

Quarterly PPF/SW Meeting

17th May 2022



from
**Southern
Water** 

Agenda

- Structure
- Problem statement and overview
- Operational Mitigation
 - Tankering
 - Overpumping
 - Plan for 2022
- Capital improvement works
 - Progress report
 - Analysis
- Plan and options



Our structure and liaison with PPF

Nick Mills
Head of Storm
Overflow Taskforce

Simon Parker
Director of Asset
Management

Floyd Cooper
Operational
Manager Hants

Click to add text
Keith Herbert
Pathfinder lead

Glenn
McCubbin
Local lead

Tankering
Overpumping
Repairs
Maintenance
Incidents

Project work
Design
Targeting
Delivery
Engagement

Coordination of
site activities

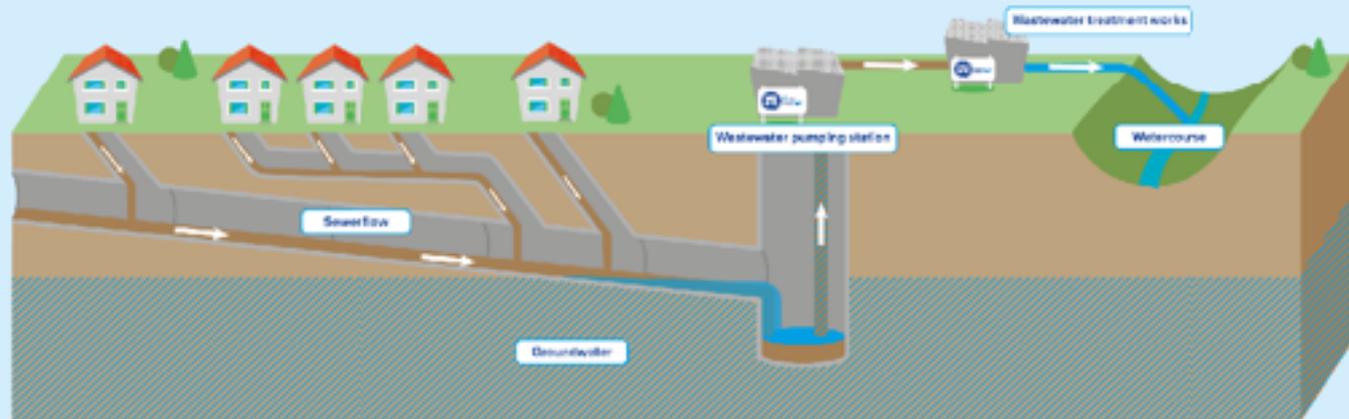
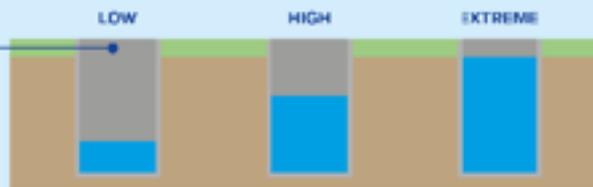


Problem statements

- Significant infiltration into the sewerage network.
- Excessive flow restoration costs
- Local disruption from tankering, pumping and remedial works
- Environmental impact upon chalk streams

