

Southern Water: Kent County Update

11 July 2024



from
**Southern
Water** 

The Southern Water logo graphic consists of three stylized, wavy blue lines of varying lengths, positioned to the right of the text "Southern Water".

Agenda

- Welcome – George Eykyn
- Company update – Jude Winstanley
- Wastewater – operational update – Andy Webb, Alex Saunders and Simon Tomlinson
- Clean Rivers and Seas Task Force – Jon Yates
- Water – operational update – Paul Tiller and Matthew Smiley
- Our work in the community – Alex Willumsen and Nick Eves
- Closing words

Company update

Jude Winstanley, Managing Director – Waste



Our Business Plan – 2025 to 2030

- In October 2023, we submitted our ambitious Business Plan to Ofwat for the period 2025-30. We have today (11 July) received initial feedback from Ofwat on our plan, and we will now carefully review before commenting publicly.
- Our plan is the company's largest ever - c.£8 billion to enhance the health and wellbeing of our communities, protect and improve the environment and help to sustain the local economy.
- More than 25,000 customers spent over 8,000 hours telling us what they think to help us develop it.
- Our customers are telling us – and we agree with them – that we need to increase our investment now so we can deliver the real change our communities expect and our environment deserves.



Some highlights from our plan for 2025-30...

Some of the highlights you will have seen from our plan...

£7.8 billion
investment programme

Investing in a new billing system

Doubling the amount of support we offer customers in vulnerable circumstances

Investing in leakage and demand reduction

Reduce overall pollution incidents by 50%
Investing nearly £682 million to reduce our use of storm overflows

Investing £600 million to upgrade 38 wastewater treatment sites

More than 1 million smart meters

£320 million modernising our four largest water supply works

Reducing the amount of water we take from the environment

£3.4 billion
between 2025–35
for a reliable supply of water

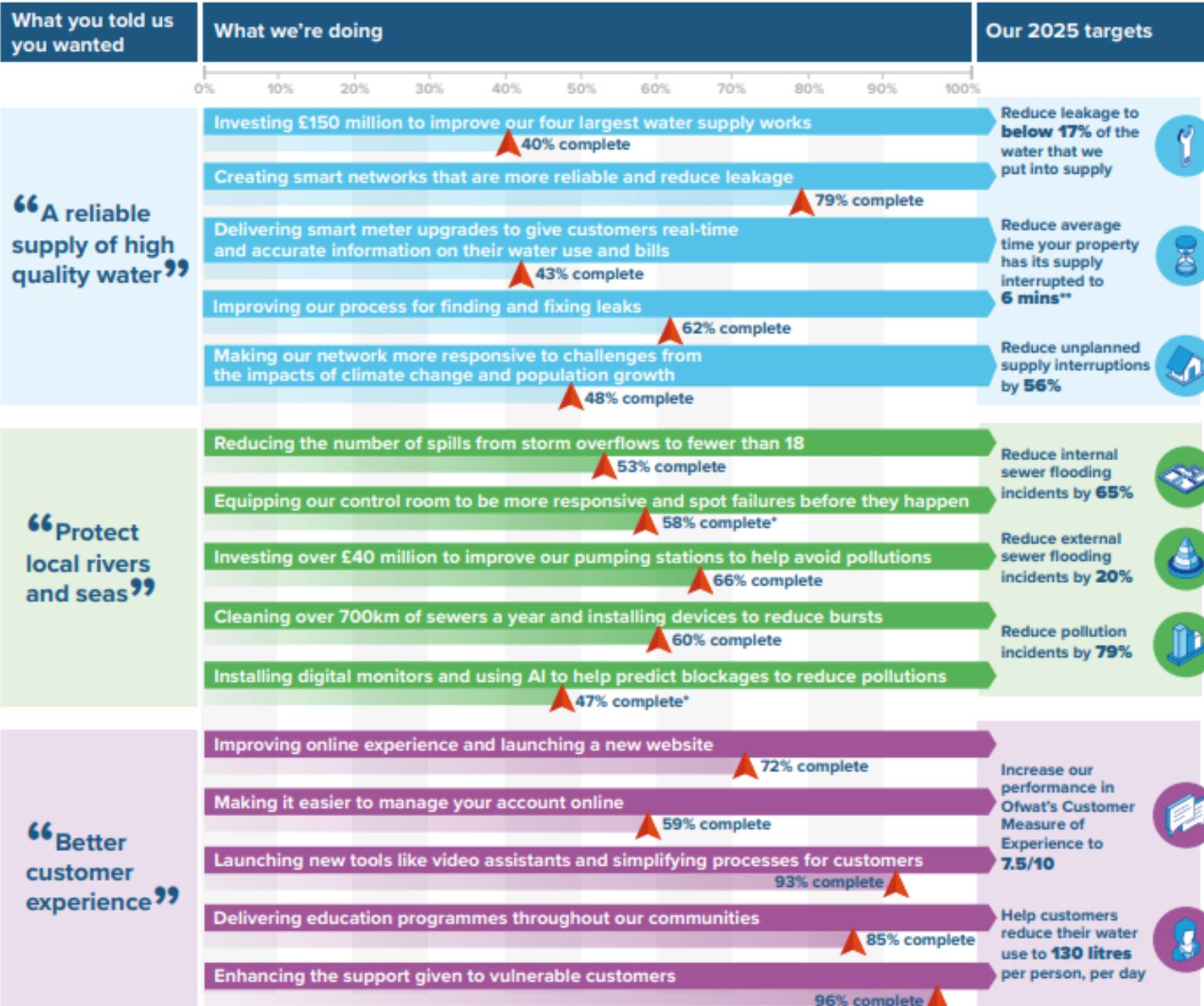
£3.3 billion
in the environment

Investing in new sources like water recycling and a new reservoir

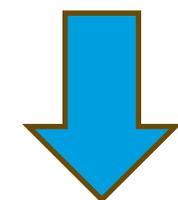
Turnaround Plan

- In April 2023, launched an ambitious Turnaround Plan to deliver a step-change in our performance over two years.
- Our overall goal is to provide a better service to our customers and to ensure that we're doing everything we can to protect our environment in the years ahead.
- Until 2025, we'll be reporting on progress every six months.
- Our plan is a short and sharp strategy to boost performance and it's showing continued signs of progress.
- It focuses on quick improvements in producing a reliable supply of high quality water, protecting the environment, and providing excellent customer service, as well as a number of other areas.





- Take a look at our latest update, which explains in detail where we are in our plan.



- [Turnaround Plan – May 2024 update](#)



* Initial actions delivered or on track for but additional scope has been added to deliver the Pollution Incident Reduction Plan (Jan-Dec 2024) developed in consultation with the Environment Agency.
 ** Our supply interruption performance remains challenging with a small number of high impact incidents masking underlying performance.

Wastewater – operational update



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Wastewater Networks

A very wet winter

- This winter we experienced extreme levels of rain and the ground in certain areas of Kent became heavily saturated.
- The local drains and sewers were inundated with surface water run-off, which put significant pressure on our local wastewater pumping stations.
- Areas that particularly suffered from groundwater infiltration were Newington and Peene, but other areas in Kent and right across our region suffered, particularly in Hampshire.
- A industry leading case study demonstrated that deployment of private lateral sealing (Tubogel) in addition to sewer lining has been successful in further reducing infiltration in North Hampshire (Mullens Pond) where tankering levels (despite higher groundwater) reduced by 90% year on year from 2022 to 2024. This approach is being used in Bromley Green, Kent, this summer.
- We are investing heavily this summer and plan to invest further in AMP8 to reduce infiltration and the subsequent risk to customer flooding and the environment.
- We are also continuously improving our winter readiness and playbooks for the worst impacted areas.

Looking to the future

- We are currently reprocuring our core Waste Network services for 2025 to 2033.
- We are procuring a specialist lot aiming to focus on manhole response and repair to improve:
 - Speed of response
 - First time fix resolution
 - Reduce end-to-end journey time
- Once we have awarded to our preferred supplier in the coming weeks, we would like to engage with you at the earliest opportunity to help ensure our final solution delivers an improved service



- Polymer modified mastic asphalt technique
- Reduced material waste
- Increased productivity
- First time fix
- Reduced carbon footprint



Wastewater Treatment Operation in Kent

- 104 Wastewater Treatment Sites in Kent
 - Largest Strategic Site – **Ashford WTW**
 - Site directly supporting most customers – **Motney Hill WTW** in Gillingham – 250,000 people.
- **7** of the sites in Kent are large sites which treat products from the other 97 smaller treatment sites and have large anaerobic digestion processes – generating **21GWh/Year of electricity**.
- Kent has a significant mix of coastal, rural and urban treatment assets, particularly into some sensitive areas incl SSSI and Shellfish Areas – with quality parameters within our permits which reflect this, including UV disinfection techniques on some sites eg Swalecliffe WTW in Whitstable, Weatherlees WTW near Pegwell Bay.
- Significant activity undertaken this summer at Ashford WTW – taking out of service and cleaning of the largest digester in the organisation's operation – 62 days of activity – 7 days/week work to drain, clean, refurbish, inspect and refill.
 - Ensures no processing capacity lost and is required to undertake safety critical inspections
 - Removed 32Tonnes of Grit from the tank
 - Additional treatment capacity installed to facilitate work

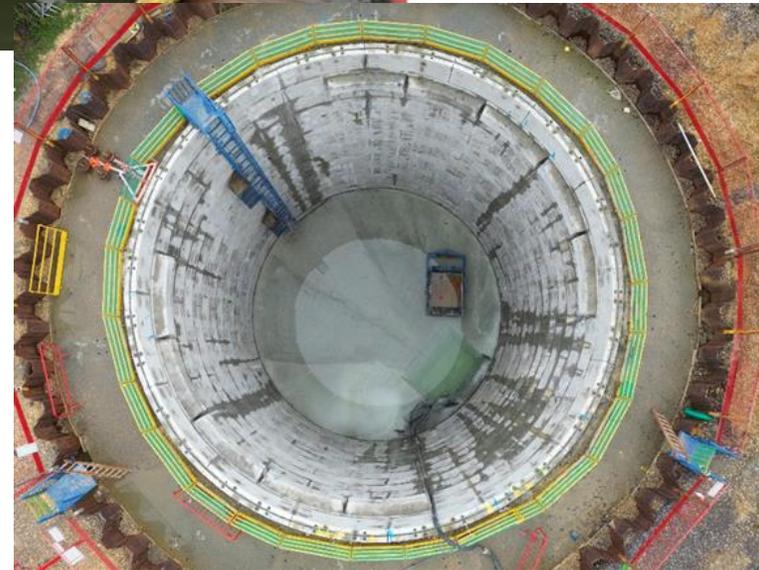
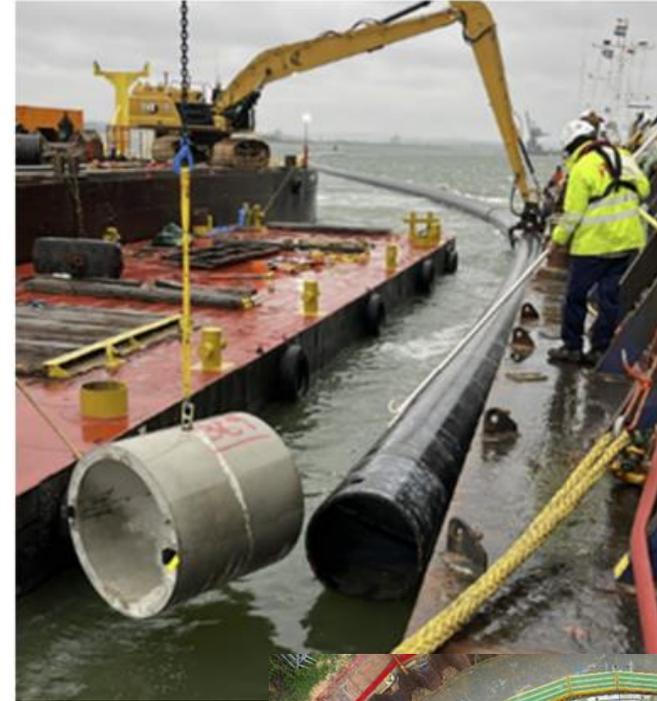


Kent digestion sites



Capital Investments in Kent - Wastewater

- **During AMP7 (2020-2025) we've invested £203m** so far which includes:
- **Network Projects;** Growth Schemes (£22.5m) & Rising Mains (£14m)
- **Treatment Enhancement;** Additional Storm Storage (£21m), Increase Flow to Full Treatment (£6m) & Improved quality of treated wastewater, including Phosphorus removal (£44m)
- **£57m still to spend** this AMP, largely relates to **Treatment Enhancement**, vast majority schemes now on site.
- **Key Projects:** Swalecliffe New Outfall (c£20m), Thanet Network Rehabilitation (c£15m).



