

Pathfinder Project

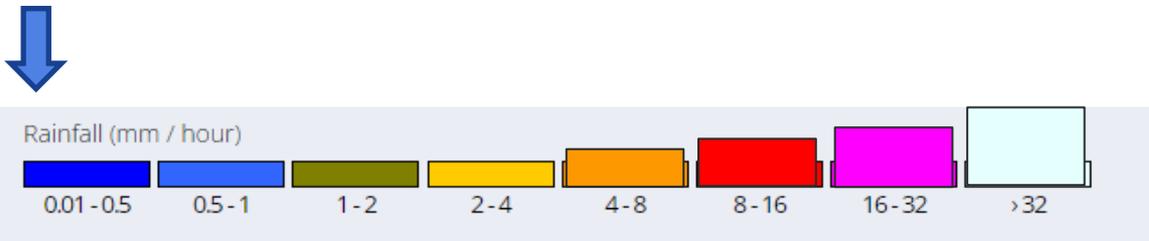
Gurnard



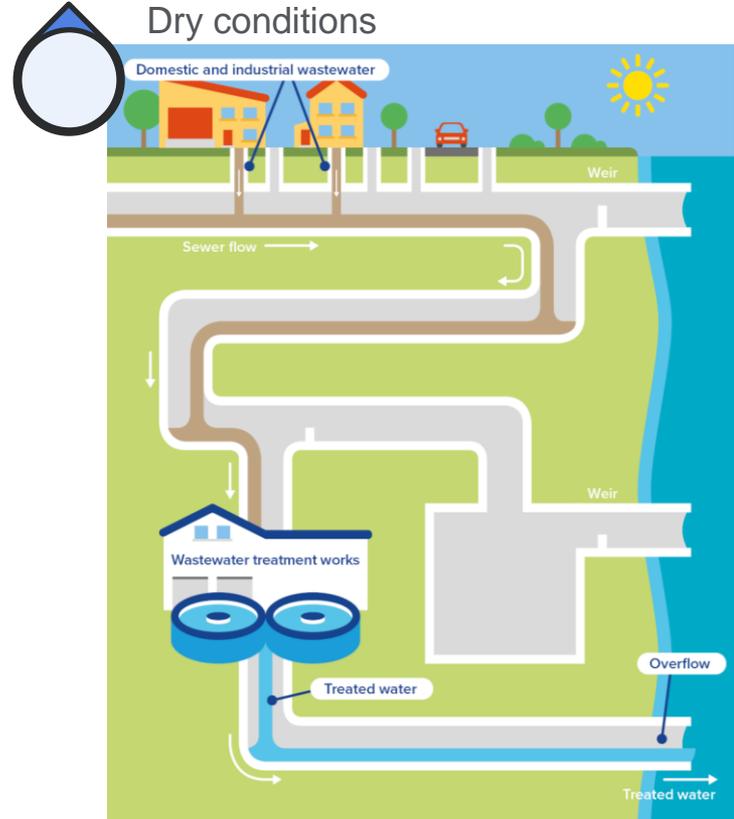
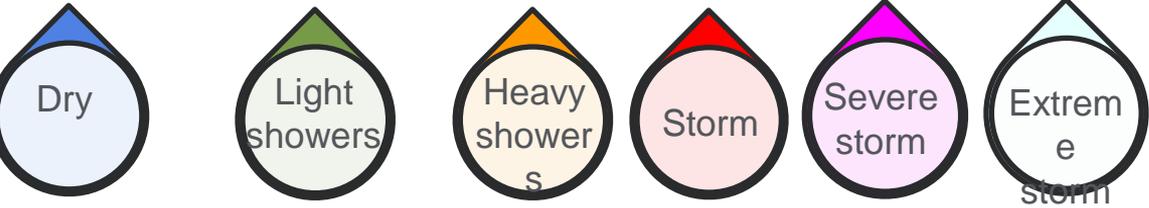
from
**Southern
Water** 

Why do CSO exist?

