

# Southern Water: West Sussex Update

24 July 2024



from  
**Southern  
Water** 

# Agenda

- Welcome and Company update – Richard Manning
- Wastewater – operational update – Andy Webb, Cathy Marriott and Simon Tomlinson
- Clean Rivers and Seas Task Force – Nick Mills
- Water – operational update – Edward James, Stephanie Davidovitz and Paul Tiller
- Our work in the community – Dan Rodrigues and Ashley Marshman
- Closing words



# Company update

Richard Manning, Company Secretary



from  
**Southern  
Water** 

# Our Business Plan – 2025 to 2030

- In October 2023, we submitted our ambitious Business Plan to Ofwat for the period 2025-30. On the 11 July we received initial feedback from Ofwat on our plan, which we'll now carefully review.
- We'll publish our response on the 28 August, ahead of Ofwat's Final Determination in December 2024.
- 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

Investing in new sources like water recycling and a new reservoir

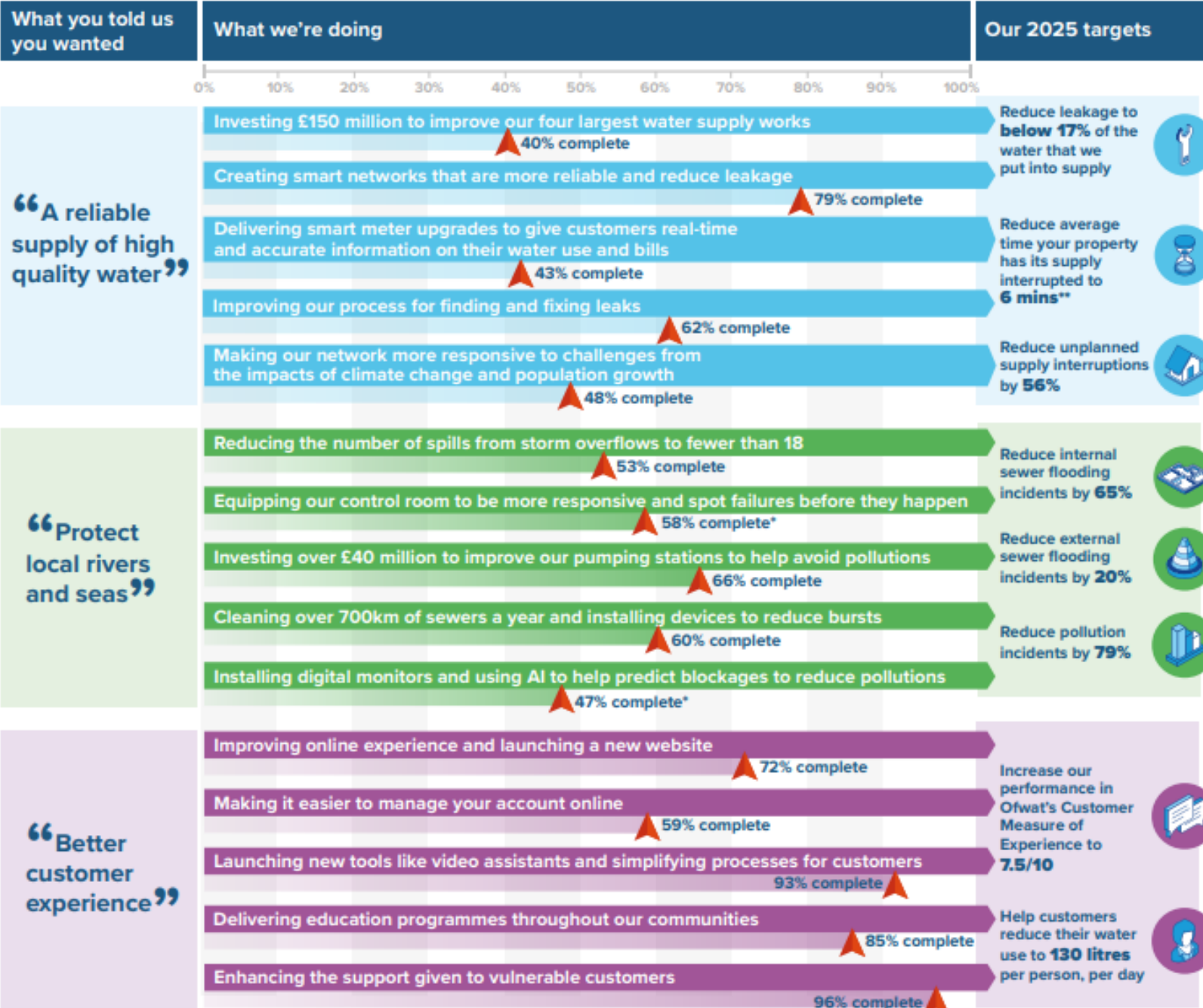
**£3.4 billion**  
between 2025–35  
for a reliable supply of water