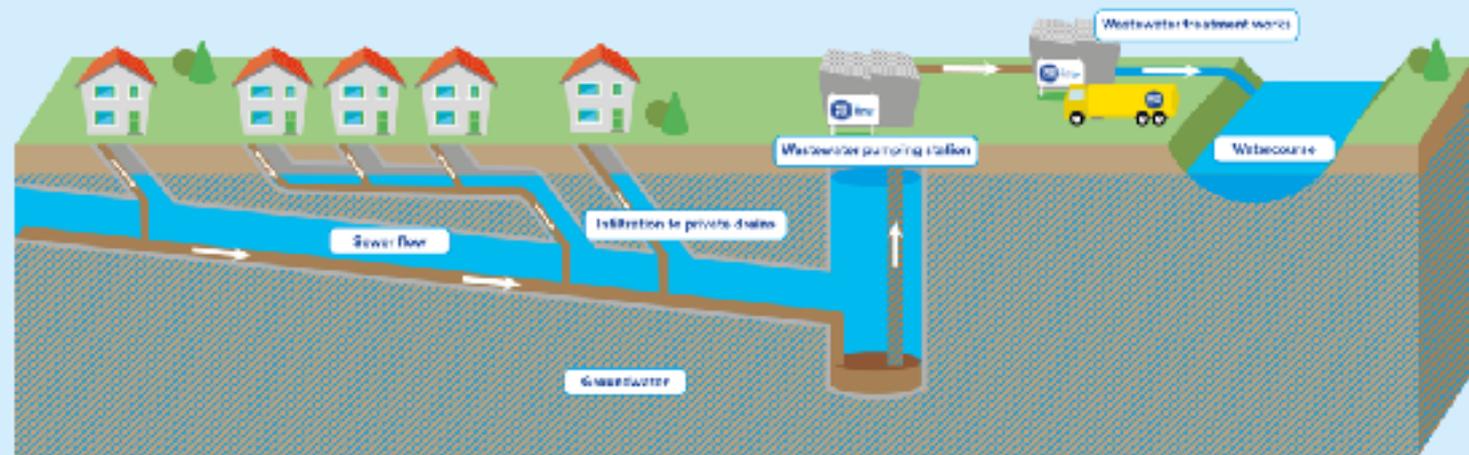
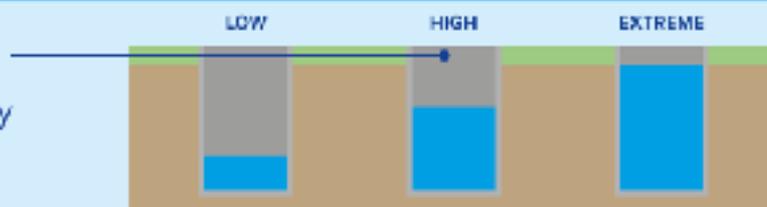


In low groundwater conditions pumping stations convey the foul flow and a small amount of infiltration to the wastewater treatment works.



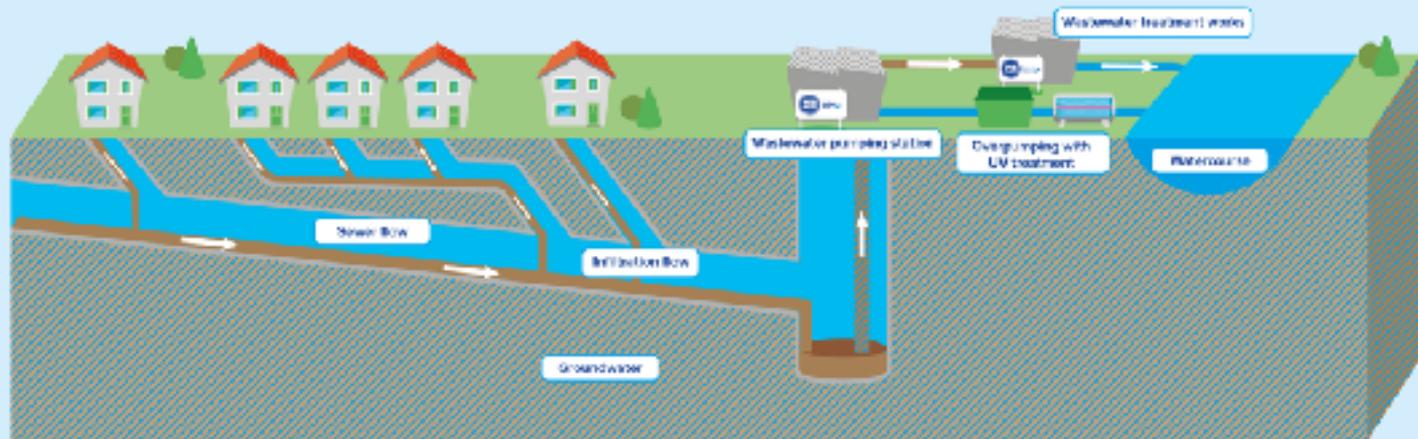
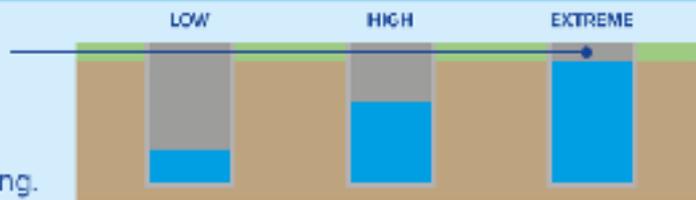
In high groundwater conditions

the flow is largely infiltration. At these levels the pumps are working continuously and tankers are required to keep the sewerage system functioning.



