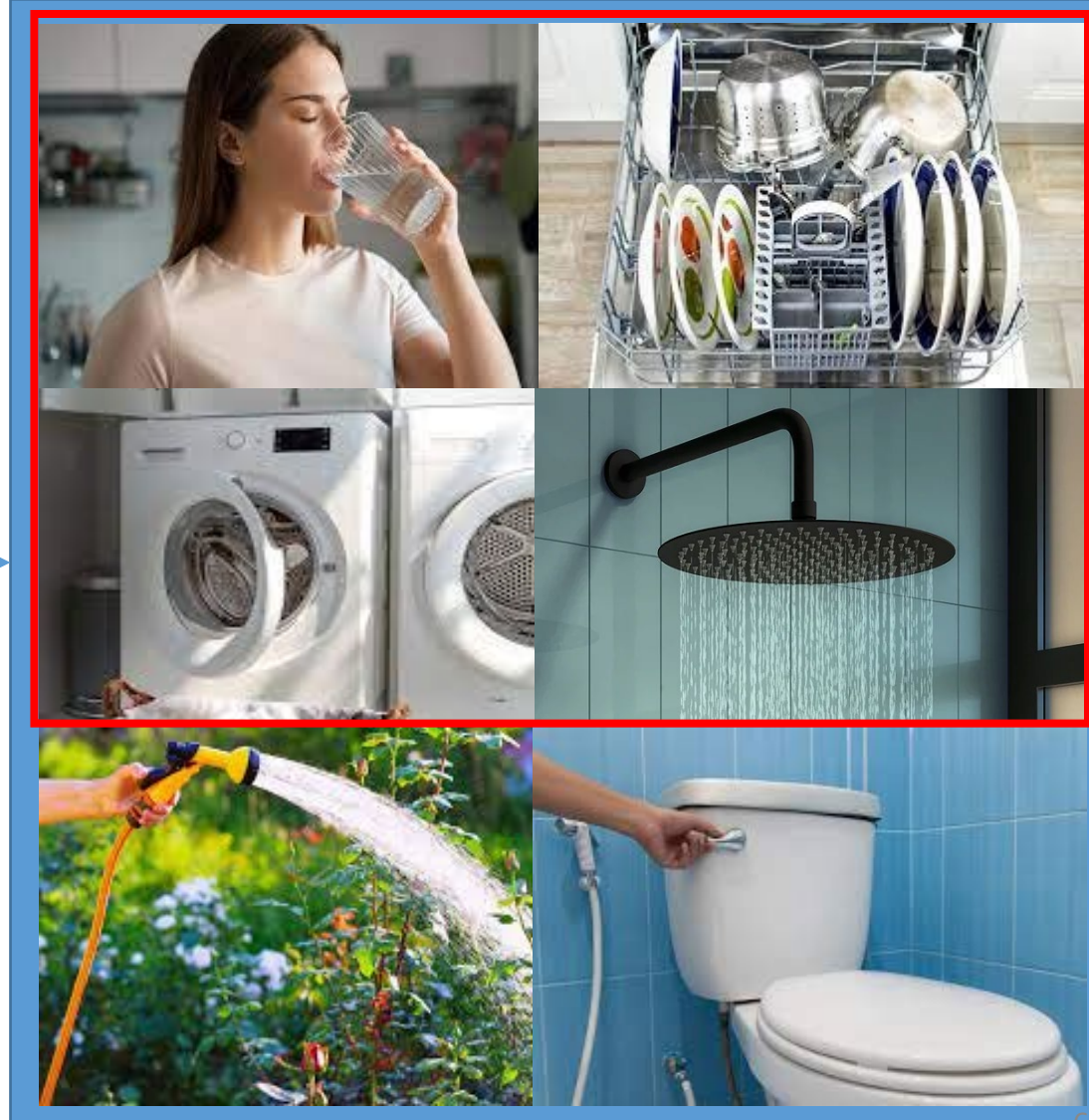
(There's also one-pipe supply problem)