During dry weather, flow from domestic and industrial properties is treated at a wastewater treatment works and then released into rivers or the sea

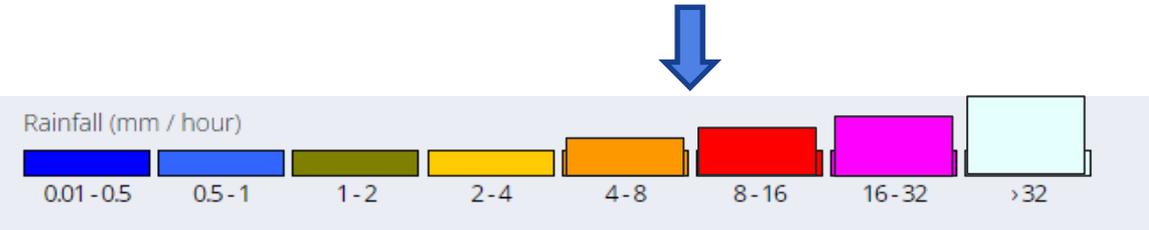


Met office

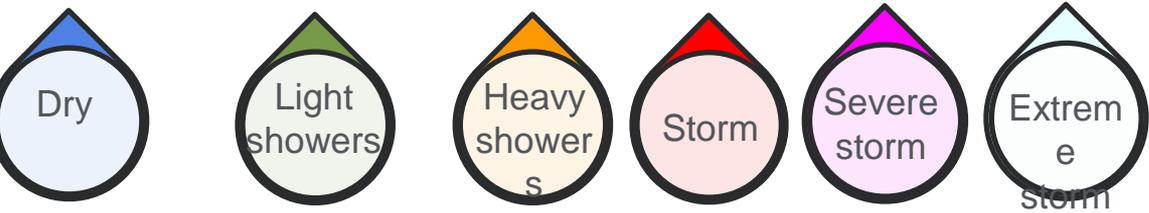


Why do CSO exist?

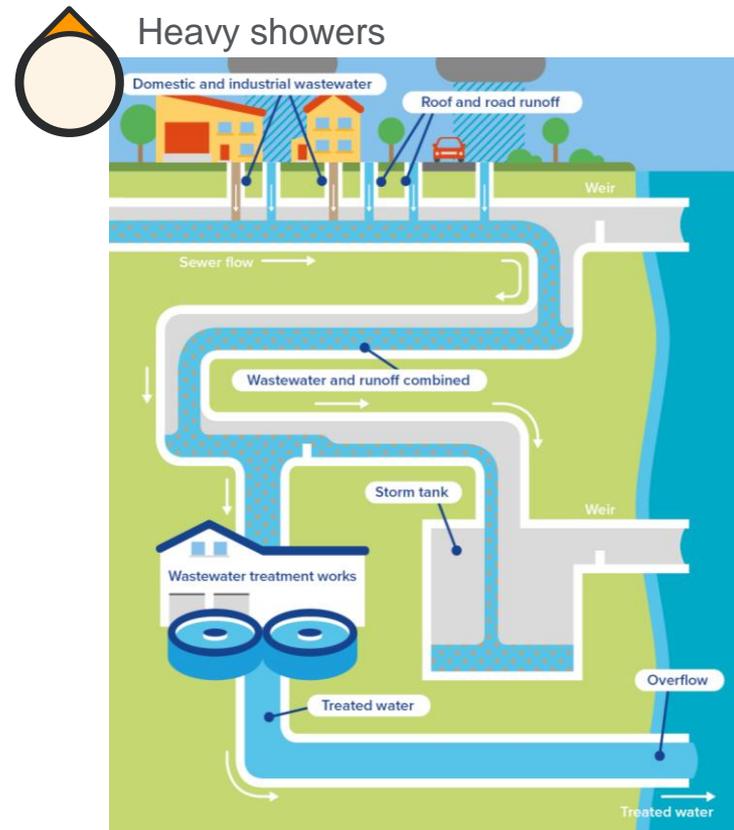
In wet weather, when rain runoff from roads and roofs is combined with wastewater in the sewer, storm tanks are used to hold excess ready to be treated after high flows



Met office



Figures and concepts are typical and are not based on a specific catchment or area, which will vary in performance. This concept does not take account of condition pre-post the quoted rainfall.

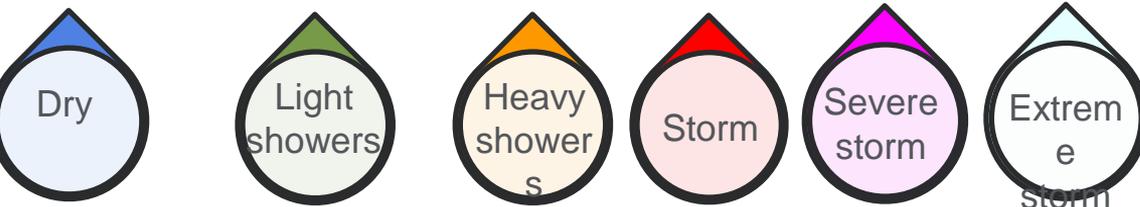


Why do CSO exist?