In extreme groundwater conditions

infiltration gets into the network through all pipes and inundates the pumping stations. Overpumping arrangements with UV treatment are used to prevent property flooding.





We are extremely pleased to report we have not needed to use UV disinfected over-pumping in the Pillhill Valley at all this year

The equipment was set up and commissioned as a preparatory measure at Mullens Pond WPS.

We didn't need to consider its use at Stanbury Road, Fyfield WPS

Consideration being given to semi-permanent installation



New Over-pumping signs to better reflect the commitment to UV disinfection as per the agreed action.



Baseline Ecology Survey – Commitment III



- Spring invertebrate study completion by 31ST of May
- Spring Diatom survey completion by 31ST of May
- Macrophyte survey scheduled for September
- Summer invertebrate and Diatom study scheduled for September

All results will be distributed to the EA and members of the Pan Parish Forum when available, and will be available on request to other stakeholders and members of the public



Mullens Pond WPS and Stanbury Road WPS – Commitment V



Mullens Pond WPS

Wear on impellers
No critical spares (lesson learned)
Experiments with various pumps and impellers
Aim for better pass forward to minimise interventions



Mullens Pond WPS

Fencing	Completed
Lighting	Completed
Mains power upgrade	24.05.22 Completion

Stanbury Road Fyfield WPS

Mains power upgrade	With SSE locating mains cable
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Flow Management – Commitment V - VI



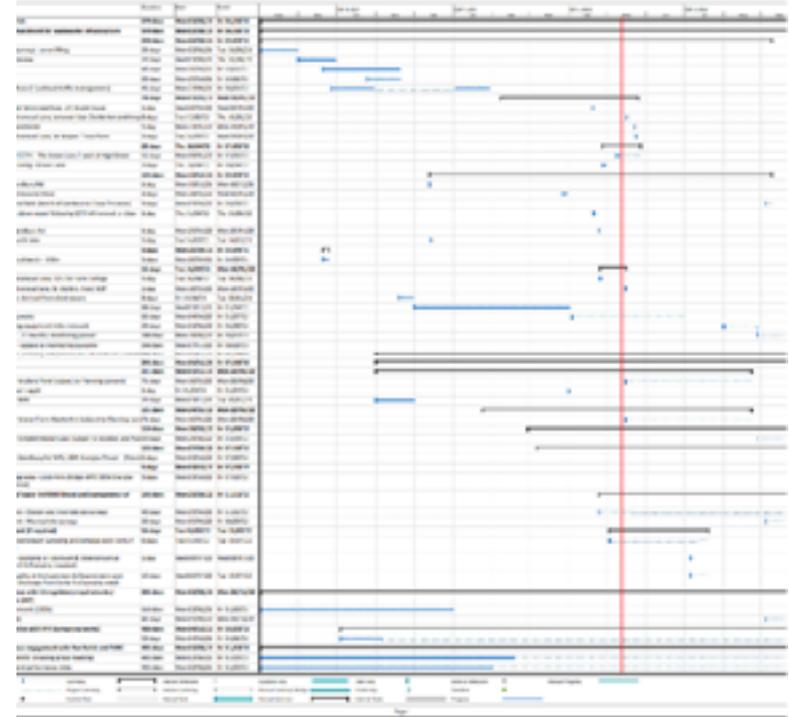
- Tankers for groundwater management required only at Mullens Pond and Manor Farm, Abbots Ann this season
- Proactive sewer rehabilitation work and operational incidents associated with the Little Ann Bridge rising main and a UKPN failure
- OCP comms updates
- Scoping for a fixed generator at Little Ann Bridge