**£3.3 billion**  
in the environment

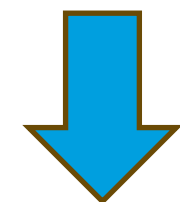
# Turnaround Plan

- In April 2023, we 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

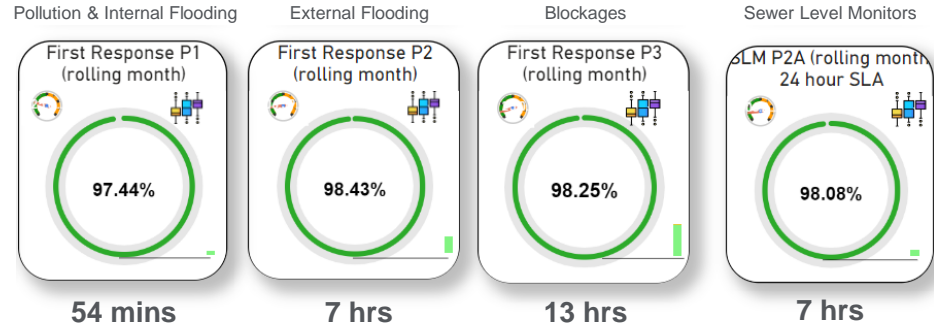


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The Southern Water logo graphic consists of three stylized, wavy blue lines of varying lengths, positioned to the right of the text "Southern Water".



# Wastewater Networks



## A very wet winter

- This winter we experienced extreme levels of rain and the ground in certain areas of Sussex 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.
- 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 West Sussex where tankering levels (despite higher groundwater) reduced by 90% year on year from 2022 to 2024.
- 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.

## Looking to the future

- We are currently reprocurring 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 West Sussex

- 86 Wastewater Treatment sites across West Sussex
- Largest treatment in West Sussex is our East Worthing WTW, serving 140,000 customers (PE)
- Three of the sites in West Sussex are large sites which treat products from the other 83 smaller wastewater treatment sites and have large anaerobic digestion processes – generating 10.3 GWh/year.
- Our Strategic, and largest site, Budds Farm WTW in Havant is strategically important for West Sussex as sludge also moves to this site.
- 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 and tertiary treatment.
- Commissioning of our first Thermal Hydrolysis plant – an advanced digestion technology which utilises high pressure steam to treat sludge to a high quality and improve power generation efficiency.



# Capital Investments in Sussex - Wastewater

- **During AMP7 (2020-2025) we've invested £321m** so far which includes:
  - **Network Projects;** Rising Mains (£25m), Growth (£21m)
  - **Treatment Enhancement;** Additional Storm Storage (£9m), Increase Flow to Full Treatment (£9m) & Improved quality of treated wastewater, including Phosphorus removal (£122m)
- **£72m still to spend** this AMP, largely relates to **Treatment Enhancement**, vast majority schemes now on site.
- **Key Projects:** Goddards Green (£24m), Horsham (£31m), Pagham (£20m)