Surface water and groundwater sources



Treatment and distribution



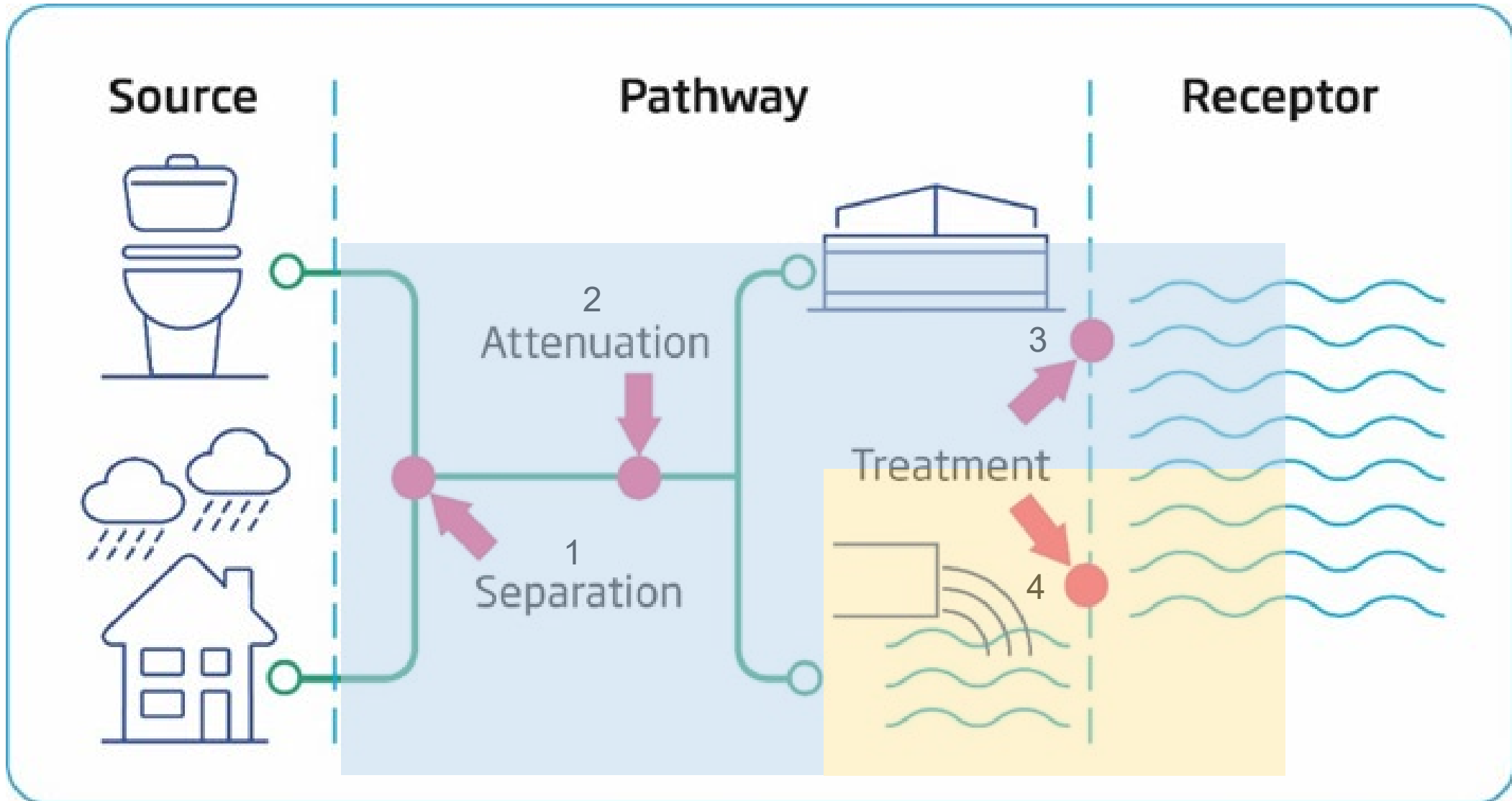
Building back better

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Solution types



Solutions types: relative benefits

Outcome	Solution	Relative Benefits Assessment				
		Water efficiency	Biodiversity	Customer bills	Embodied Carbon	Operational Carbon
Reduction in discharges	1. Separation (property level)	✓	✓	✓	✓	✓
	1. Separation (community level)	✗	✓	✗	✓	✓
	2. Attenuation	✗	✗	✗	✗	✗
	3. Treatment capacity increases at WRCs	✗	✗	✗	✗	✗
Reduction in harm	4. Treatment at overflow: nature-based solutions	✗	✓	✗	✓	✓