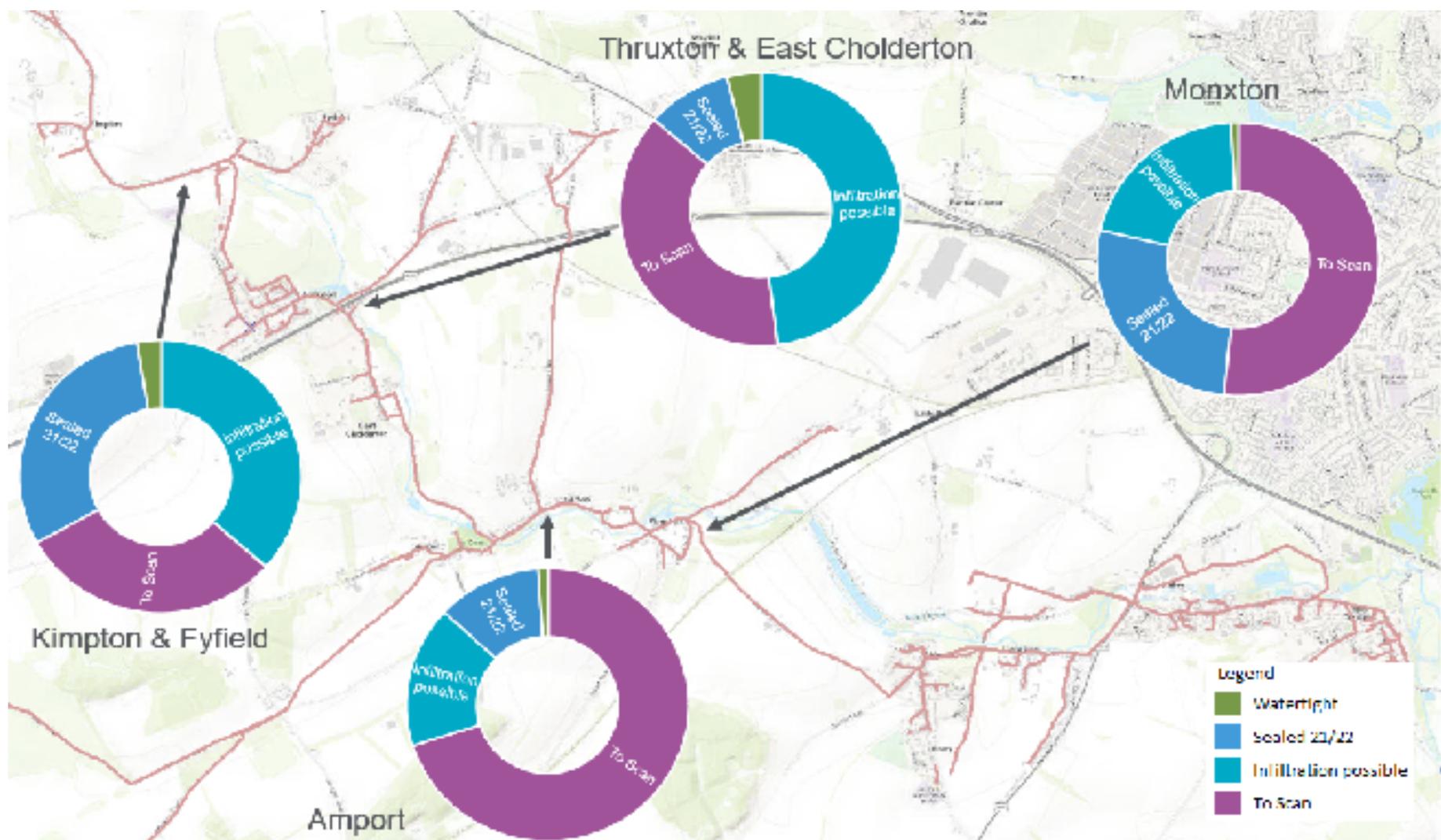
Plans to use past data from groundwater report and tanker presence to create a forecast model for predicted flow management interventions to assist with enhanced notice