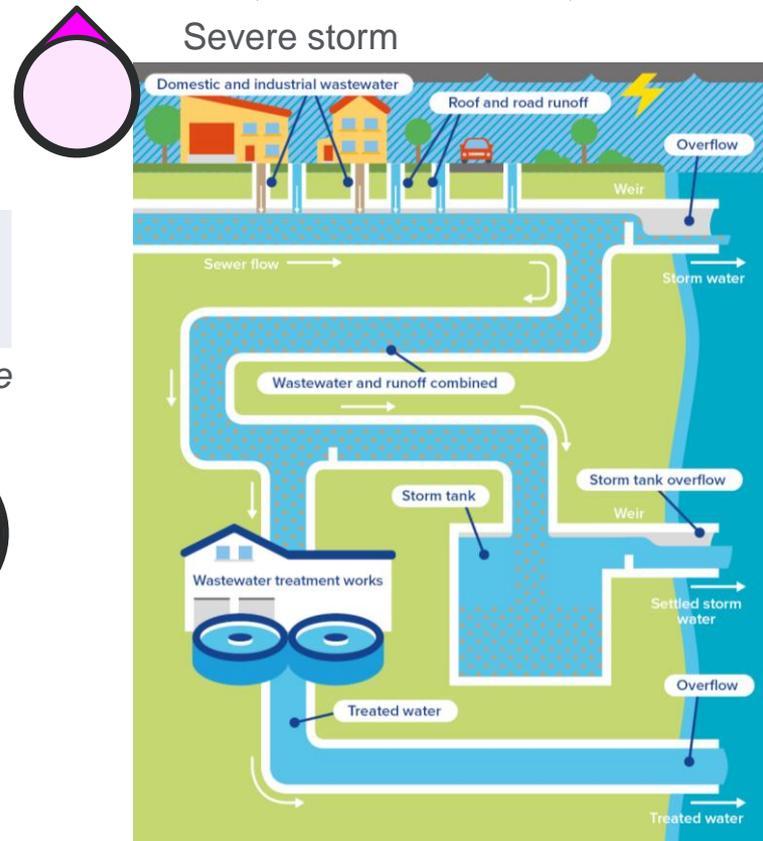
For severe storm conditions and once our storm tanks are full, overflows are used to prevent the flooding of homes, businesses, hospitals and schools