	4. Treatment at overflow: grey solutions (e.g. UV)	✗	✗	✗	✗	✗

The principles of good rainwater management

1

Rainwater should first and foremost be treated as a RESOURCE, captured near where it lands and reused where possible....



Rainwater should be returned to the environment AS CLOSE TO WHERE IT LANDED as possible and never mixed with sewage

How most properties were built

1

Rainwater should first and foremost be treated as a RESOURCE, captured near where it lands and reused where possible....

2

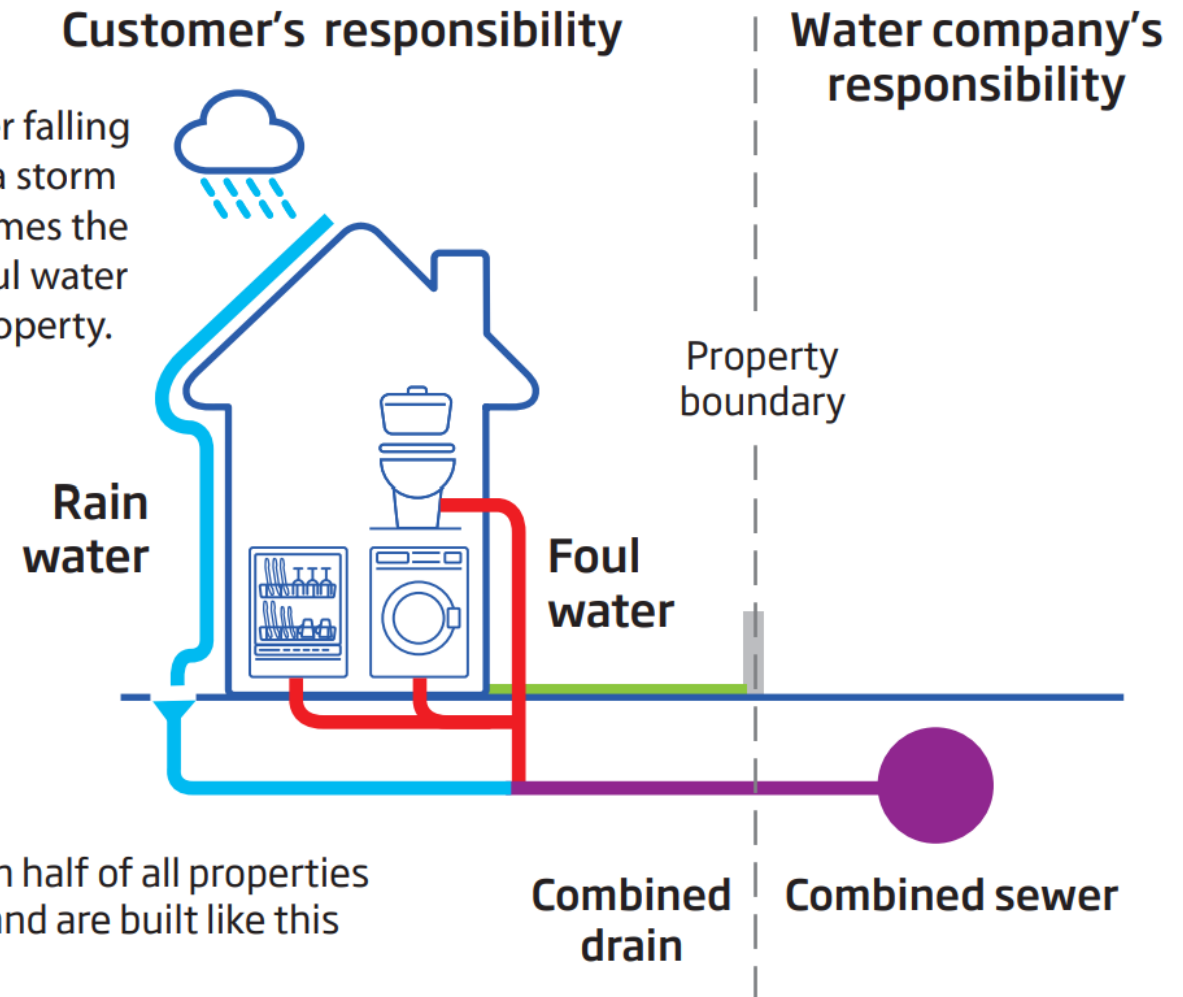
Rainwater should be returned to the environment AS CLOSE TO WHERE IT LANDED as possible and never mixed with sewage