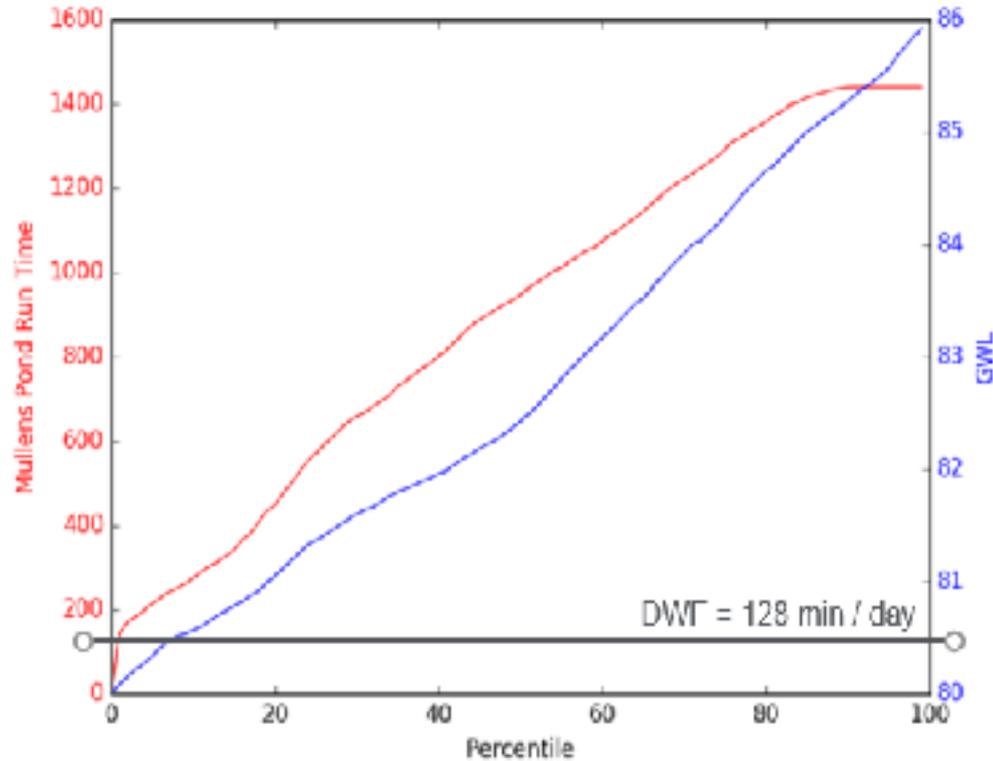
Programme with headlines

	Planned	Completed	Unit
Electroscan Survey	7579	7579	m
CCTV investigation	4334	4334	m
Dig down repair	1	1	nr
Manhole Sealing	2	2	nr
CIPP lining	3088	2308	m
No Dig Repair/ patches	43	43	nr
Inspect Manhole	1	1	nr
Inspect previous repair	1	1	nr