Met office

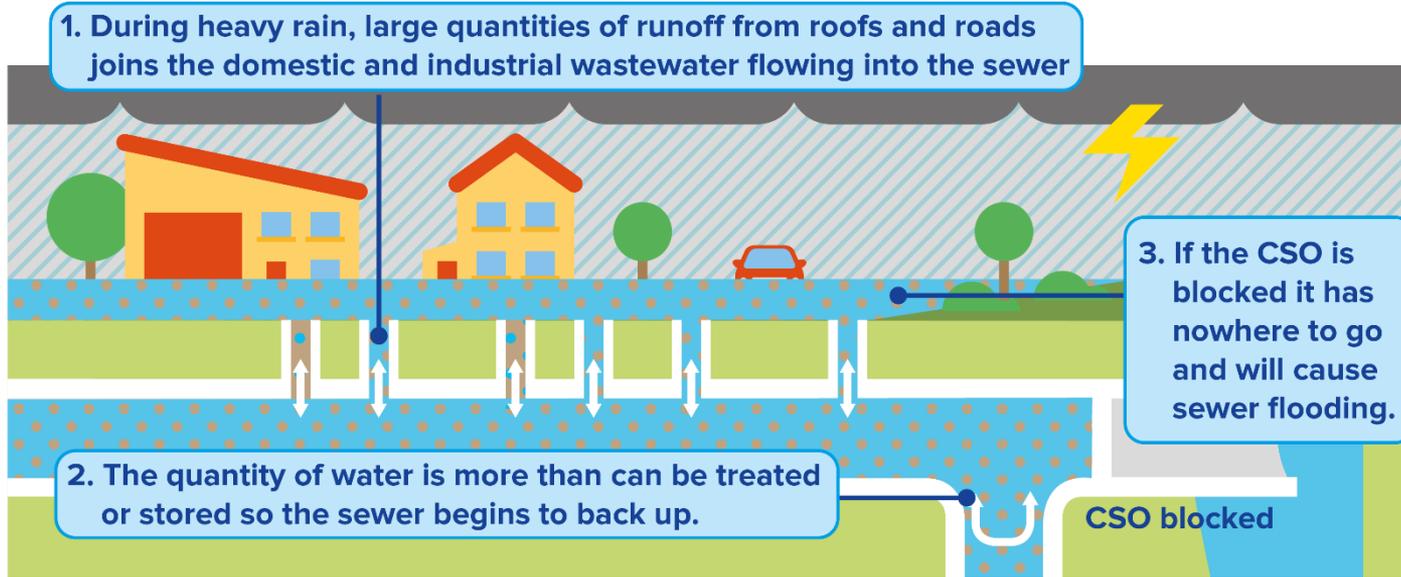


Figures and concepts are typical and are not based on a specific catchment or area, which will vary in performance. This concept does not take account of condition pre-post the quoted rainfall.



Why do they exist?

CSOs are a pressure relief valve for the system to prevent the devastating impact of sewer flooding. Blocking up CSOs will cause flooding.



from
Southern
Water



What are we going to do?

We fully support the environment bill amendment and are taking the lead with swift and bold action

Southern Water to cut storm releases by 80%

Southern Water has launched a specialist task force in an effort to cut storm releases by 2030 this week.

The time to act on storm releases is now

05/11/2021 14:08:18

A letter from Ian McAulay, CEO of Southern Water

The Environment Bill currently making its way through Parliament has brought the issue of water pollution to the forefront of public debate. While we welcome the strengthening of the Bill, it is now time for the water industry working with the Government, regulators and customers to move forward with swift and bold action - not in the medium or long term - but now.



Much of the discussion in the media and Government focuses on pollution caused by storm releases through Combined Sewer Overflows (CSOs). These heavily regulated releases of wastewater during rainfall protect people's homes and businesses and other properties from the misery of flooding. They are an integral part of our Victorian-era sewage system. Storm releases typically occur during periods of heavy rainfall and are more than 95 per cent rainwater.

ey
2021, 2:35 pm
November 2021, 2:36 pm

West Sussex Gazette



from Southern Water

What are we going to do?

The Storm Overflow Task Force

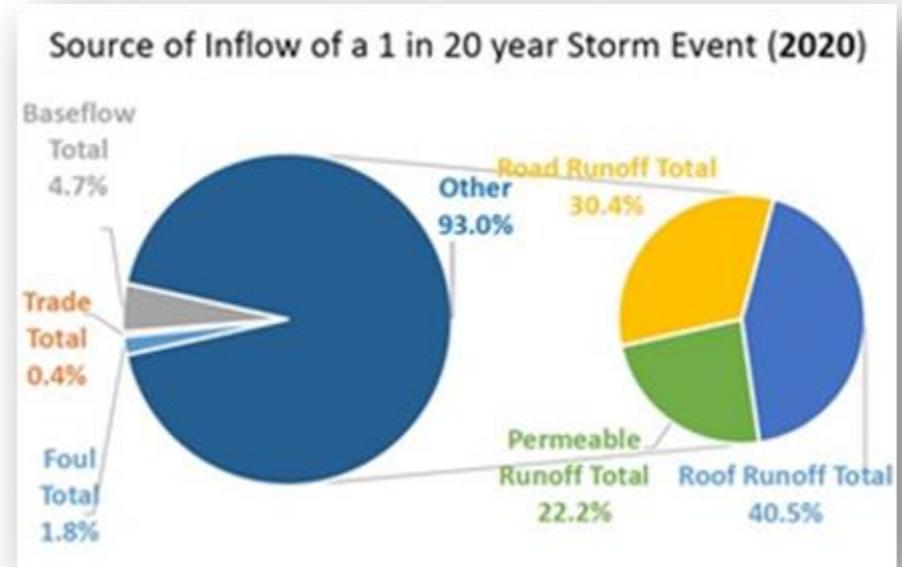
- Reducing the use of storm overflows by up to 80% by 2030 across the region
- Viewing the water system holistically
- Establish strong partnership approaches to deliver interventions
- Prioritising sustainable catchment and nature-based solutions
- Build a regional plan for implementation between now and 2030



What are we going to do?