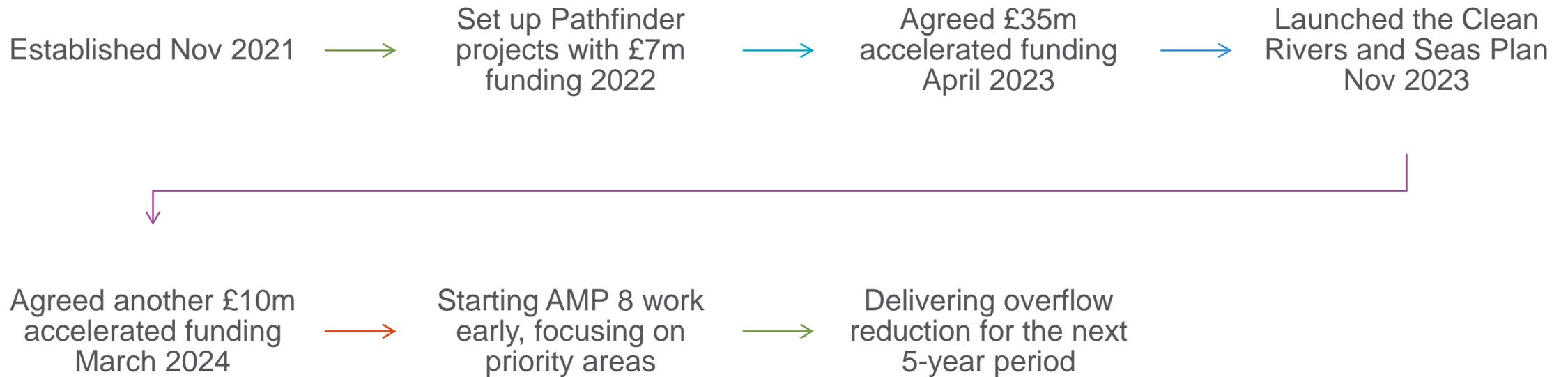
Clean Rivers and Seas Task Force



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Task Force evolution



Overflows in Kent

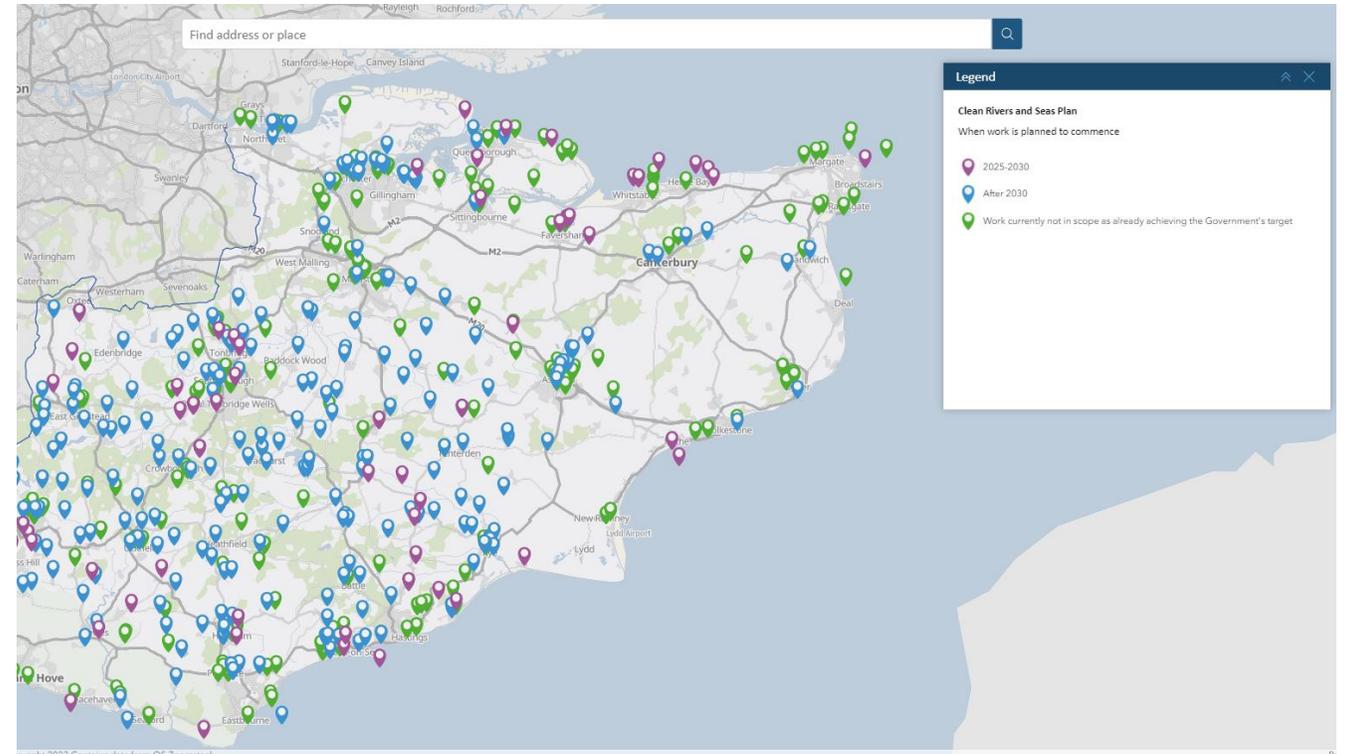
Key stats

322 Storm Overflows in Kent

152 Require work/investment to achieve Govt. targets before 2050

33 Overflows working on between 2025-2030

Approximately **£207m investment** in next five years



southernwater.co.uk/water-for-life/clean-rivers-and-seas-plan/map



Rivers and Seas Watch

WATER for LIFE from Southern Water

Subscribe Feedback

Map Release History Learn More

Pre-release (Beta): your feedback will help us improve this new service

Enter address, bathing site or outfall name

ST MARYS LANE TICEHURST
Feeds into: TRIBUTARY OF THE RIVER LIMDEN

Confirmed or possible release in past 24 hours
There has been an unverified outfall release in the last 24 hours that is under review

Last release:

Started	Ended	Duration
28/06/24 11:20	Ongoing	3 hours 21 minutes

HERNE BAY CENTRAL

No release impacting bathing site
There have been no recent outfall releases

Latest Impacting Release - from SWALECLIFFE NO1

Started	Ended	Duration
10/06/24 07:26	10/06/24 07:45	18 minutes

Latest Not Impacting Release - from SWALECLIFFE NO1

Started	Ended	Duration	Status
11/06/24 22:50	11/06/24 23:53	1 hours 2 minutes	Genuine

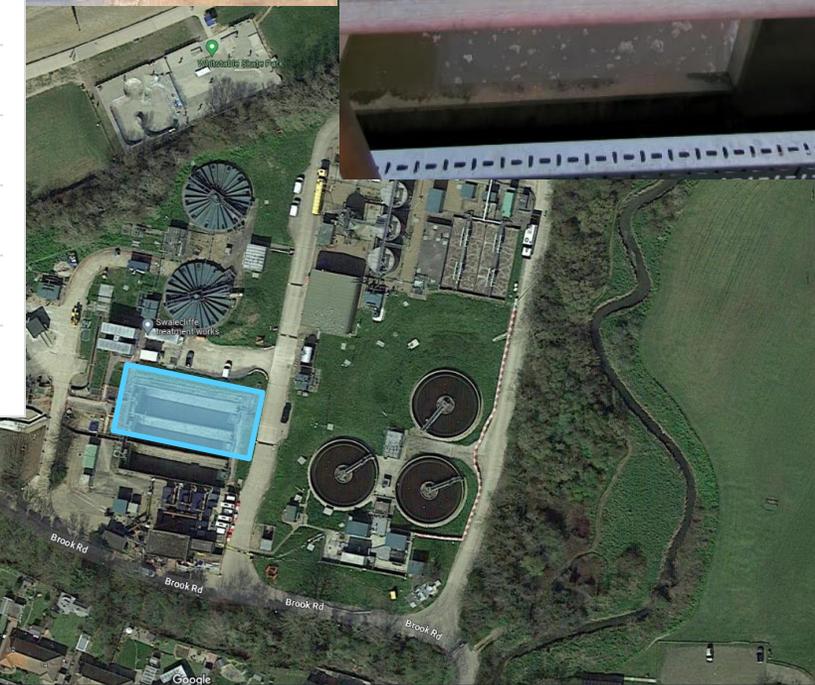
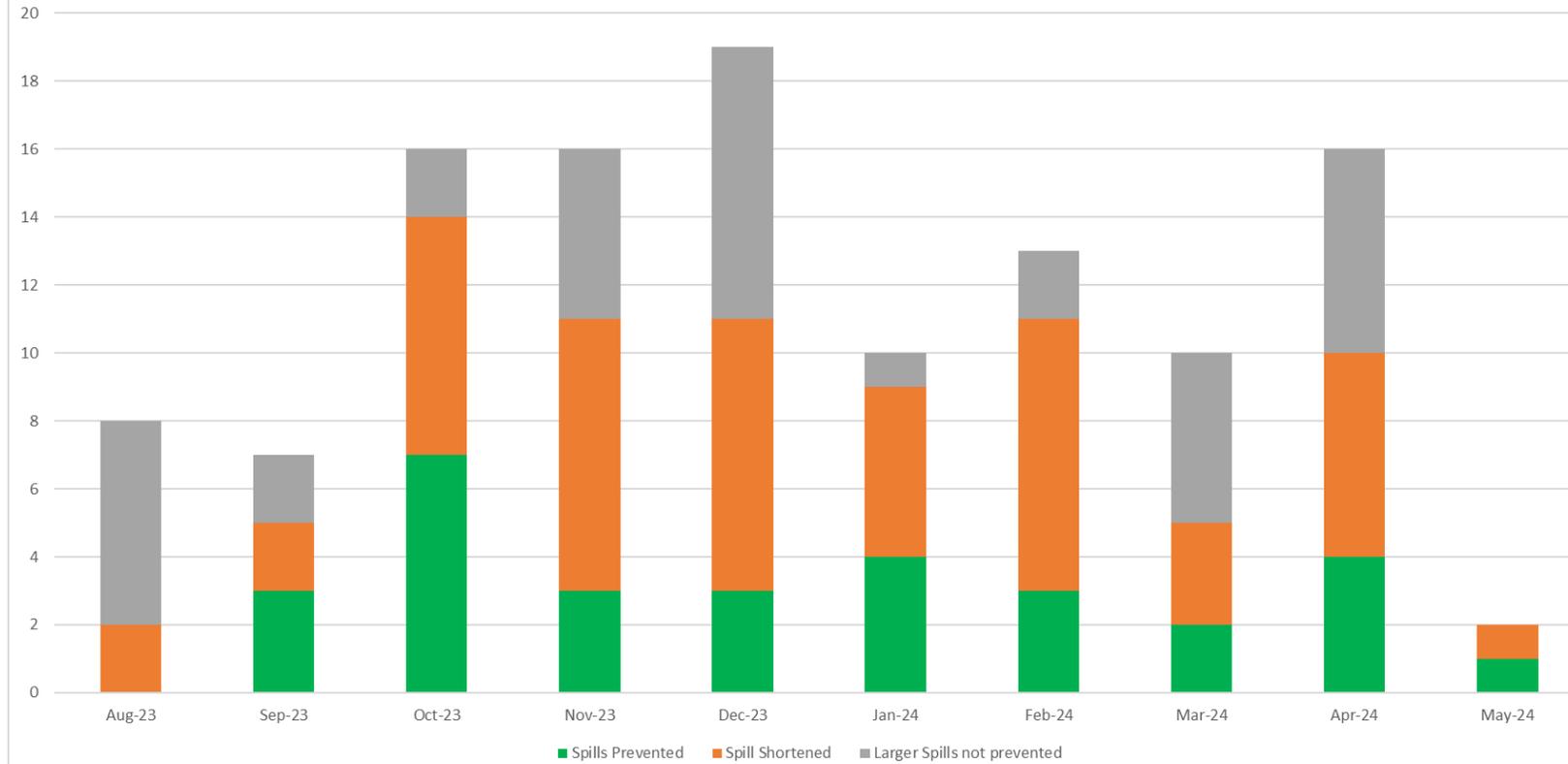
Release History