X

The rain water falling on a roof in a storm can be 100 times the volume of foul water from the property.

X

More than half of all properties in England are built like this



Separate drainage

1

Rainwater should first and foremost be treated as a RESOURCE, captured near where it lands and reused where possible....

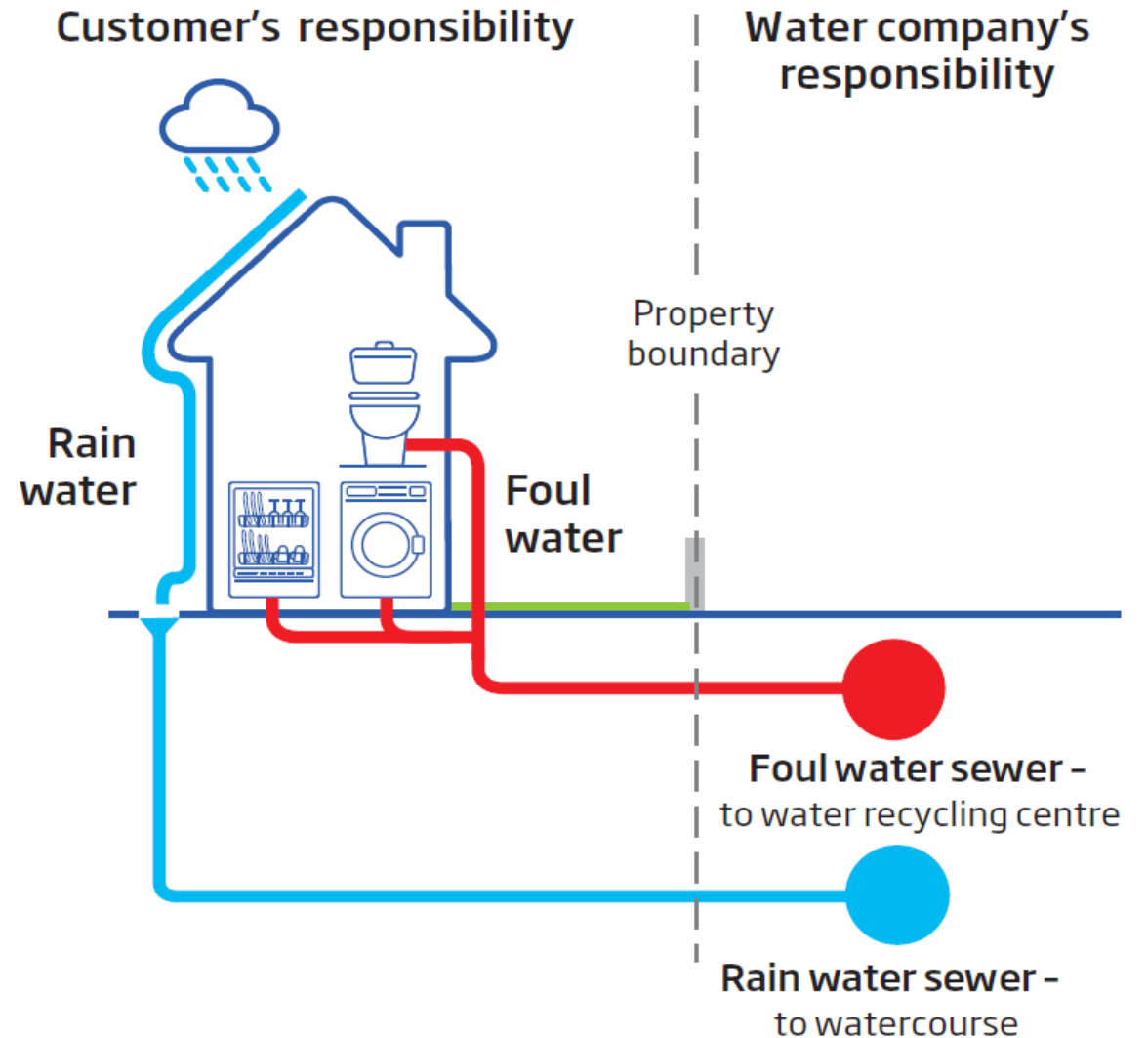
X

2

Rainwater should be returned to the environment AS CLOSE TO WHERE IT LANDED as possible and never mixed with sewage

X

✓



Separate drainage and local disposal

1

Rainwater should first and foremost be treated as a RESOURCE, captured near where it lands and reused where possible....