New Screen at Horsham



Pagham

# Clean Rivers and Seas Task Force West Sussex update July 2024



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# Task Force evolution



# Overflows in West Sussex

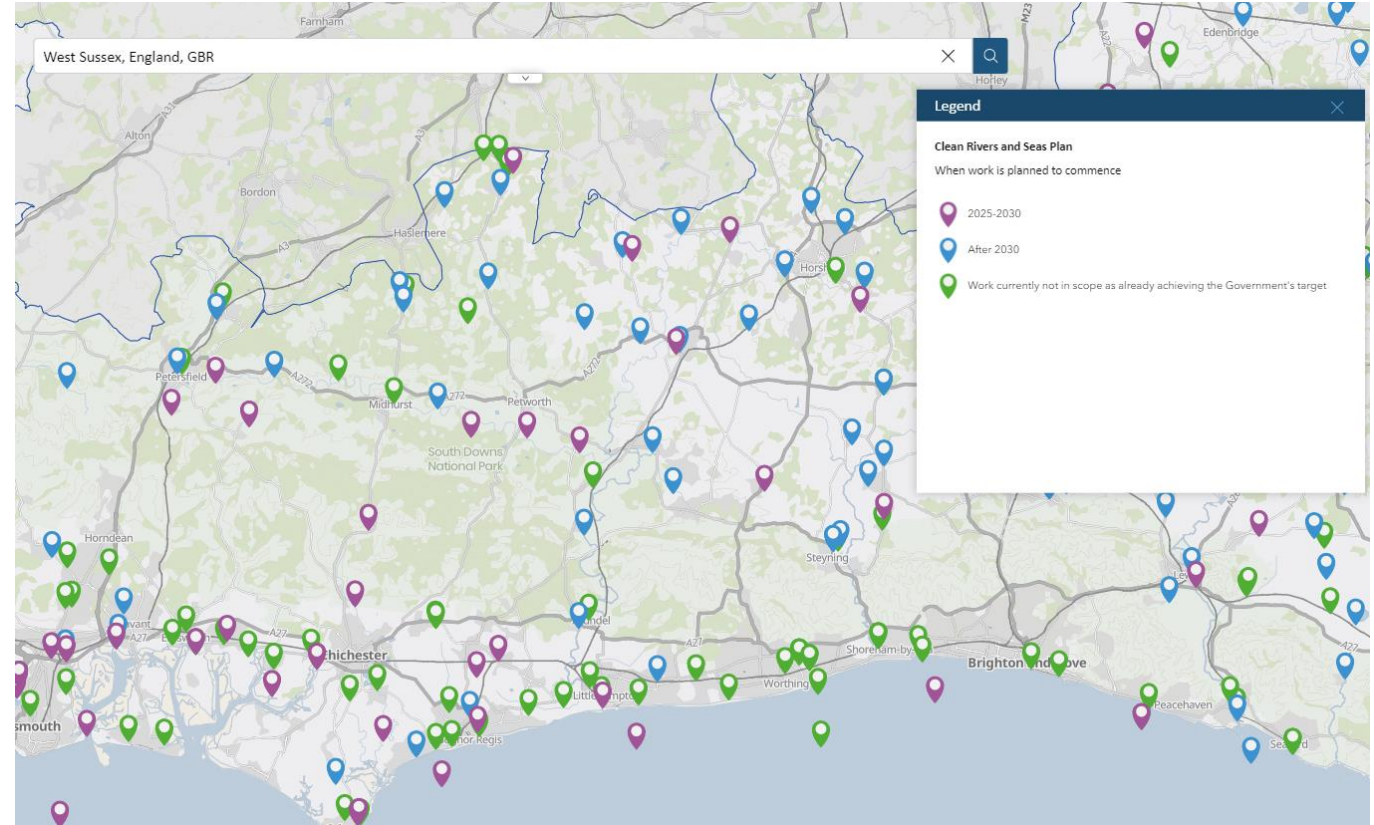
## Key stats

**149** Storm Overflows in West Sussex

**84** Require work/investment to achieve govt. targets before 2050

**35** Overflows working on between 2025-2030

Approximately **£240m investment**  
in next five years



[southernwater.co.uk/water-for-life/clean-rivers-and-seas-plan/map](https://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
- Co-created with customers and stakeholders
- All storm overflows included
- More transparency, better usability, more features

# Three Harbours Project

Partnership of organisations working together to restore the landscape across the Three Harbours of Langstone, Chichester and Pagham focussing on water quality, biodiversity and carbon capture.