Show all
Total: 616

- Launching [Rivers and Seas Watch](#) imminently (pre-release version live)
- Co-created with customers and stakeholders
- All storm overflows included
- More transparency, better usability, more features

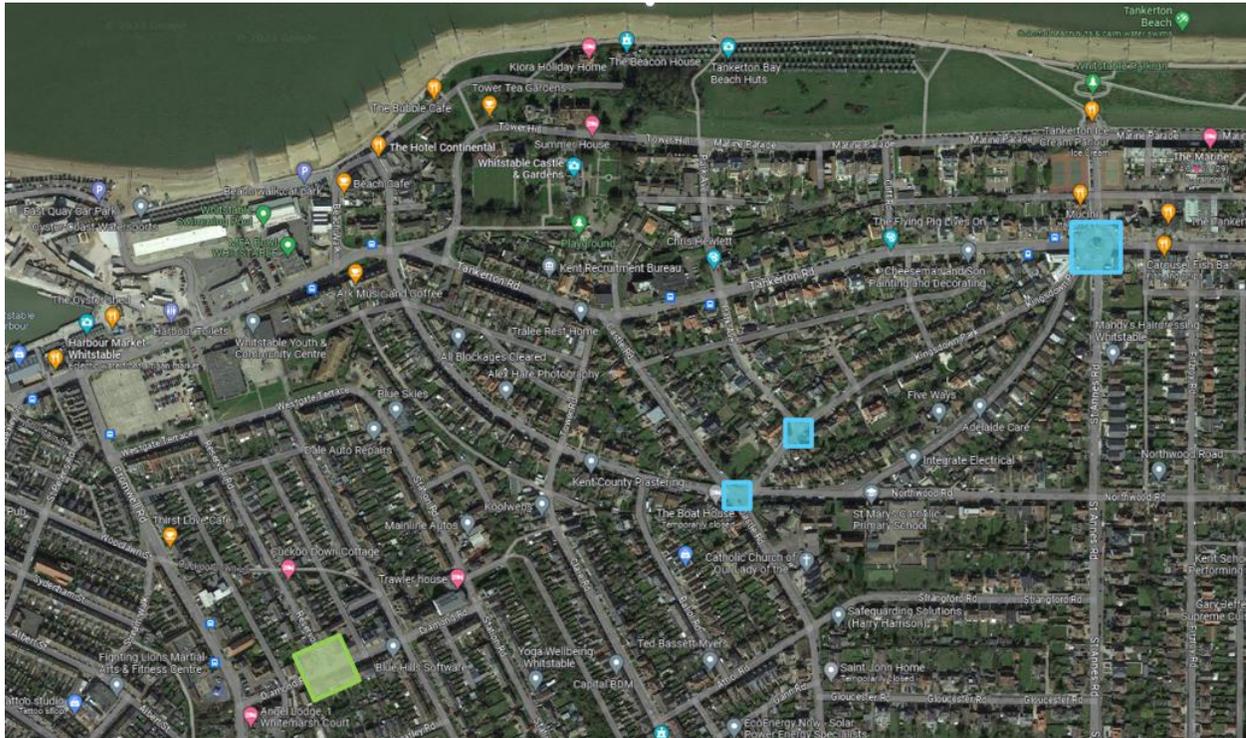
Swalecliffe Treatment Works

Swalecliffe Long Sea Outfall Reconfiguration



- Since August we have:
 - captured 30 of the 115 discrete storm events that have occurred

Centaur Gates



 Diamond Road CSO, modelled c60% reduction in spills

 Tankerton Circus CSO, modelled c40% reduction in spills

- We are currently developing a programme of works to make Whitstable the first Intelligent Catchment utilising forecast rainfall, real time network information and AI to manage the infrastructure in a different efficient way to reduce CSO usage across the catchment and 37 pumping stations



SuDS – Highways Margate

Gloucester Avenue

Proposed street improvements



Introduction: the Pathfinder Project

The Pathfinder project is a collaborative project which aims to improve water quality throughout Kent. The project aims to reduce the amount of surface water runoff from hard surfaces (roads, paths, roofs etc) entering the combined drainage network. The effect of this will be to reduce the number of spills from Combined Sewer Overflows (CSOs)

As part of this project, funding is available to undertake landscape improvements to sites (such as Gloucester Avenue) which can help the project achieve this goal.

What is being proposed?

Adaptation of existing grassed verges along Gloucester Avenue, to take rainwater run-off from the road surface into shallow, grassed channels, and new tree planting.

Why is this work proposed?

The modified verges will collect and channel rainwater, which will be absorbed into the ground and by plants. These types of Landscape design features are called "SuDS" (Sustainable Urban Drainage Systems). See next page for more info on SuDS.

Will this change the street?

Very little - the proposals are designed to fit into the existing layout/verge footprint. The profile of the grass surface will be shaped to provide a shallow channel. Changes will be relatively small, and offer environmental benefits in terms of surface water management and flood risk reduction.

Where is this proposed?

Southern half of Gloucester Avenue (see right)

When will the work take place?

To be confirmed - expected to be in late 2023, subject to Kent County Council approvals and consultation.



Proposals are being considered for the Southern half of Gloucester Avenue



ABOVE: Impression of what the proposed swales along Gloucester Avenue will look like.

Questions or comments?

For further information on the project, or to have your say please visit detailstobeconfirmed.co.uk, or contact address@detailstobeconfirmed.co.uk.

Sustainable Urban Drainage Systems (SuDS)

The Pathfinder project is developing and building Sustainable Urban Drainage Systems ("SuDS") in the Kent area.

These proposed projects will reduce the flow of surface water entering the combined sewer network. The key aim of the Pathfinder project is to reduce spills from Combined Sewer Overflows (CSOs).



Why are SuDS needed?



A increase in rainfall and storms due to climate change, combined with an increase in development (hard paved surfaces such as roads and paths) means that the existing drainage network is full to capacity. In high rainfall events this can lead to flooding and CSO spills



Surface water picks up pollutants as it runs across roads and other surfaces, enters the drains and ends up in water courses reducing the quality of the water. Many drainage systems in towns and cities are part of the combined sewer system - this takes water from both surface rainfall, and waste water from buildings.



In high rainfall events, the drains fill to capacity. When this happens, excess water is released into rivers and the sea. Where this water comes from combined drainage systems, waste and other contaminants are often contained within the discharge.

SuDS help by reducing the flow of water into drains, which reduces the strain on existing underground drainage networks. This can help prevent spills from Combined Sewer Overflows (CSOs), reducing flooding, and improving water quality.

What do SuDS look like?

There are lots of different types of SuDS - you've probably walked past one on the street and not even noticed! They can look like planters, grassed verges, treepits, or other landscape features. This page shows some examples:



SW Pathfinder

- Installation of Tree Pits along both sides of the southern half of Gloucester Avenue.
- Technical review completed by KCC, comments being clarified and responded to before going to customer consultation and works starting.
- Anticipated Start date Mid 2024



from Southern Water

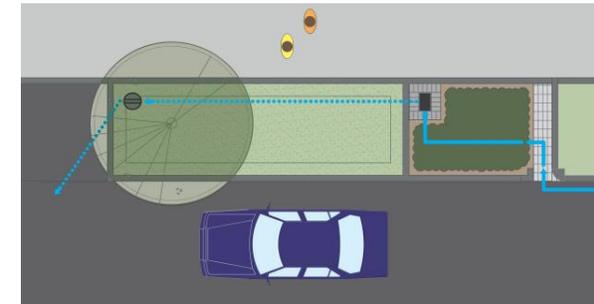
Kent Pathfinder in numbers

- Over 3000 slow-drain water butts installed in Whitstable and Margate, and further 50 smart water butts installed in Deal
- 50km of sewers investigated
- Surface Water Connections identified and removed 1ha and resulting in 30% reduction in spills
- Optimisation works reducing spills from our Treatment works by 36%



Kent Highways Programme

- Already working with Kent County Council to establish a highways SuDS programme – removing the equivalent of 141km of highways drainage from the combined sewer
- Current status – workshops held, identifying areas, surveying network, creating standard designs
- Focusing on Sittingbourne, Faversham, Whitstable, Herne Bay, Queenborough



What will investment / activities in Kent look like...

By April 2025

- Gloucester Ave SuDs installed
- Green Parks in Whitstable
- Centaur Infrastructure Smart Controls in Whitstable

2025-2030

- Approx. installing 15,000 slow the flow measures such as water butts on domestic properties
- Lining and sealing over 80km of public and private sewers
- Managing over 140km of highway drainage
- Planting over 4000 trees



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Water – operational update



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Water network performance

- We have used Veriflo to confirm data in some District Metered Areas (DMAs) which has resulted in more accurate reporting of five DMAs in the Eastern Operational area. Further work to be undertaken on our Trunk Main and Pressure Managed areas, as well as further meter verification work across our network
- To reduce leakage levels, we've commissioned multiple Pressure Reduction Schemes to help reduce the pressure in the water network, especially at night when pressures and leakage are higher. This also helps with the potential for mains to burst due to fatigue.
- We have introduced many additional DMA splits across Kent, resulting in smaller DMAs an helps us target leaks more in specific areas.
- We've completed a satellite survey of the water mains in our Eastern area, as well as the trunk main from Darwell to Beauport, to identify any leaks. Awaiting survey results.



Reducing and repairing leaks

- Reducing leakage is a crucial priority in our Turnaround Plan and we are committed to improving how we find and fix leaks
- We have improved the fix rate by 30% since summer 2022 and will continue to work hard to improve this
- A further £140m is being invested on staff and technology, to help us reduce leakage by 15% by 2025
- Proactively finding and fixing leaks before they worsen will help reduce our impact on the Kent Highways network with emergency closures



Leakage in Kent

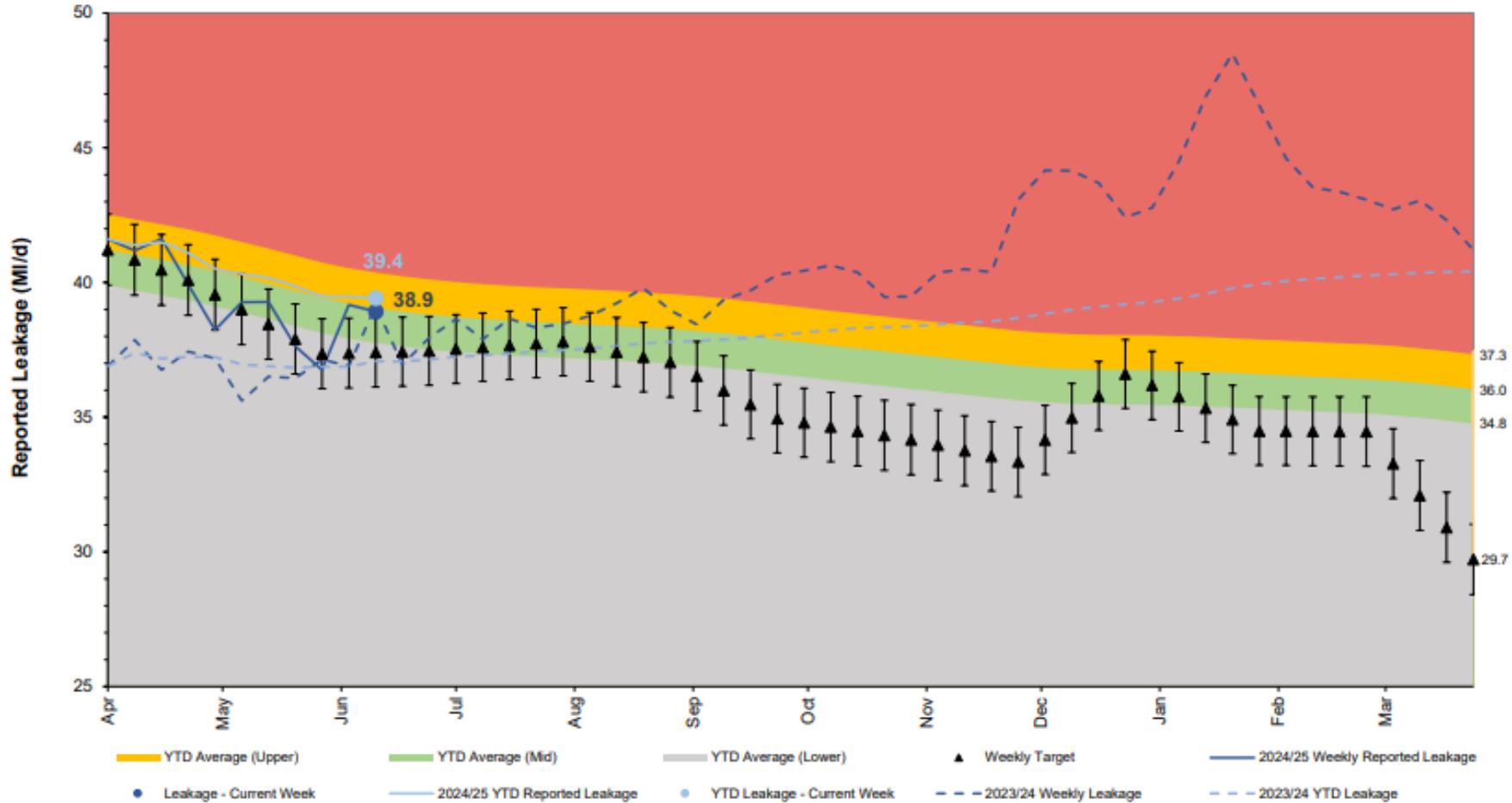
- The table indicates the number of leaks we have fixed in Kent since 1 April 2022. Figures are based on number of leaks repaired in the financial year – 1 April to 31 March.
- The number year on year may see a slight drop as we are looking for large volume leaks to be more efficient and effective, rather than fixing a larger number of smaller leaks.
- We are using an industry wide method to reduce leakage under our recovery plan, using the PALM Model – Prevent, Aware, Locate, Mend.