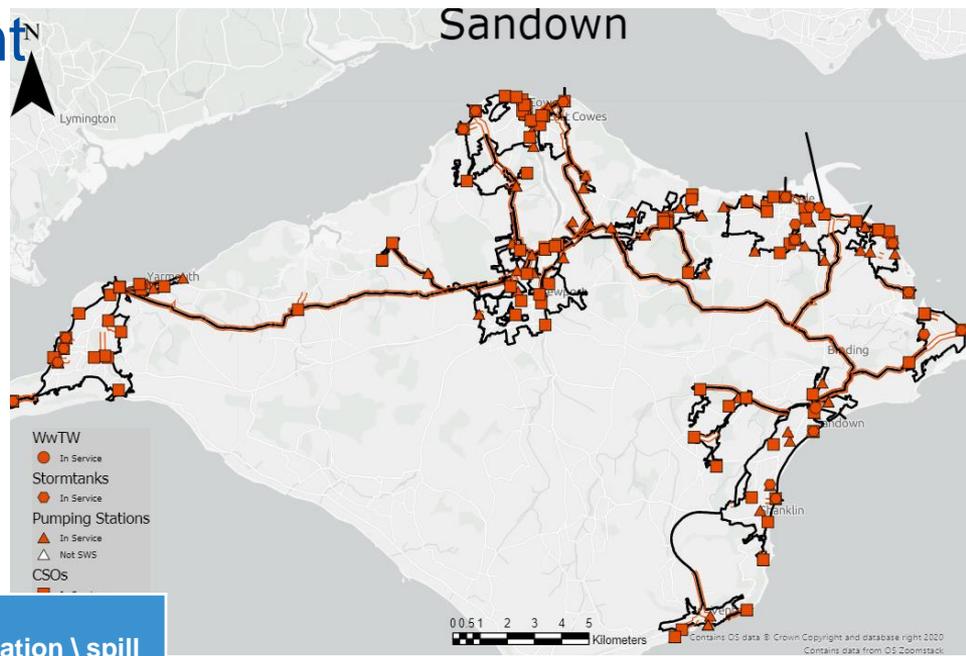
Facts regarding CSO discharges

- Our research has shown that discharges are over 90% rainwater
- Of this, 30% of flow comes from roads, 40% comes from roofs and 15% comes from gardens and open spaces.
- If we remove 40% of the stormwater, we can reduce CSO discharges by 80%.



Sandown Wastewater Catchment

- Covers the majority of the island
- Prioritisation of the 8 sub-catchments
- Next steps:
 - Flow surveys & Identification of model survey scope requirements
 - Internal mapping of Sandown catchment projects
 - Review model and GIS opportunities