Jointly drafted a strategy to:

- Focus on the priorities
- Get all partners pulling in the same direction



Natural England Condition Review of Chichester Harbour Sites:

The main intertidal habitats and bird features were assessed as 'unfavourable declining' condition - largely due to the **continued loss of saltmarsh, the poor quality of saltmarsh and mudflat habitat, and the continued decline of several bird species** (wintering and nesting).





# Three Harbours Project – Southern Water Role

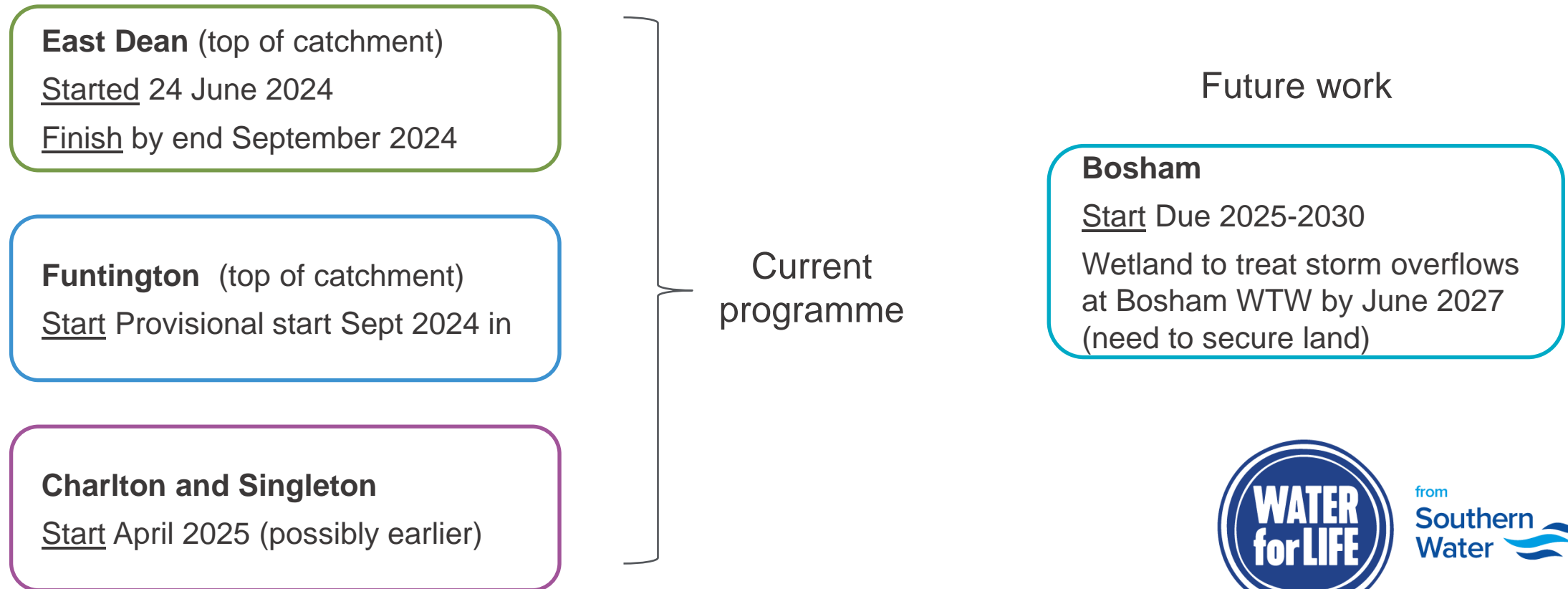
- Funding RSPB project manager role – Fay Pisani
- Dedicated resource to support Fay – Joff Edevane, Pathfinder Delivery Lead Wetlands & Harbours
- Representative on associated steering groups with local councils, harbour groups, catchment partnership groups, NE and EA etc.
- Sponsor Brighton University PhD looking at microbial and nutrient sources into the Harbours
- Exploring aquaculture / seaweed opportunities as nutrient sink
- Offering suitable pump out facilities at Yacht clubs
- Involved in regulatory schemes and programmes that will help to address the issues
  - Water quality: through our overflow reduction and nutrient removal schemes 2020-2025 and 2025-2030 work
  - Land: Catchment work