	Kent
2022/23	7,348
2023/24	7,095
2024 – to date	1,280
Total	15,723



Leakage

2024/25 Weekly and Year-to-Date Leakage - Kent



Water process performance

- The wet summer of 2023, followed by a wet winter, has seen exceptionally high groundwater levels across our region
- This is good news for water resource availability, but means that raw water quality deteriorates, making our water supply sites particularly vulnerable to turbidity (ie. cloudiness) and nitrates (caused by historic fertiliser spreading)
- In the last few years, we have reintroduced more mothballed sites to service, to make our network more resilient to external stressors. As such, we have been able to transfer water around the network more flexibly
- However, exceptionally heavy rainfall experienced in February at Wingham WSW (our second largest site in Kent), caused it to fail due to increased turbidity, and resulted in disruption in the nearby area



Wingham WSW water supply incident – Feb 2024

What happened?

- 4.5 inches of rainfall fell in 24 hours on 21 February.
- Turbidity increased >200 x higher than normal, which caused Wingham WSW to initiate its emergency failsafe mode to protect water quality.
- Operations teams brought a containerised filtration plant in from storage in Medway, which was installed and commissioned in 36 hours.
- This took longer to install than reservoir storage allowed, meaning customers began to lose supplies overnight.
- At its peak, approximately 9,500 properties experienced water supply disruption.



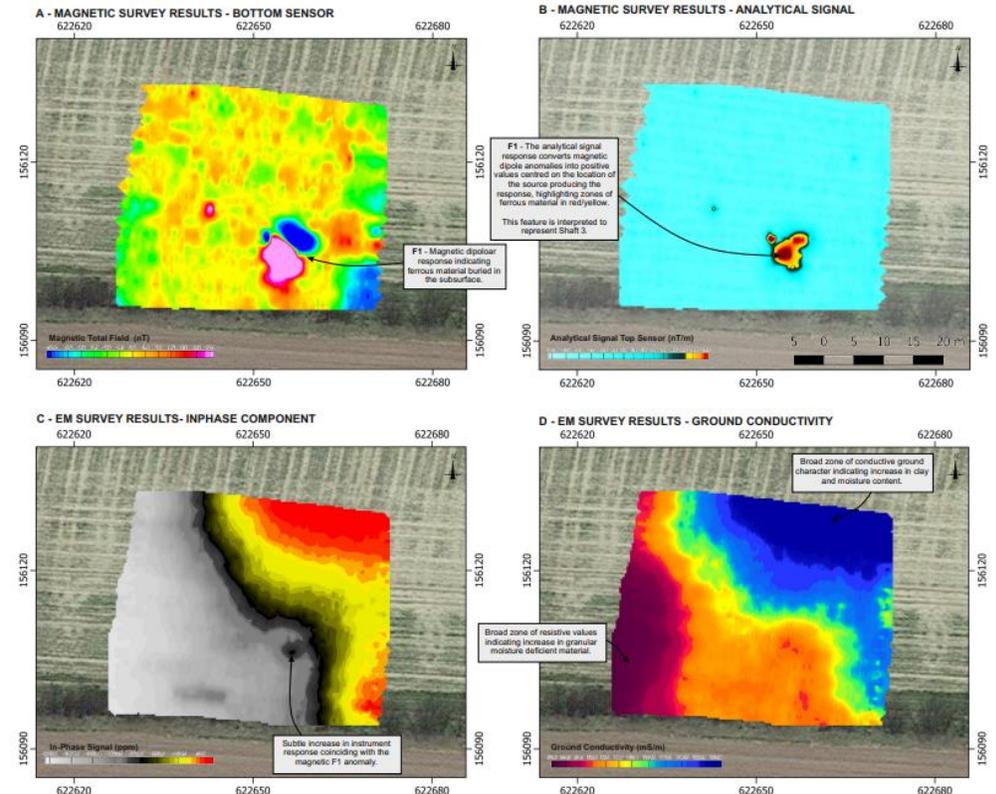
Wingham WSW water supply incident – Feb 2024

How we reduced the impact

- Customer impact reduced once we rezoned water around our pipes and injected water from more than 20 tankers directly into the network.
- We also delivered bottled water to those impacted, as well as opening two bottled water stations for customers to collect supplies.
- The incident started late on Friday 23 February, and supplies returned on Sunday 25 February. We were very sorry for any customer impacted.

Our work continues

- We have undertaken geophysical surveys from the surface to check for collapses on our well and adit system. We will complete underwater camera surveys in 2024 too.
- The filters will remain on-site until we ascertain the root cause and have confidence the risk of reoccurrence has passed.



An extract from the geophysical survey of the well and adit system at Wingham WSW



Incident Response – Wingham WSW, Kent



Incident Overview

Incident occurred on Friday 23rd February with potential impact to 9,549 properties. Reduced to 3,616 due to network response.

Wingham Water Supply Works shutdown due to high turbidity caused by collapsing underground natural water tunnel / cave following prolonged rainfall.

All customers in supply Sunday morning.



Vulnerable Customers

Vulnerable customers were supported through doorstep water deliveries.

1,626 customers registered as vulnerable on our Priority Service Register.

2 x Courier companies used to deliver to all impacted properties.



Bottled Water Stations

3 Bottled Water Station Locations used during this incident: Ayelsham Welfare Leisure, Manston Airport and New Dover Road Park and Ride.

Bottled Water Stations selected based on areas impacted or likely to be impacted.

Locations changed to support customers as the incident progressed and recovered.



Alternative Water

486,504

Litres
doorstep
deliveries

187,680

Litres given at
bottled water
stations

7,362,128

Litres put in
network by
tankers

1369

Combined
tankering
hours

8,036,312

Total litres of Alternative Water
Provided



Collaboration

The LRF was updated and advised that an incident was ongoing.

Regular DEFRA meetings were held.

No requests for TCG or SCG meetings were made.



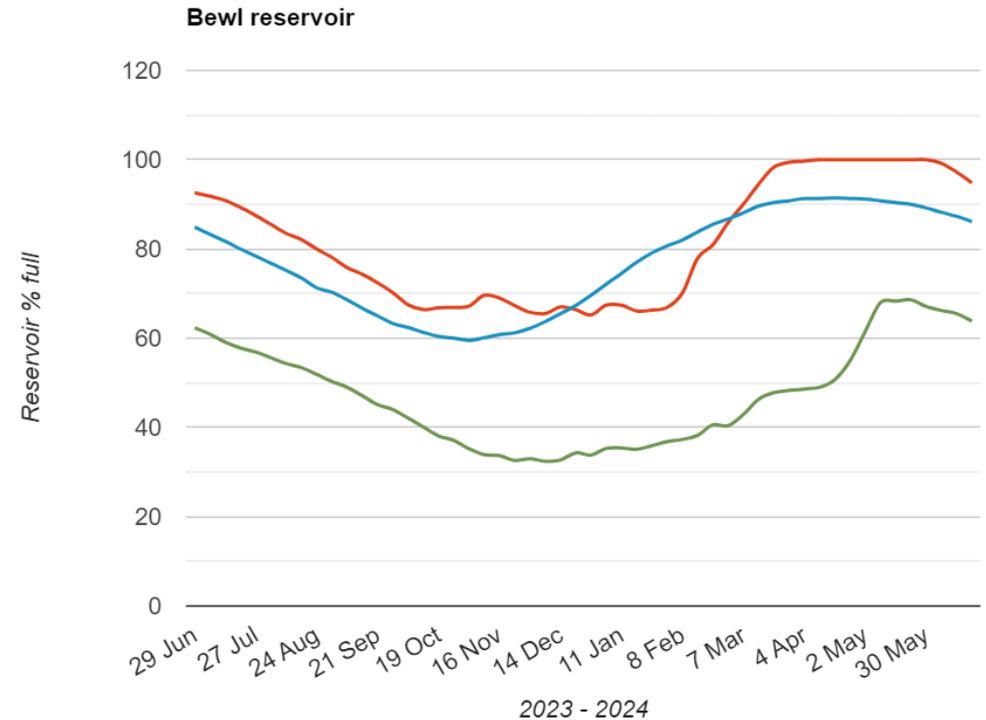
Key Learnings

First test of a secondary water delivery provider, who have now been integrated into our Incident Response.

Improved mapping of hydrant locations to maximise tankering impacts.

Drought

- The principal drought risks in our Eastern area relate to storage in our three reservoirs at Bewl, Darwell and Powdermill, and the ability to refill the reservoirs during periods of low flow in the associated river systems.
- There are also many groundwater sources, which offer some drought resilience as the majority are constrained by infrastructure or abstraction licence limits though some are vulnerable to low groundwater levels.
- Groundwater levels are all 'normal' or 'above normal'
- All storage reservoirs are above their long term averages for this time of year (Bewl 89%, Darwell 84%, Powdermill 86%)
- While storage levels are currently fine, we constantly monitor the situation and will react if required



Improving and investing in our assets

- To reduce water supply disruption and to improve customer experience, Kent will receive a huge injection of investment in the coming years
- **In the next 5 years:**
 - We intend to invest c£40m on key ground water supply works in Kent, to manage raw water deterioration challenges, and reduce unnecessary customer interruptions
 - We're planning to replace over 300km of water mains to address leakage, protect future resources, and improve aged assets. Kent will be part of the targeted replacement programme, however the specific areas are TBC
- **Over the next 10 years:**
 - We plan to invest c£110m at our key strategic WSW in Burham (supplying approximately 59,000 properties), to improve asset reliability and resistance to customer outage, along with building in greater asset redundancy.



Our work in the community

Alex Willumsen, Community Partnerships and Programme Manager

Nick Eves, Head of Insight and Digital Experience



Community Engagement – Kent July 2024

Improving outcomes and building skills for our community

- New Wave Education**
- 83 schools/uniformed groups in past 3 months
 - 3,517 pupils
 - 7 Apprenticeships – 2 under 18 years
 - 4 Apprentices starting in September



Making the Community stronger

- Outreach activity**
- YWM- 29th January –Whitstable
 - 61 engagement outreach events
 - 3,914 people in last 3 months

“Engaging with Southern Water was a risk for us, but I've been refreshed by their openness to public engagement and the depth of understanding of the team and their approachability“
Jon- Harbour Wall Banger



Caring for the Environment together

- Volunteer Hours**
- 254 hours during last 18 months
- Wilderness to Wonderland**
- Margate
- Litter picking/Beach cleaning**
- Sheppey
 - River Medway
 - Friends of Botany bay



Demonstrating our role as a good corporate citizen

- Grants**
- £178K grants awarded since 2010
 - Tonnes of Tins with KMFM
 - Dover SMART
 - Community Centres x 9

“The grant will enable us to continue our vital community and youth work in Broadstairs”
Victoria – The Zone Youth Club

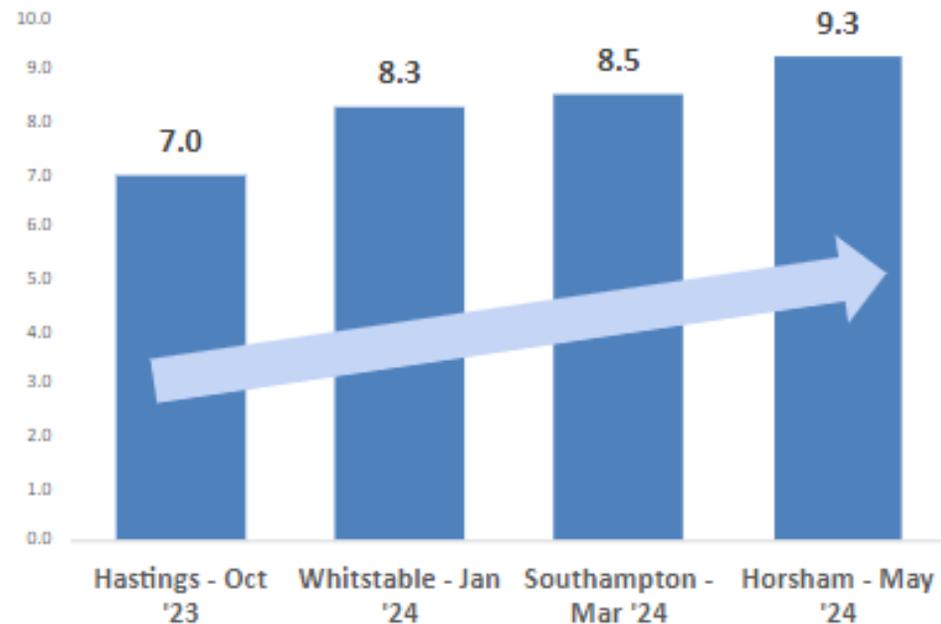




“Website didn’t answer my query, but this did right away”

Overall Rating of Events

How did you find the event?