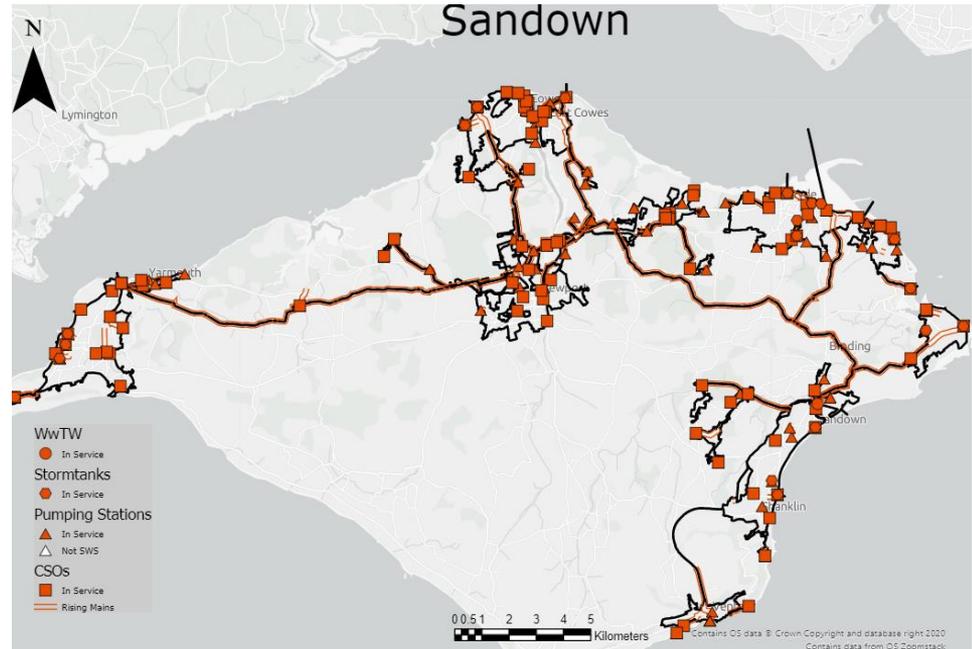


Sub-catchment	2020 Spill count – clustered 12\24 method (total 921)	Population	Population \ spill
Fishbourne	187	5,249	28
Yarmouth	131	12,829	98
Bembridge	47	5,117	109
Cowes	235	27,964	119
Newport	178	27,010	152
Sandown	125	28,263	226
Ryde	83	33,846	408
Ventnor	4	7,311	1828



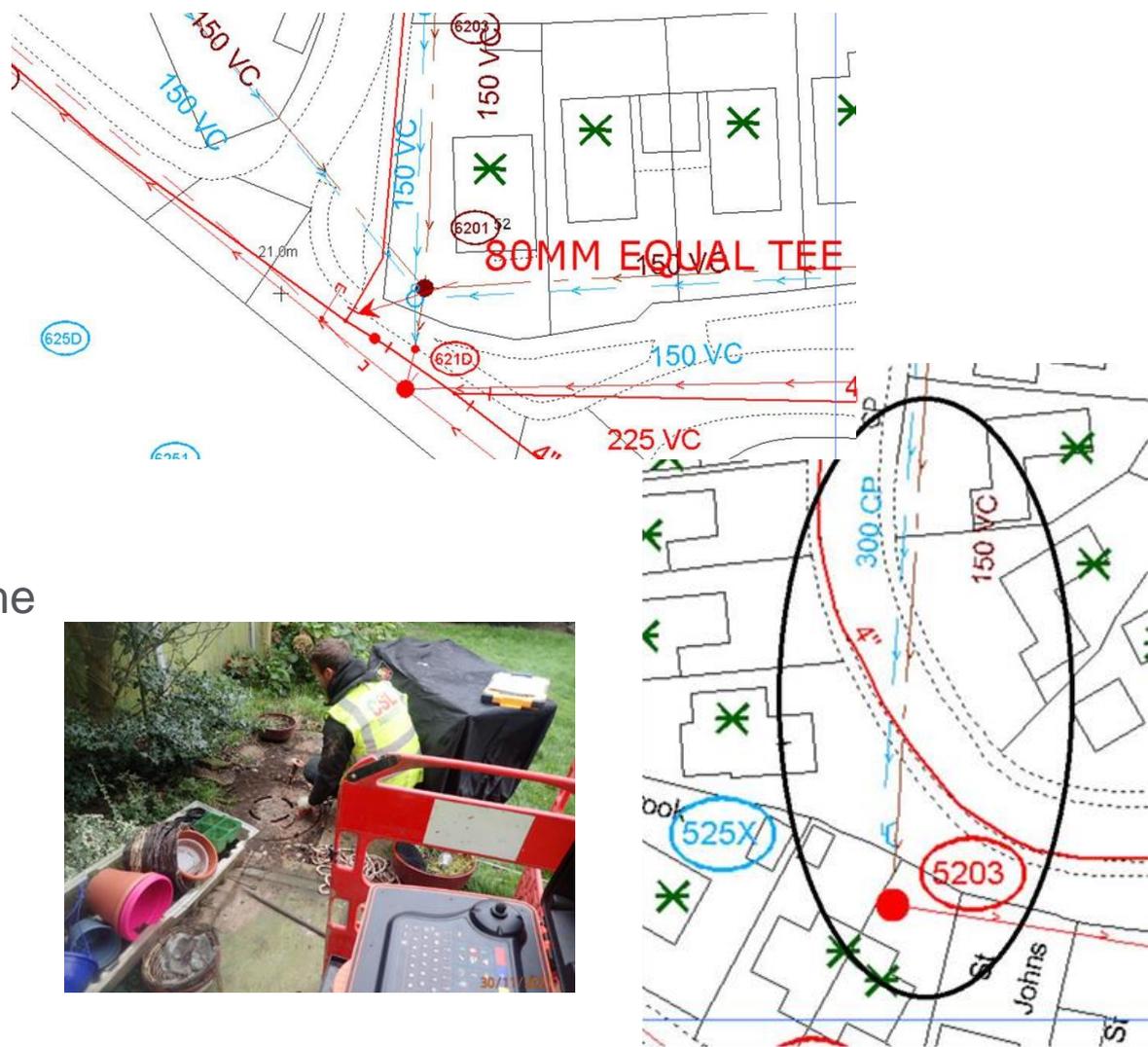
1. Get our sites in order

- Pumping optimisation
- Investigate alarms
- Increase flow and storage
- SUDS on sites