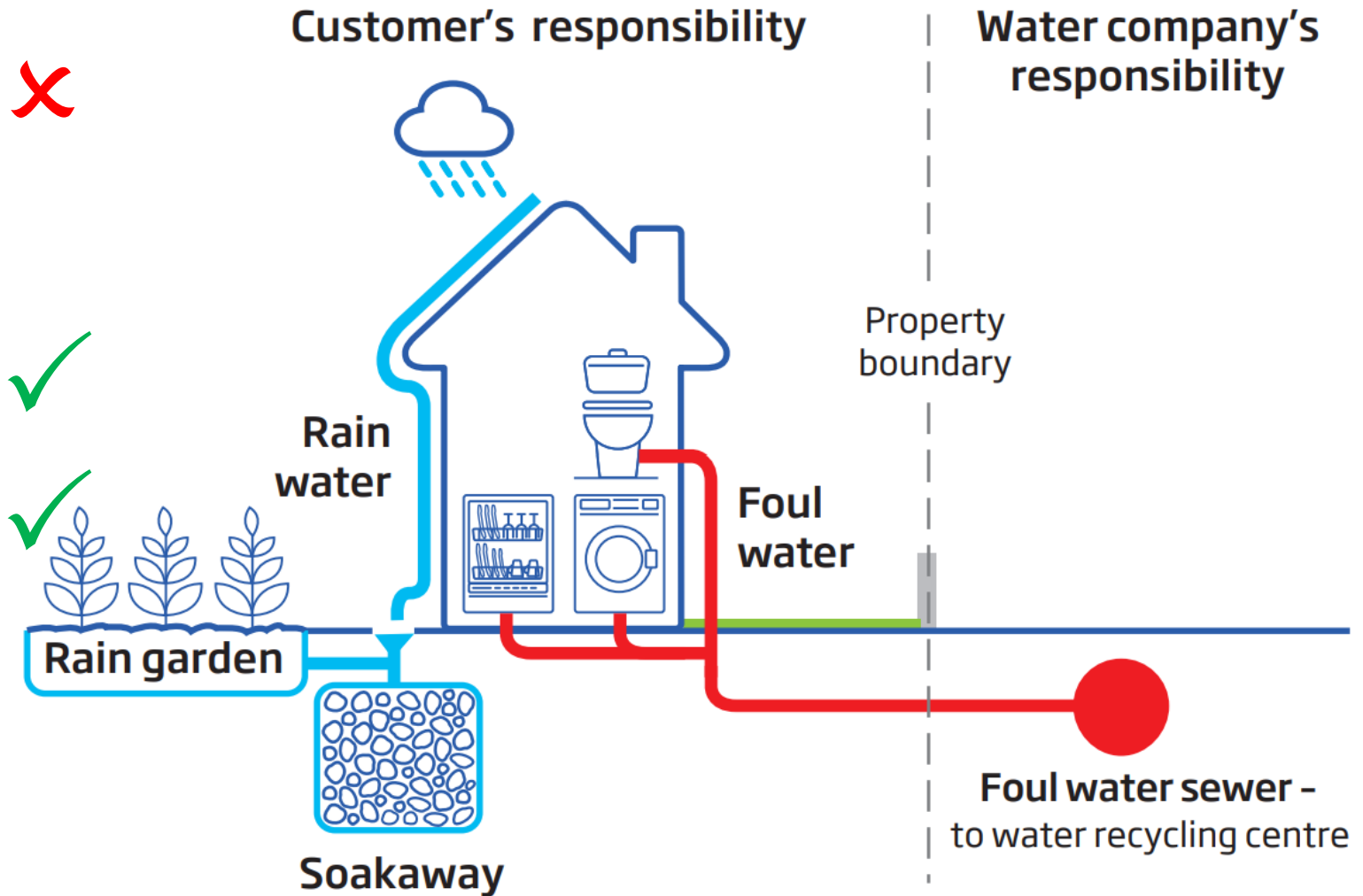
2

Rainwater should be returned to the environment AS CLOSE TO WHERE IT LANDED as possible and never mixed with sewage