AOB



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Appendix



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Water Resources Management Plan (WRMP)

July 2024 update



Our Water resources plan is ambitious and challenging

- Scale of our Water Resources Management Plan (WRMP) larger than other companies and matches regional challenges
 - We need to identify alternative sources for 2/3rds of supplies across our area of operation by 2075
 - We will be delivering significant environmental improvements and future resilience
- Our revised draft WRMP has been submitted to Defra:
 - We've worked with the Environment Agency and Natural England to understand and address technical issues
- Awaiting Defra decision before we can proceed to consultation
 - There are possible impacts from election period, September start estimated
 - A full 12 week consultation planned
 - Please get involved, we'd love to hear your thoughts!**
- Responses to consultation around January, start date dependant

Our Water Resource Plan

Investment area*	AMP8	
Smart metering and water efficiency	£186m	We will be smart metering all our customers to help them manage usage and identify leakage
Managing leakage	£239m	5 Water reuse schemes providing new sources of water through recycled water
Transfer pipelines	£164m	
5 Water reuse plants	£651m	We are delivering a new reservoir with Portsmouth Water as part of an integrated system for Hampshire
Short term drought mitigation options	£91m	
Other supply schemes and long-term transfers	£326m	Replacing 300km of water mains to drive our lowest levels of leakage and provide increased resilience
Havant Thicket reservoir	£134m	We are working on collaboratively on long term plans to bring water from a new reservoir proposed in the Thames area
Total	£1,791m	

*As submitted in Oct. 2023 and subject to finalising the revised draft WRMP24

** need to understand the impacts on timeline of general election

Risks remain in our plan that we will need to continue to develop mitigation for collaboratively with regulators and stakeholders

Issue	Risk	Mitigation	Other actions
Risk of drought orders and permits in the Western Area post 2030 until Western Area solution is delivered	Risk we won't get these approved if required	We have proposed short term supply options covering more than half the deficit	Maintain adaptability in plan for new mitigation solutions alongside needed review of the S20 agreement
Water neutrality in the Central Area	Water neutrality remains a challenge in Sussex North	Accelerated package plant for Weir Wood by 2025, alongside smaller schemes for headroom and ongoing work with LA's	Assessing the potential of an intertidal abstraction options (<i>will not be ready for consultation</i>)
5 significant recycling schemes key to delivery between 2030 - 2033	Gated processes alongside consenting, and permitting	As part of PR24 schemes planned for DPC style route and proposed RAPID process	Maintaining current delivery activities across all schemes, Sandown and Budds well progressed and land purchased
Significant investment in future proposed transfers – SESRO / Thames to Southern needed to 2040+	Risk of delay to these very large complex projects	We are now leading on the T2S project and embedded in the core team for SESRO	Remain as key deliverables in the plan to be consulted on – aligned to Thames plan
Significant leakage reductions required by 2030	Risk we don't deliver leakage start point by 2025	Additional investment in our execution plan driving for end of AMP target level	Leakage strategy review underway alongside enabling key deliverables on mains replacement and meter rollout
Significant customer demand reductions required by 2030	Risk that we don't see savings expected	Enabling Investment targeted (metering) in the high-risk areas 1 st – Sussex North and Hampshire	National Water Efficiency Fund and group established, key to recognising the true level of benefit possible and gov. requirements

Kent bathing waters



from
**Southern
Water** 

Kent

- Investigations in AMP8 at Herne Bay, Deal Castle, Folkestone and West Bay Westgate
- Significant improvement at Ramsgate Sands since sewer rehabilitation and removing builders' rubble from the sewers.
- 96% Excellent samples so far in 2024.



Bathing Water	District	No. samples 2024	Samples above Excellent threshold	% Excellent samples	2022	2023	Projected 2024	Headroom 2022	Headroom 2023	Projected 2024 headroom	Change	Comment	Explanation	
West Beach, Whitstable	Canterbury	22	0	100%	Excellent	Good	Good	19%	-6%	-5%	↔	All samples Excellent so far in 2024	Unlikely to recover to Excellent in 2024, more likely in 2025.	
Tankerton					Excellent	Excellent	Excellent	48%	45%	46%	↔	All samples Excellent so far in 2024		
Herne Bay Central					Good	Good	Good	5%	11%	14%	↔	All samples Excellent so far in 2024		
Herne Bay					Excellent	Excellent	Excellent	4%	19%	17%	↔	All samples Excellent so far in 2024		
Sandwich Bay	Dover	17	1	94%	Excellent	Good	Good	29%	-44%	-59%	↓	One high sample.	No SWS assets here	
Deal Castle					Good	Sufficient	Sufficient	1%	-30%	-27%	↔	High samples in school holidays since 2021. All samples Excellent so far in 2024	Investigation in AMP8. Recoverable to good at end of 2025	
St Margaret's Bay					Excellent	Excellent	Excellent	54%	39%	39%	↔	All samples Excellent so far in 2024		
Folkestone					Good	Sufficient	Sufficient	33%	-3%	-5%	↔	All samples Excellent so far in 2024		
Sandgate	Folkestone & Hythe	34	2	94%	Excellent	Excellent	Excellent	40%	47%	48%	↔	All samples Excellent so far in 2024	Investigation in AMP8. Recoverable by end 2024.	
Hythe					Excellent	Excellent	Excellent	59%	41%	44%	↔	All samples Excellent so far in 2024		
Dymchurch					Good	Sufficient	Sufficient	14%	-33%	-28%	↔	Very high samples in August 2023. All samples Excellent so far in 2024.		Recoverable to Good by end of 2025
St Mary's Bay (Kent)					Poor	Poor	Poor	-6%	-33%	-28%	↔	2 high concentration samples. Recoverable to Sufficient by end of 2025		
Littlestone					Good	Poor	Poor	18%	-65%	-70%	↔	Very high samples in July 2023. All samples Excellent so far in 2024.		Connecting unsewered properties to mains drainage. Recoverable at end 2024
Sheerness					Swale	17	1	94%	Excellent	Excellent	Excellent	53%		50%
Minster Leas	Excellent	Excellent	Excellent	19%					10%	10%	↔	All samples Excellent so far in 2024		
Leysdown	Good	Good	Good	38%					29%	28%	↔	All samples Excellent so far in 2024		
Minnis Bay, Birchington	Thanet	76	2	97%	Excellent	Excellent	Excellent	73%	63%	64%	↔	All samples Excellent so far in 2024	Ongoing investigations. Investigation in AMP8. Recoverable to Good at end of 2025.	
West Bay, Westgate					Good	Sufficient	Sufficient	29%	-32%	-24%	↔	Very high sample in July 2023. All samples Excellent so far in 2024.		
St Mildred's Bay, Westgate					Excellent	Excellent	Excellent	43%	28%	32%	↔	All samples Excellent so far in 2024		
Westbrook Bay, Margate					Excellent	Excellent	Excellent	55%	42%	31%	↓	High sample June 2024.		No overflow operation.
Margate The Bay					Excellent	Good	Excellent	49%	-1%	4%	↔	All samples Excellent so far in 2024		Recoverable to Excellent by end of 2024
Margate Fulsam Rock					Excellent	Excellent	Excellent	19%	4%	2%	↔	All samples Excellent so far in 2024		Recoverable to Excellent by end of 2025
Walpole Bay, Margate					Good	Good	Good	44%	30%	33%	↔	All samples Excellent so far in 2024		
Botany Bay, Broadstairs					Excellent	Excellent	Excellent	34%	55%	54%	↔	All samples Excellent so far in 2024		
Joss Bay, Broadstairs					Excellent	Excellent	Excellent	50%	40%	39%	↔	All samples Excellent so far in 2024		
Broadstairs, Stone Bay					Excellent	Good	Good	10%	-2%	-11%	↔	1 high concentration sample in 2024. Very samples in 2022 and 2023.		No overflow operation.
Broadstairs, Viking Bay					Good	Sufficient	Sufficient	2%	-4%	-5%	↔	High conc samples in 2021. Excellent so far in 2024		Sewer rehab, misconnections investigations. Recoverable to Good at the end of 2024
Ramsgate Sands					Good	Good	Good	41%	46%	49%	↔	All samples Excellent so far in 2024. Recoverable to Excellent at end of 2024.		Removal of rubble from sewers and sewer rehab have led to improvement
Ramsgate Western Undercliffe					Good	Good	Good	23%	11%	12%	↔	All samples Excellent so far in 2024. Recoverable to Excellent at end of 2025.		Investigation in AMP8

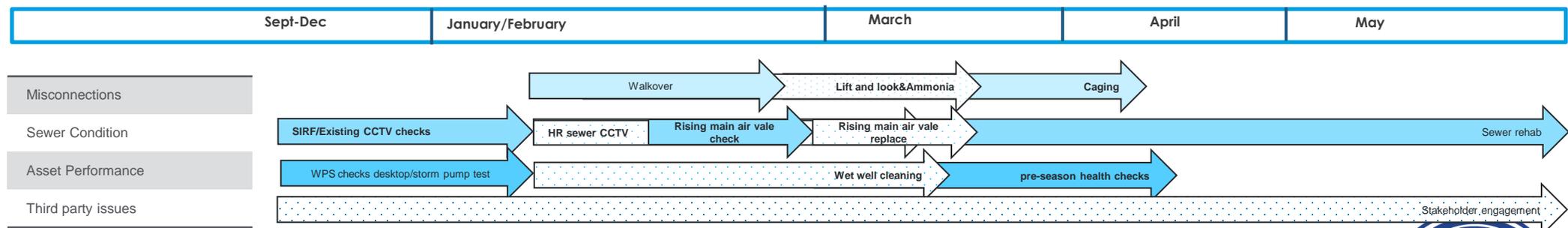
Priority locations – improvement plans

- Priority bathing waters identified by:

- Currently classified as poor
- Currently Classified as sufficient at risk of dropping to Poor
- Currently Excellent with narrow headroom between Good
- Capacity to improve in class in '24/25

Kent priority bathing waters
Broadstairs Viking Bay
Littlestone
Ramsgate Sands
Folkestone
Margate the Bay
Broadstairs Stone Bay
Ramsgate Sands
Margate Fulsam Rock
Deal Castle
Dymchurch
St Mary's Bay
West Beach Whitstable

Representative workstream plan



Future Growth and Developer Services

Working with planners and developers to enable a water resilient future



from
**Southern
Water** 

Our Delivery Teams

1

Future Growth Team

- ✓ Local plan consultations
- ✓ Neighbourhood plan consultations
- ✓ Planning application referrals

2

Developer Services

- ✓ Sewer & Water main diversions/requisition/'build over' applications
- ✓ Sewer & Water main connection applications

3

Asset Strategy & Planning

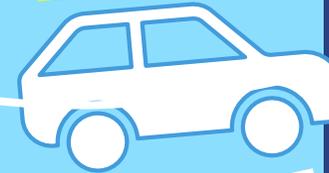
- ✓ Plan infrastructure growth schemes as required

4

Capital Delivery

- ✓ Deliver capital schemes, from diversions, connection & requisitions, to larger infrastructure growth schemes

Developer



Sustainable Development

Future Growth Team - Introduction

- We are a Statutory Consultee on Local and Neighbourhood Plans (5–20-year plans) & a Non-Statutory Consultee on individual Planning Applications (2–5-year plans)
- For Local Plans we seek to influence **policy provisions** that mitigate the impact of the proposed housing allocations on the operation of our infrastructure, promotes water efficiency & protects water quality
- For Planning Applications, should there be insufficient capacity to serve the development, we will request **planning conditions** to allow for the occupancy of the development to be **phased** in line with the upgrade to our infrastructure
- This is required as we have limited powers to prevent connections to our network, even when capacity is limited; for example, under Section 106 of the Water Industry Act, developers have a right to connect foul drainage on 21 days' notice



Developer Services - Introduction

- We administer developer applications for water & wastewater connections, diversions, requisitions and 'build overs' within regulatory levels of service [Water UK Developer Services](#)
- The above provides the *quantitative* measure for the Developer Measure of Experience (DMEX) alongside quarterly developer questionnaires, which provide the *qualitative* measure; these measures are combined to provide a **DMEX score** - [Customer and developer services experience – Ofwat](#),
- The DMEX score determines our position on the Ofwat DMEX table, which in turn determines the associated financial rewards or penalties for water companies
- We also provide technical approval & guidance for developer plans; this is supported by industry & national technical standards
- Aswell as, receiving revenue from developers through application fees, including the developer infrastructure charge, which is utilised for capital growth schemes where required



Our Policy Statement on Sustainable Development

We have the following expectations for developers when building new homes and commercial buildings:



Water efficiency – designs for developments must meet 100 litres per person per day.