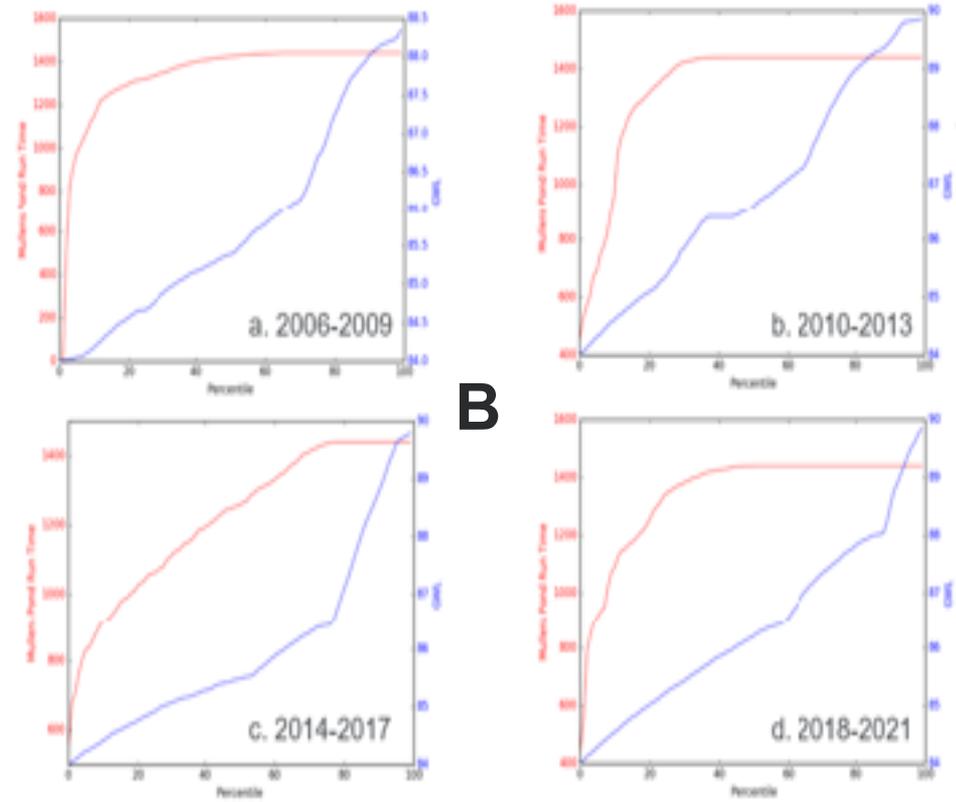
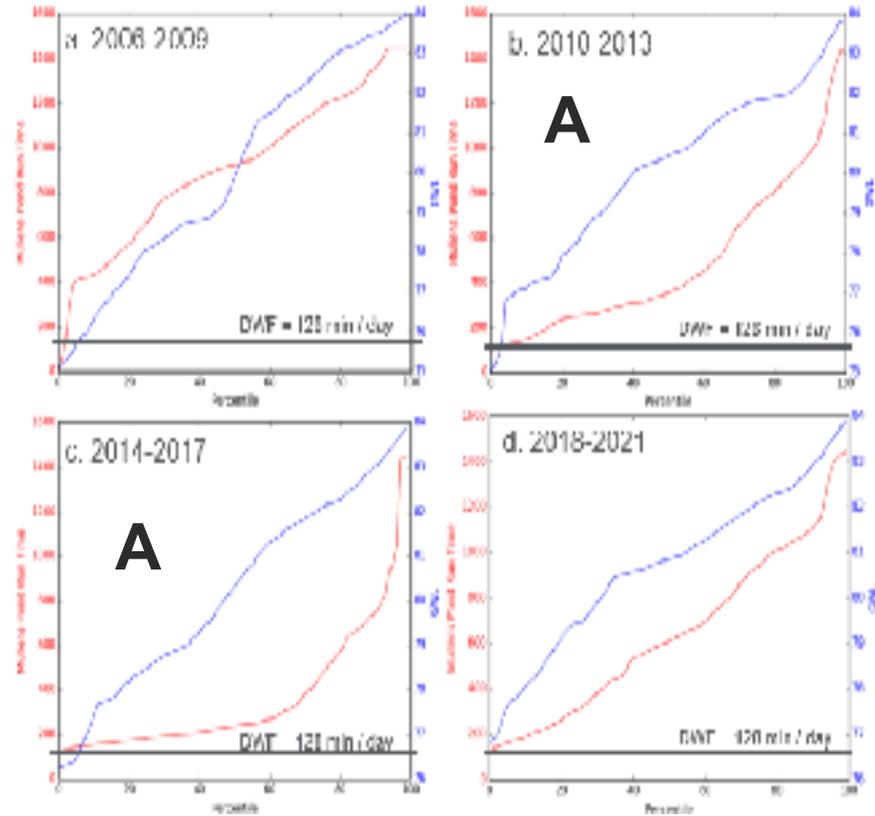