X

✓

✓



Rainwater reuse and local disposal

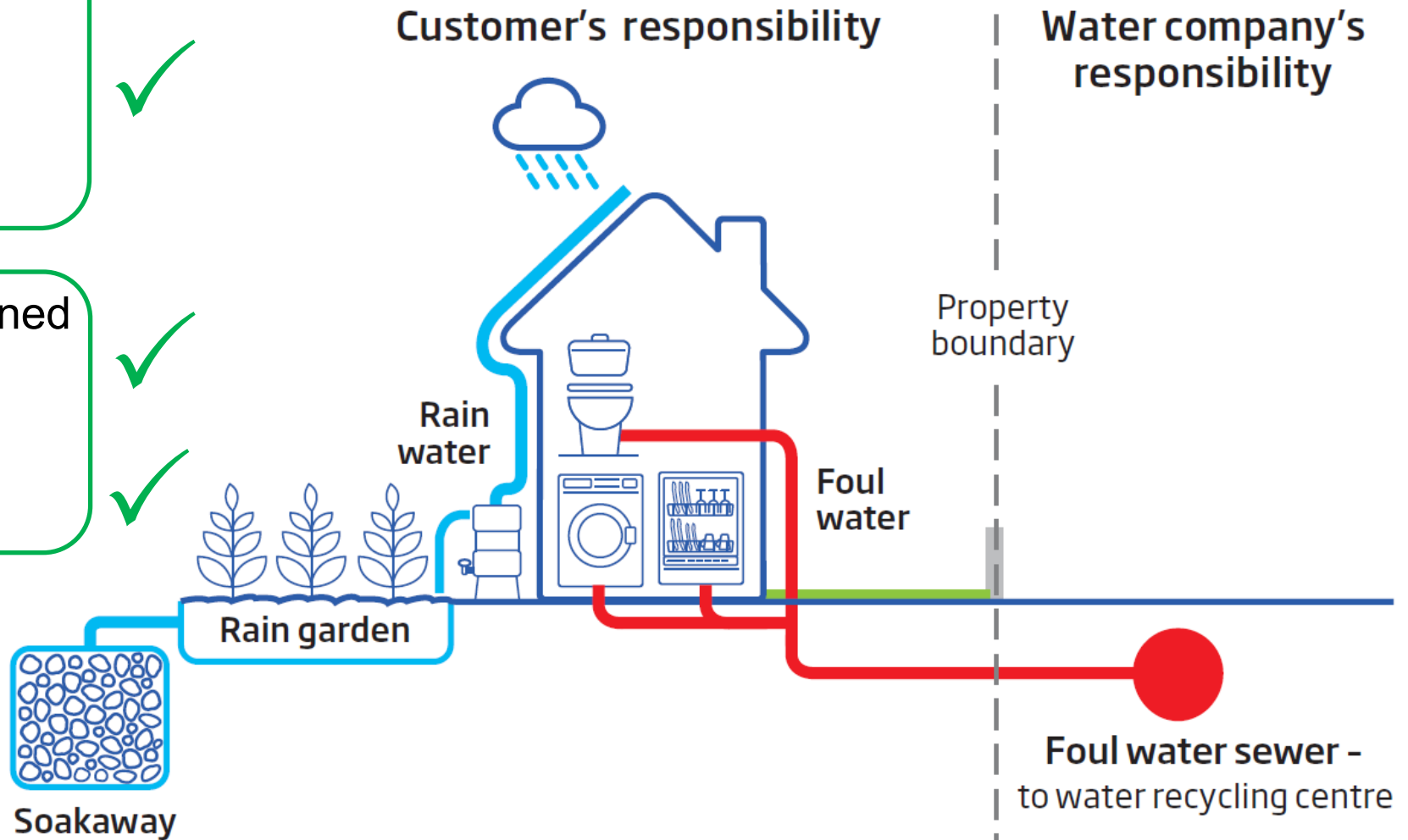
1

Rainwater should first and foremost be treated as a RESOURCE, captured near where it lands and reused where possible....



2