Water efficiency labelling – water consumptive appliances fitted by developers will use water efficiency labelling.



Water neutrality – developments in Sussex North must demonstrate Water Neutrality for any new development with designs meeting 85 litres per person per day.



Smart metering – Our programme to roll out smart metering for new and existing connections is in development.



Sewer connections – Connections from new developments to Foul or Combined Sewers for surface water runoff will not be accepted unless all options to separate surface water have been applied.



Sustainable drainage – Designs must include features to slow the flow of surface water runoff as close to the source as possible, for example, green roofs, permeable paving, rain gardens and water butts.



Water recycling – incorporate rainwater capture and grey water recycling systems into designs, linking it to blue-green infrastructure and joining or establishing partnerships where practical to eliminate rainwater from drains.



Nutrient Neutrality – developments in the Stodmarsh area in Kent and parts of South Hampshire and Chichester new developments are required to demonstrate Nutrient Neutrality.



Water Offsetting – where opportunities to offset water consumption are available these will be adopted as a planning gain principle.

These expectations contribute to our transformational programmes:



Target 100



Sustainable Drainage



Catchment First



Network 2030



from
Southern
Water

Sustainable Development - Industry Updates

- **Surface Water:** Sustainable drainage systems are currently optional, however the proposed inclusion of Schedule 3 to the Flood and Water Management Act 2010 will make it mandatory to install sustainable drainage to manage surface water on a new development (*this has been delayed due to the general election*) [New approach to sustainable drainage set to reduce flood risk and clean up rivers - GOV.UK \(www.gov.uk\)](#)
- **Government's Environmental Improvement Plan 2023:** Working with the Future Homes Hub and other stakeholders, Government have developed a roadmap on water efficiency in new developments and retrofits, proposing 10 actions over the next decade [Environmental Improvement Plan 2023 - GOV.UK \(www.gov.uk\)](#)
- **Building Regs Water Efficiency Review – Feb 2024:** Report commissioned by Water Wise and delivered by Welsh Water & Water Resource Centre, found the need to address deeper concerns related to enforcement and compliance of building regulations [Building Regulations Water Efficiency Review – Database WW \(waterwise.org.uk\)](#)



Wastewater Asset Strategy and Planning



from
**Southern
Water** 

There are four key themes encompassing our delivery plans

The Challenges

Climate Change



Population Growth



Environmental Capacity & Resilience



Affordability



Network flow management to reduce flooding and spills

- **Surface water separation** and **sustainable drainage systems** to keep rainwater out of sewers and prevent spills from storm overflows
- Build **storage tanks** where other methods do not deliver.
- **Smart networks** - sewer level monitors with artificial intelligence
- Increasing **sewer capacity** for new homes and businesses

Recycling wastewater and nutrient removal

- Enhancing wastewater treatment to remove **nutrients and chemicals**
- Increasing **wastewater treatment** capacity for new homes and businesses
- Additional **UV treatment** to improve water quality for shellfish waters

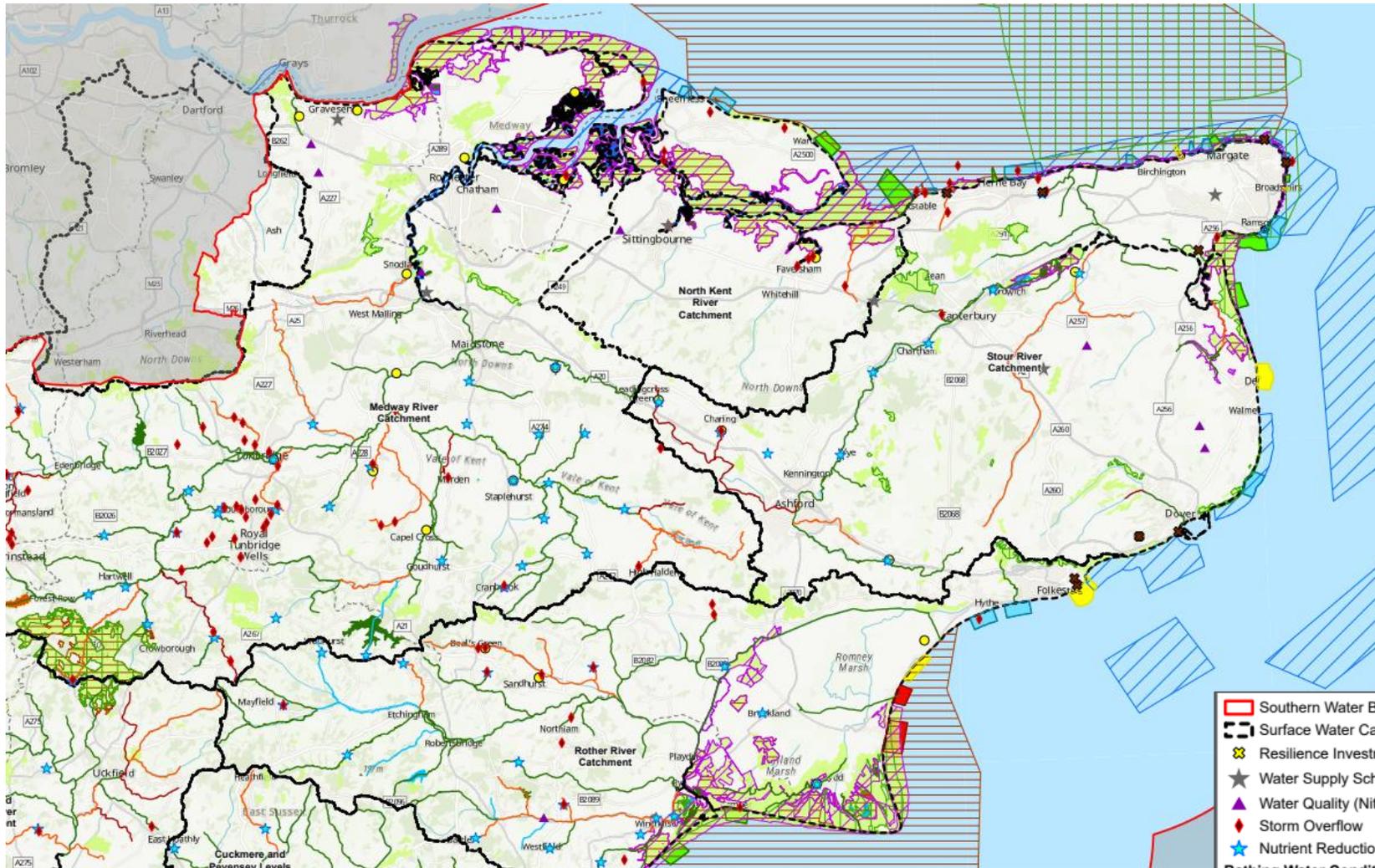
Asset health and resilience

- Enhanced **maintenance programmes** to improve resilience
- Improving **resilience** to power outages, increasing heat and flood risks
- **Partnership working** to address coastal erosion
- Enhanced **sewer sealing** to improve resilience to high groundwater

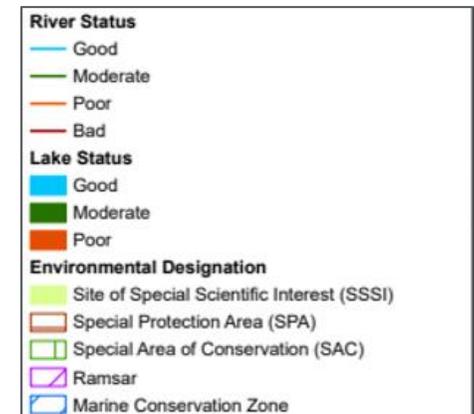
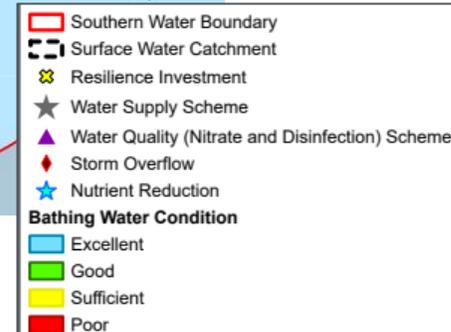
Bioresources

- Consolidate treatment sites and move to **Advanced Digestion** technology
- Increased biogas production and **renewable energy**
- Explore **Advanced Thermal conversion** technology

Kent environmental schemes – key areas of focus



- Improving river water quality through nutrient reduction
- Reducing spills from storm overflows
- Nutrient neutrality in the River Stour catchment to protect Stodmarsh Nature reserve
- Increasing capacity of our critical infrastructure to support new homes and businesses
- Improving power resilience at key coastal sites to further protect bathing waters
- Further reducing nutrients in wastewater discharges - building on schemes already in delivery