Groundwater Vs Pump Run



Mullens Pond <84mAOD

Mullens Pond >84mAOD

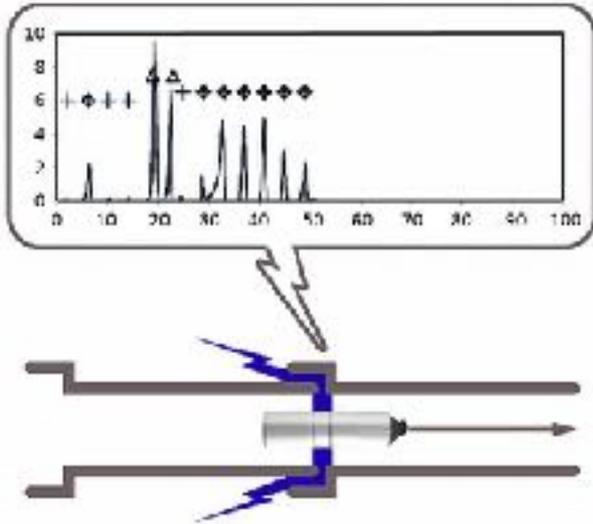


A

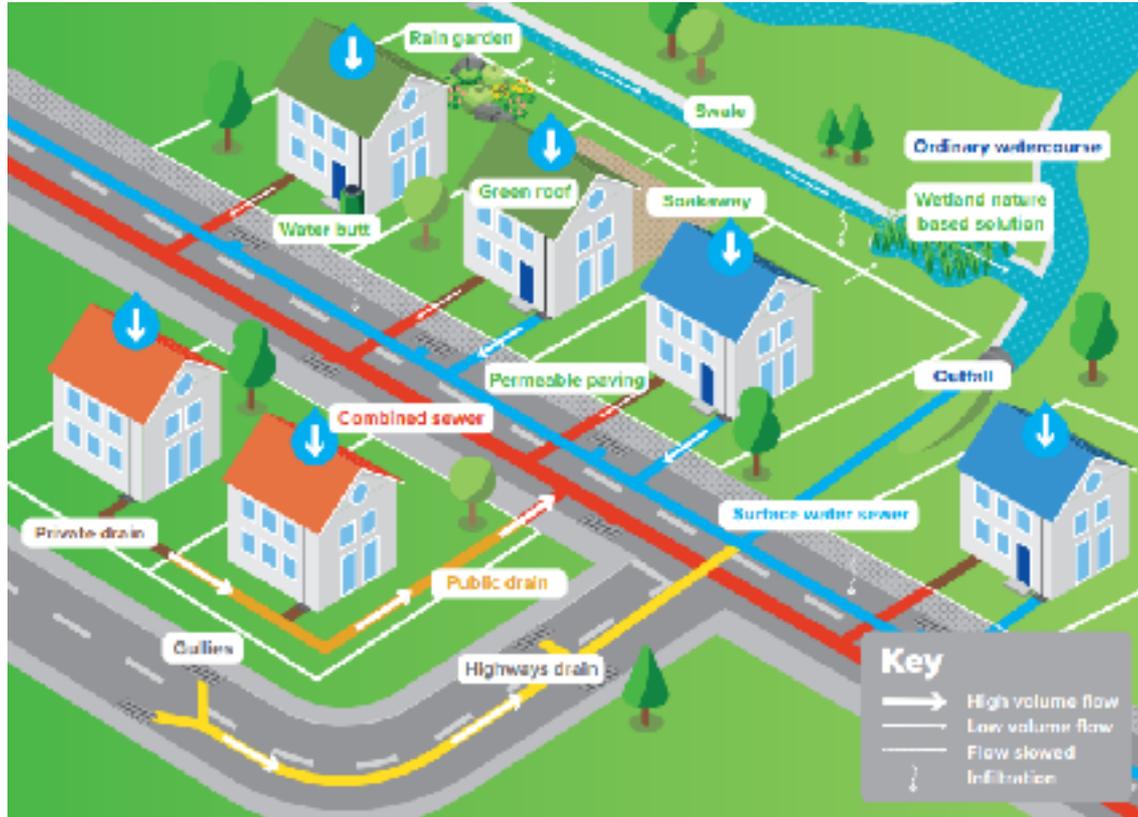
B



Innovation



Sewer ownership and engagement



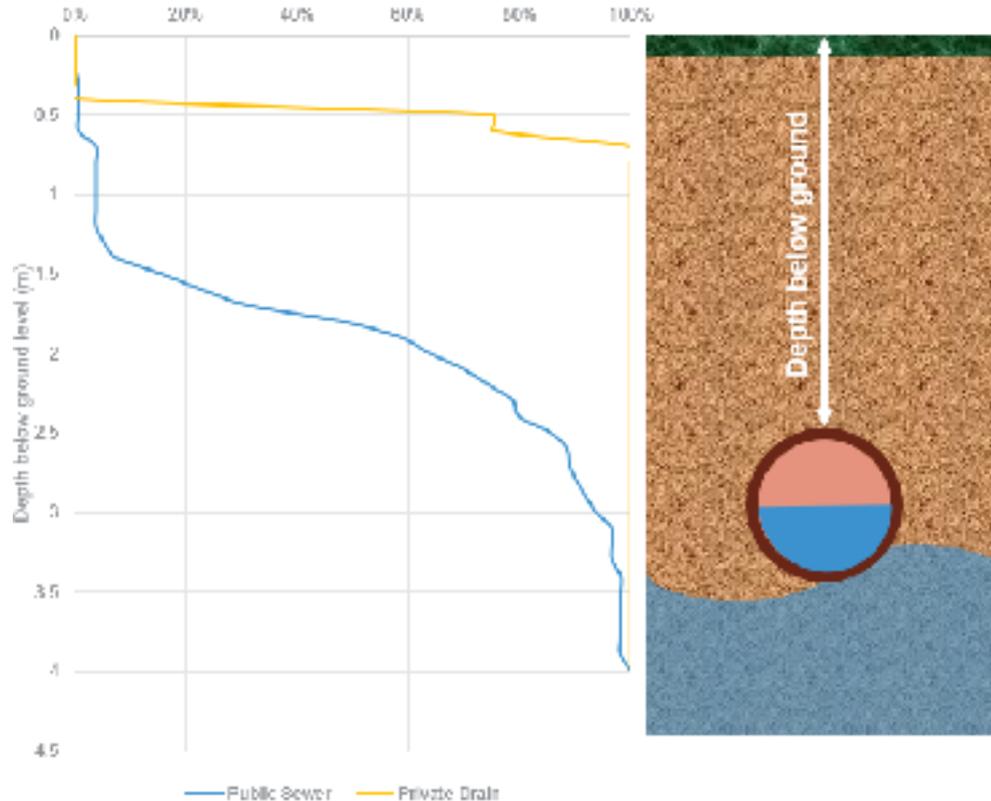
Options appraisal



Option 1 mitigate the flow



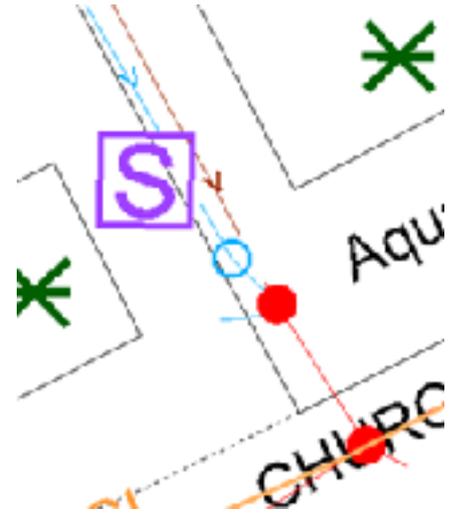
Option 2 Manage the groundwater



Option 3 Seal and investigate



Option 4 'Slow the flow' methods and connectivity



Option 5 Treat flows with a wetland



Tarland Burn Wetland (River Dee – Aberdeenshire)

Option 5 Treat flows with a wetland



Cromhall Wetland – Gloucestershire (Wessex Water)



High level options

Option	Does it protect the Environment?	Would it stop the disruption?	Timescales to stop disruption
1 – Mitigate flow	To an extent	No	Never
2 – Manage GW level	No	Yes	Unlikely to deliver.
3 – Seal and investigate	Yes	Yes	3 years
4 – Slow the flow	Yes	Yes	5 years - won't mitigate the groundwater.
5 – Wetland	Yes	Yes	1-2 years



Next Steps

Southern Water

- Complete current programme of works
- Plan for next winter's mitigation
- Begin next phase of seal and investigations
- Joint working with HCC highways

Subject to collaboration with PPF

- Feasibility study for wetland
- Engagement for private lateral work
- Slow the flow initiatives