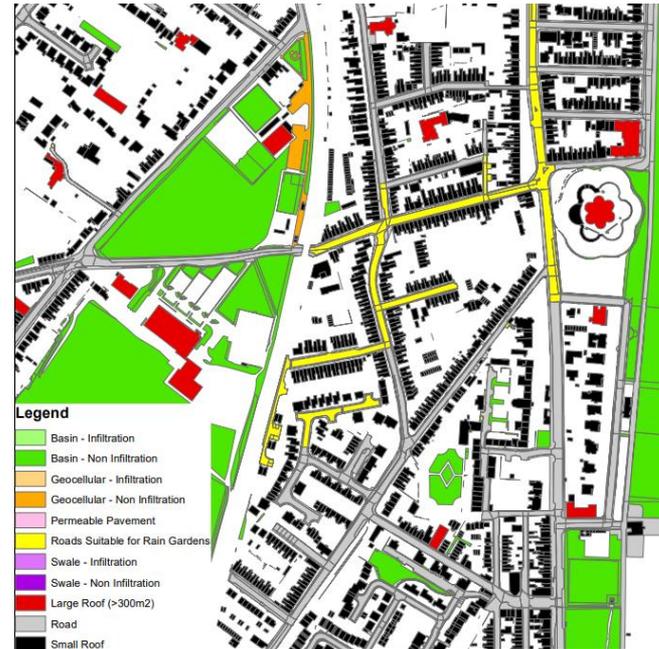
2. Connectivity

- Surface water and storm water does not need to be treated.
- Where it is connected to the foul, it overwhelms it.
- It needs to be removed.



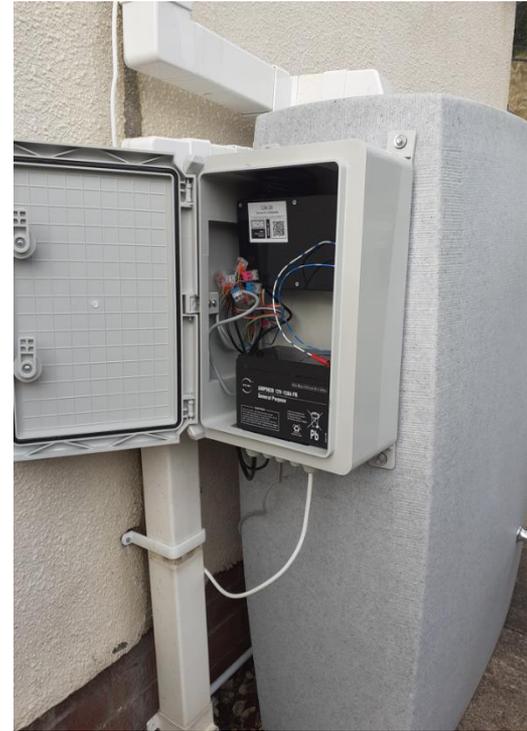
3. Large Impermeable Areas

- GIS maps showing permeable and impermeable areas.
- Free connectivity surveys for properties



4. Water butts

- Smart technologies to recognise storms approaching and empty
- Slow drain water butts
- 350l per property



5. Highway drainage



5. Highway drainage cont



6. Policy change and lobbying

- Water companies want change and the ability to stop discharges.
- Equipping LA with the tools and policies to create sustainable development
- Reviewing surface water charges
- Driveways



Slow the Flow

Surface water attenuation
Sustainable drainage systems
(SuDS) including rain gardens and swales

Using feature such as SuDS to 'connected' rainwater harvesting in our urban areas, as well as upstream, we can **mimic natural water management**. Many small changes can have a big combined effect on **reducing flood water quantity and improves our urban and natural environment**

3

Surface water attenuation

Sustainable drainage systems (SuDS) including rain gardens and swales



Discussion and Q&A

- The majority of flow comes from apparatus not managed or owned by water companies.
- Pumping more and storing more can be effective but is met with diminishing returns. 'Slow the flow' is more effective.
- CSOs will only be reduced or eliminated by the collaboration of multiple agencies and property owners.