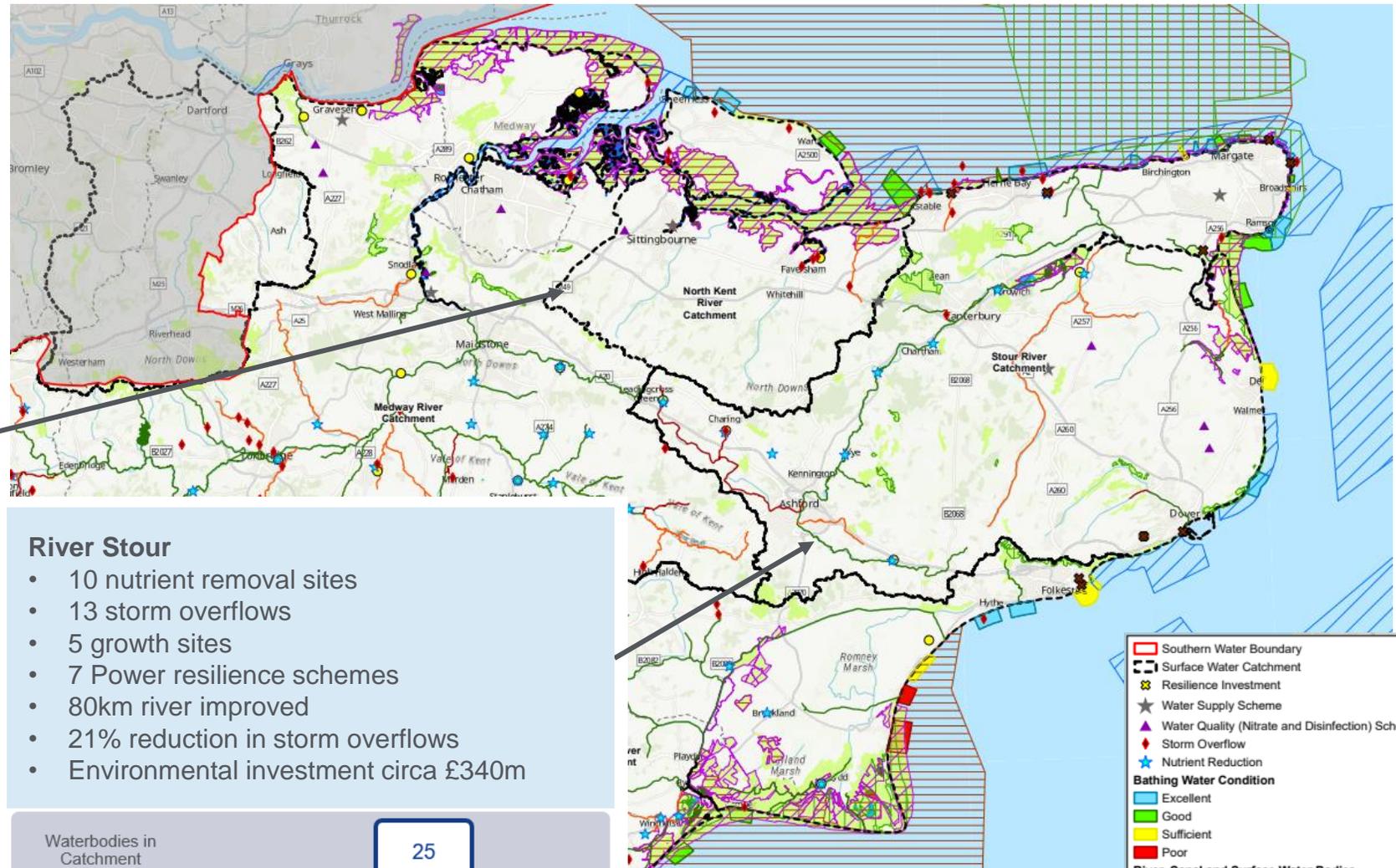
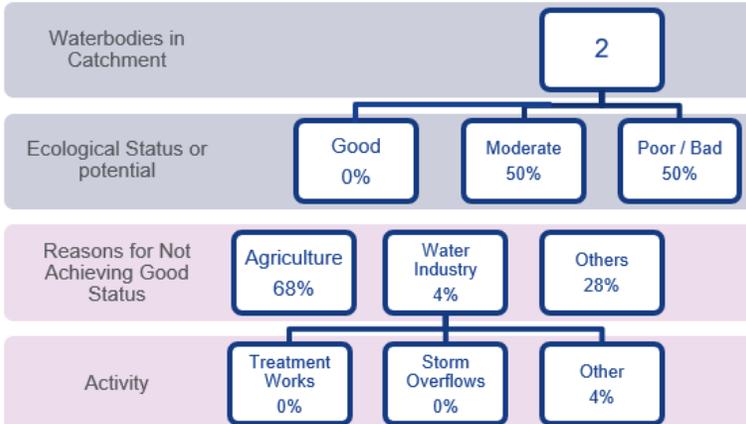


Kent enhancements

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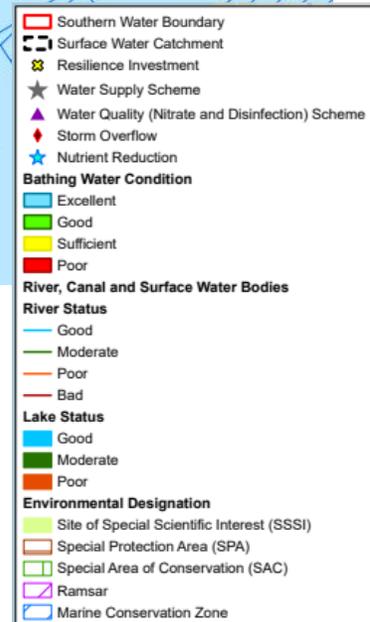
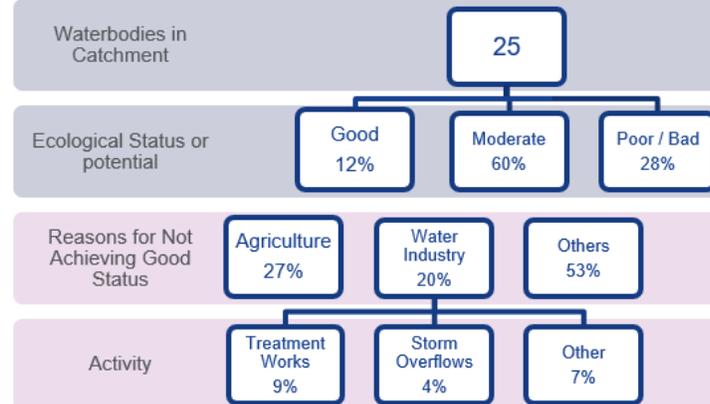
North Kent

- 8 storm overflows
- 1 growth site
- 11km river improved
- 37% reduction in storm overflows
- Environmental investment circa £60m



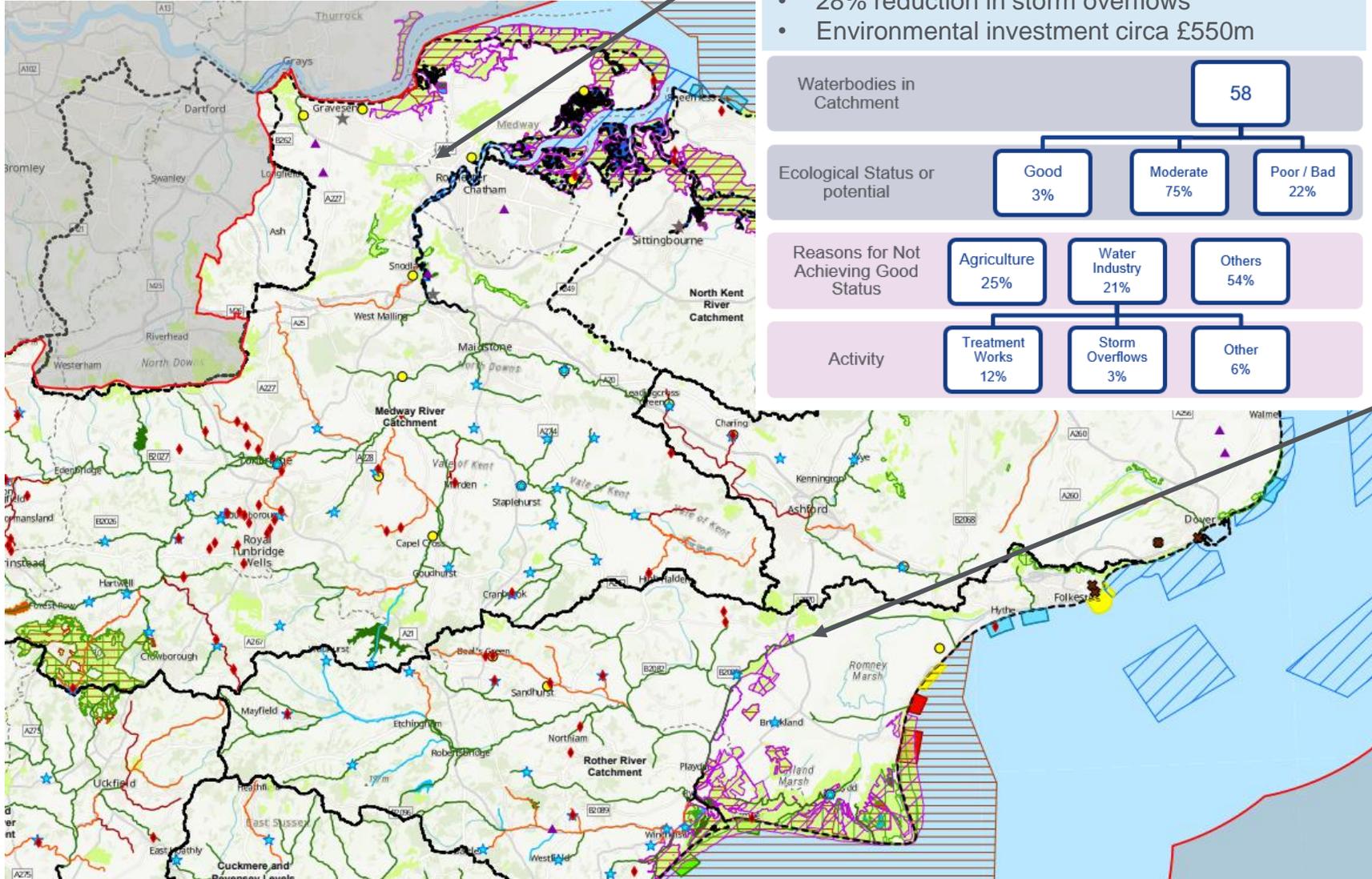
River Stour

- 10 nutrient removal sites
- 13 storm overflows
- 5 growth sites
- 7 Power resilience schemes
- 80km river improved
- 21% reduction in storm overflows
- Environmental investment circa £340m

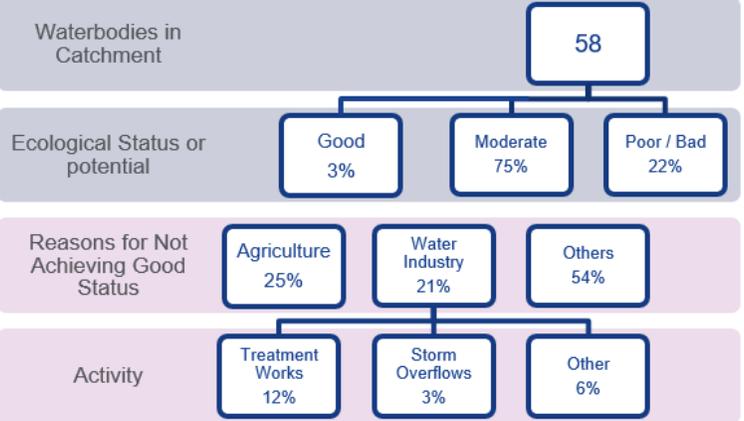


Kent enhancements

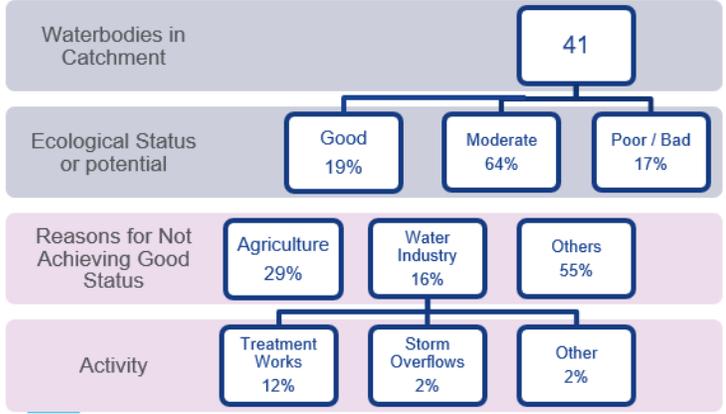
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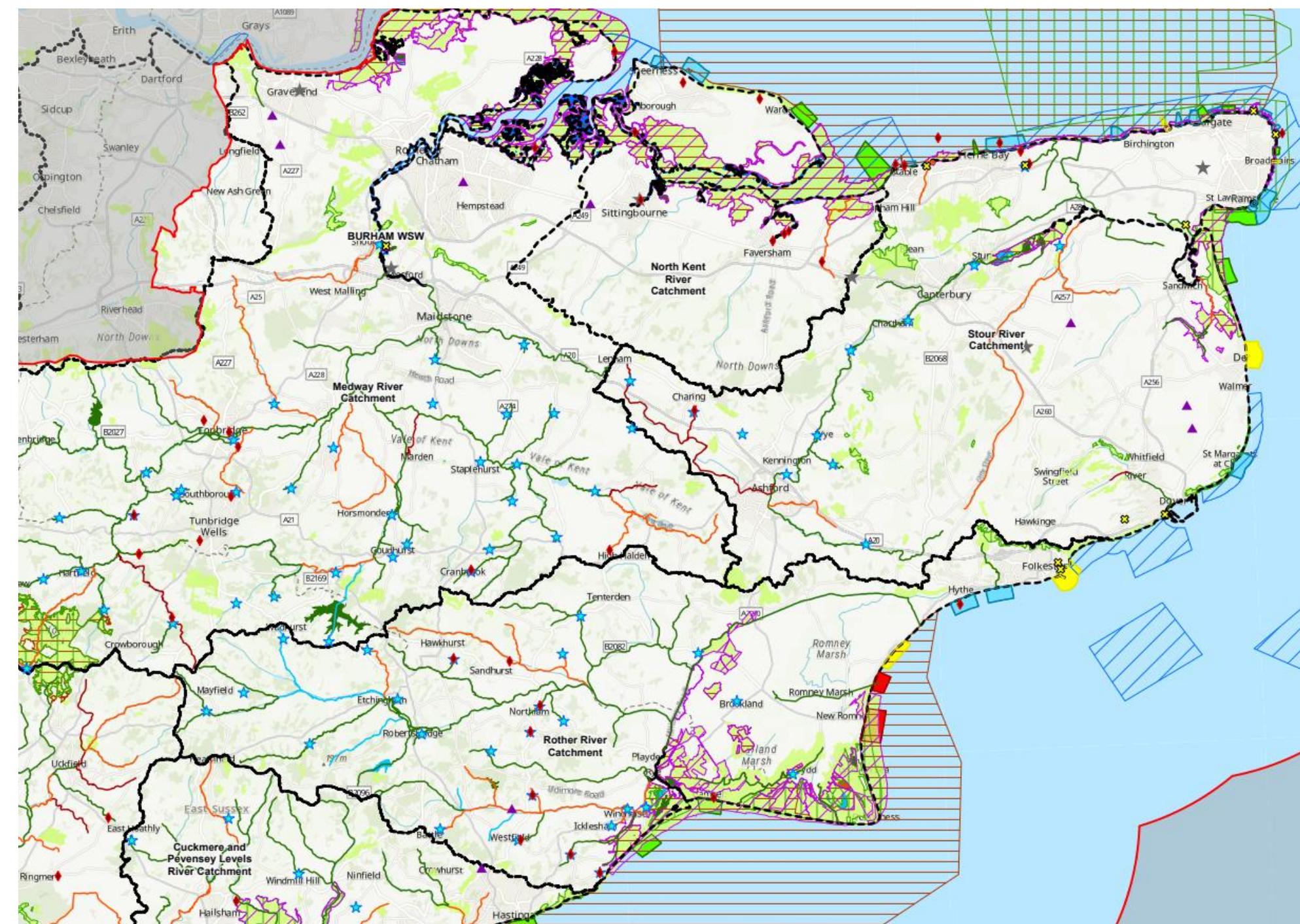