Rainwater should be returned to the environment AS CLOSE TO WHERE IT LANDED as possible and never mixed with sewage



Full rainwater reuse and local disposal

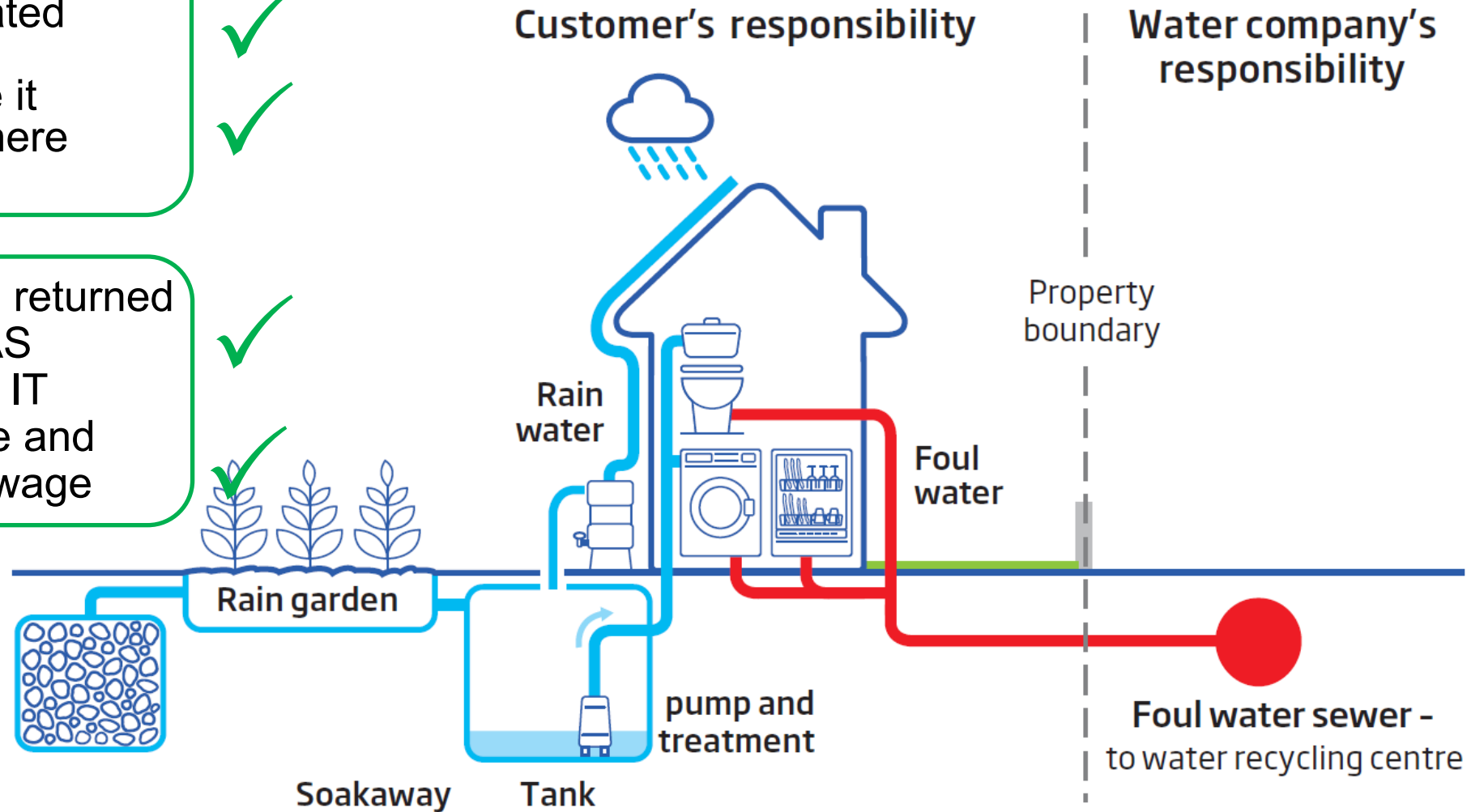
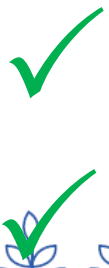
1