- ### Medway
- 36 nutrient reduction sites
 - 55 storm overflows
 - 12 growth sites
 - 205 km river improved
 - 28% reduction in storm overflows
 - Environmental investment circa £550m



- ### Rother
- 18 nutrient removal sites
 - 11 storm overflows
 - 4 growth sites
 - 2 power resilience schemes
 - 112km river improved
 - 36% reduction in storm overflows
 - Environmental investment circa £130m





- Southern Water Boundary
- Surface Water Catchment
- Resilience Investment
- ★ Water Supply Scheme
- ▲ Water Quality (Nitrate and Disinfection) Scheme
- ◆ Storm Overflow
- ★ Nutrient Reduction
- Bathing Water Condition**
- Excellent
- Good
- Sufficient
- Poor
- River, Canal and Surface Water Bodies**
- River Status**
- Good
- Moderate
- Poor
- Bad
- Lake Status**
- Good
- Moderate
- Poor
- Environmental Designation**
- Site of Special Scientific Interest (SSSI)
- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- Ramsar
- Marine Conservation Zone

Nature-based solutions as a first choice

- Defra principle: "Rainwater should be discharged back to the environment as close as possible to where it lands or channelled to a close watercourse without first mixing it with sewage"

How:

- Separating and "slowing the flow" at source where the rain falls
- Reducing groundwater infiltration into sewers

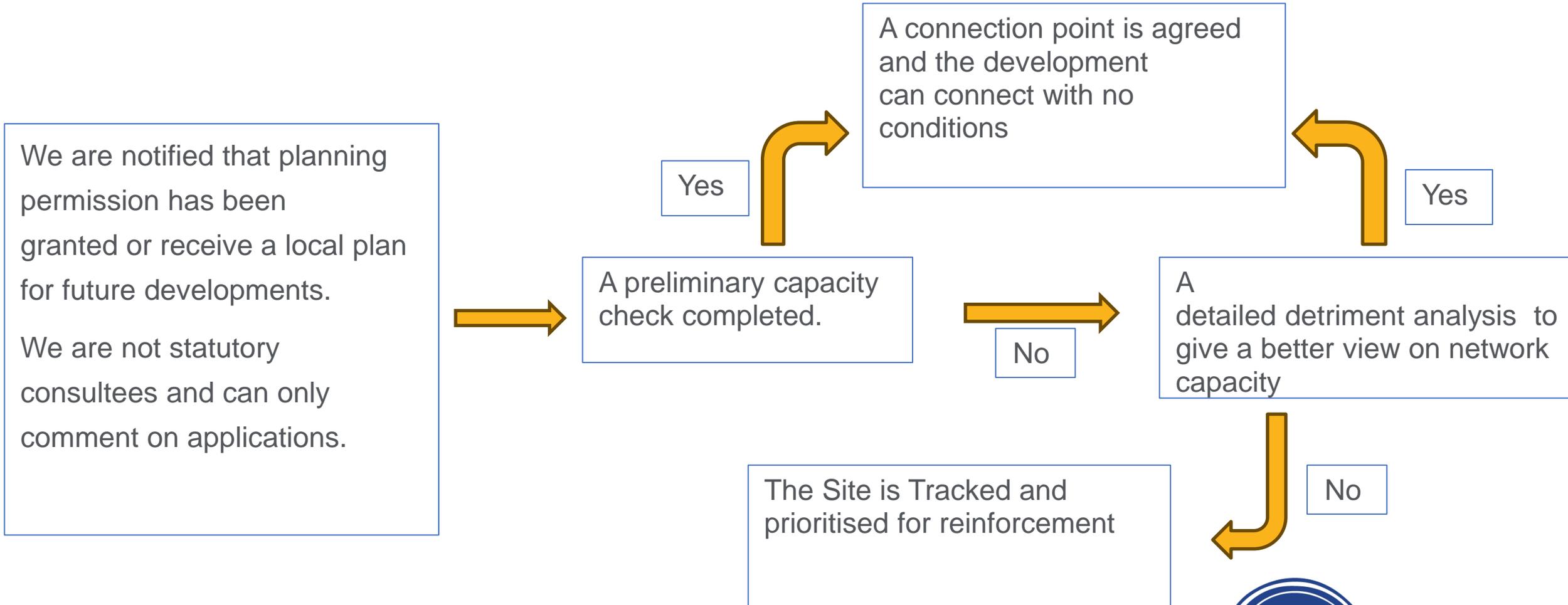
Approach:

- Catchment and nature-based solutions
- Wetlands, swales, ponds
- Rainwater capture and harvesting
- Green roofs, planters, water butts



Lavant WTW wetland: using nature to prevent harm from discharges from the storm overflow

Current Growth Process



Prioritising Growth

How:

1. Development size and expected build out.
2. Developments impact on existing issues
3. Spread of growth and potential 'Hot Spots'
4. Working alongside Councils and Developers to understand when large strategic developments will start.
5. Having a Local Plan is key to having well informed network growth schemes

Approach:

1. Reduce Surface water inundation & Ground water infiltration
2. Remove existing rainwater connections and facilitate the building of surface water drainage systems to local environment
3. Removal of system pinch points that cause hydraulic issues
4. Increase storage within the system
5. Upsize sewers



Catchment Resilience



from
**Southern
Water** 

Catchment Resilience

- Protecting the environment by ensuring abstractions are sustainable and enhancing biodiversity
- Protecting water quality and the environment by working with stakeholders including agriculture
- Safeguarding our drinking water supplies by making our catchments more resilient
- Working with Catchment Partnerships



Our priority water areas



Water Quality

- Nitrate is impacting our groundwater drinking water sources, and we are working in partnership with landowners to reduce the risk in North Kent and Thanet.
- We are implementing improvements to water quality risks from pesticides sources in the River Beult.
- We are investigating PFAS in groundwater.

Water Resources

- We are creating a sustainable abstraction regime to protect important habitats.

Environment Strategy

- We are developing a holistic Environment Strategy to help define our strategic environmental ambition.
- We are embedding natural capital approaches within our decision making.
- We need to deliver a programme of Biodiversity Net Gain (BNG).



Pilot Project: Upper Beult Catchment Resilience



- SWS working in close partnership with SERT and seven participating landowners
- The project involves creation of 51 leaky woody dams, 14 scrapes/ponds, 300m of river channel improvements and 16 ha of wetland habitat.
- Delivered through an innovative co-designed 5-year management agreement, facilitated by SERT

Medway Catchment Partnership

Hosted By



The Vision

To encourage and maintain healthy rivers, able to support characteristic environments, rich in habitat and biodiversity - with people at the heart of the catchment. To maintain a clean and plentiful water supply and encourage resilience to flood and drought through supporting the natural processes that deliver sustainability.

Our Catchment Management Specialist attends the Quarterly Catchment Partnership meetings where we present key business updates and discuss options to progress partnership work.

Monthly meetings with the Catchment Partnership host allows our team to progress internal collaboration by updating decision makers on catchment wide initiatives and aligning them with our own goals for maximum benefit

Riverfly monitoring with the Royal Tunbridge wells angling society, Environment Agency, Natural England and Southern Water.



The Medway Catchment Partnership brings together local people and organisations to plan and deliver positive actions that will improve our water environment and society. Typical organisations involved are:

- Statutory agencies (EA, NE etc)
- NGOs (Rivers Trusts, Wildlife Trusts, RSPB etc)
- Local Authorities
- Local Community Groups
- Landowners and farmers
- Angling Societies/Trusts
- ... And many more!



Invasive Species

Agricultural Land Use

Highways Run-off

Invasive Species

Eel & Fish passage

Southern Water input timeline

Task	Q2 23/24	Q3 23/24	Q4 23/24	Q1 24/25	Q2 24/25	Q3 24/25	Q4 24/25	AMP8
1 Collating SWS info	Green	Green	Green					
2 Collating CP info	Green	Green	Green					
3 Defining shared goals			Green	Orange	Orange			
4 Co-creation of a plan						Orange	Orange	
5 Co-delivery of a plan								Orange



Incident Response



from
**Southern
Water** 

Improvements Made

Bottled Water



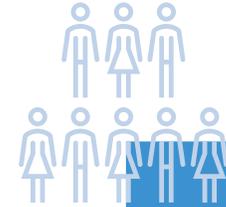
- Increased amount of water available per day to 400,000 litres. Equivalent to water for 40,000 people.
- Identified, visited and gained pre-approval for 127 bottled water supersites.
- Created a process for using small community hubs to distribute water.
- Increased our rota of Southern Water employees to manage bottled water stations.
- Secured funding to create a rota of Southern Water colleagues to distribute water at Bottled Water Stations, reducing the need for external volunteers.

Vulnerable Customers



- Introduced a secondary supplier to complete doorstep deliveries to vulnerable customers.
- Increased the number of deliveries that can be made – over 12,000 properties delivered to in 1 day in Hasting's incident.
- Introduced a proof of delivery system with both suppliers to ensure we are accountable and transparent.
- Increased internal bottled water storage to speed up replenishment of water.
- Encouraged suppliers to open a water storage facility in Hampshire – 400 pallets stored in Fareham.

Engagement



- Commitment to regular meetings with Local Authorities.
- Involvement and collaboration on planning, including agreement on Bottled Water Stations outside of incidents.
- Attendance at Water Disruption Meetings, where information is shared, and processes improved.
- Involved in the National Digital Twin data sharing pilot in Hampshire.
- Invitations shared to participate in exercises and test situations, specific to a response in the Marchwood area.

Ongoing Improvements

Water Distribution



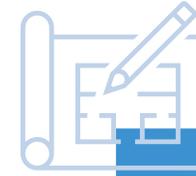
- Investment in becoming more self-sufficient; Increased water storage and internal capabilities to distribute water. Part of PR24 investments.
- Ability to better support key customers, such as schools and care homes with “Always in Supply devices”.
- Introducing improved internal and external traffic management and safety measures at our Bottled Water Stations.
- Conduct a live exercise with Water Direct and Cobra Hydro in the Marchwood area.

Vulnerable Customers



- Introduce an improved internal management system for vulnerable customers to enable a more efficient and accurate delivery process, with live delivery status and post incident reporting.
- Ensure bottled water stations are located in such a way to accommodate and support all customers, including the use of Community Hubs.
- Incorporate an information leaflet with the first PSR water delivery, to explain why water is being delivered.
- Increase pre-identified vulnerable customers through promotion of the PSR.

Planning



- Engagement with vulnerable sites such as schools to understand their exact needs in a loss of supply incident to prevent closure.
- Combine alternative water actions into one clear plan in collaboration and agreement with localised partners.
- Increase available resources for incidents by continuing to build resilience into our rotas.
- Agree all locations to be used to distribute water in order of preference, including operational requirements needed to open and be successful.