Rainwater should first and foremost be treated as a RESOURCE, captured near where it lands and reused where possible....



2

Rainwater should be returned to the environment AS CLOSE TO WHERE IT LANDED as possible and never mixed with sewage



**How can building back
better be encouraged,
enabled and incentivised?**

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How can we enable building back better?



Problem statement

- Currently new development
- does not have to be water efficient
 - nor does not have to be sustainably drained....

And developers still have a right to connect rainwater to sewers carrying foul water

Solution





Problem statement

Water companies do not have powers to build **private** assets such as raingardens/ soakaways



Solution



Problem statement

Returning rainwater to rivers is conditional on the riparian owner consenting and granting (at £££) discharge consent



Solution



Problem statement

Rainwater management is not valued as a service

e.g. Highways authorities do not pay for the service and so there are no financial incentives for removing highway rain from sewers

(Instead customers pay through the rainwater standing charge)



Solution

How can we enable building back better?

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Government and regulators have set output targets (discharge numbers)

But actually, what matters is the **outcome** AND **how the outcome is achieved**

Discharge numbers can be achieved – but at what cost of carbon footprint and the missed opportunities of greater water efficiency?



Solution

and in summary....

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From the Rivers Trust...


“An emerging picture is one of water companies responding to the Environment Act and the plans feeding into PR24 in a risk-averse, compliance-first way, which feels very concrete – and carbon – heavy”


“It’s a terrible way to run a multi-billion pound industry and provokes a response which prioritises risk-minimisation against outcome maximisation.”

“The regulators are shouting from the bridge to turn right but gripping tightly onto the wheel and preventing the ship from actually turning.”

[Mark Lloyd, CEO of the Rivers Trust](#)

The last turd...

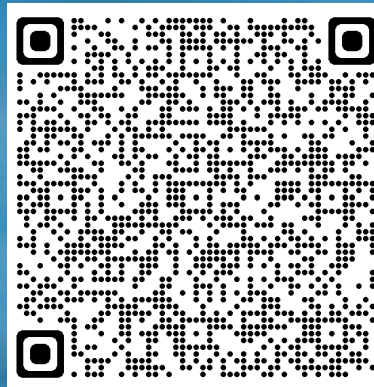
We () want your poo 

Please keep your rain 

Thank you for listening

Any questions?

Want to be kept informed? Scan me!



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