# Tackling Groundwater

**What is the problem:** Groundwater infiltrating into network through joints in public and private pipes.

**The solution:** Combination of patching / relining pipes and manhole sealing. Sealing of private and public network to reduce groundwater infiltration and therefore storm overflows



# Lavant wetland

Commissioned and operational since 2023 treating storm overflows.

Our preliminary sampling results and analysis show the wetland is delivering comparable treatment to the conventional treatment.

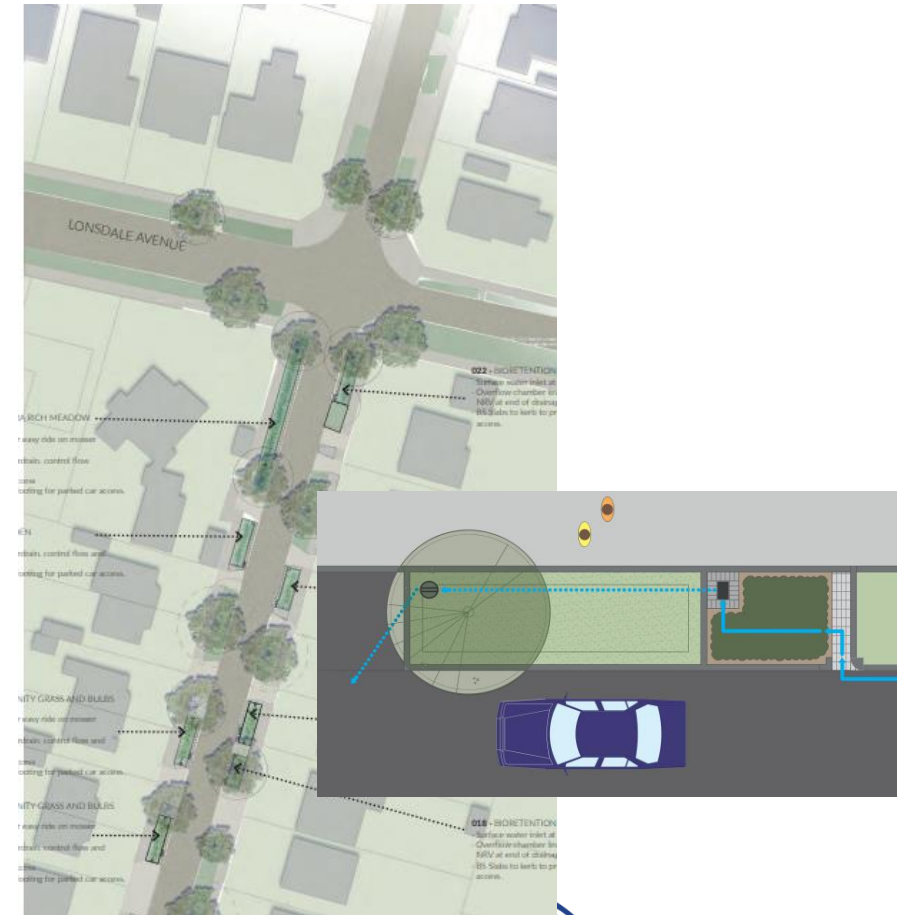


Installed to provide additional treatment after storm tank prior to discharge to river



# West Sussex Highways Programme

- Around 30-50% of surface water that enters the combined sewer network, comes from the highways
- Ongoing work with West Sussex County Council to establish a highways SuDS programme – removing the equivalent of 44km of highways drainage from the combined sewer
- Current status: both organisations met for a workshop, identifying areas for potential pilot(s), creating standard designs



# What will investment / activities in West Sussex look like for...

## By April 2025

- Complete work at East Dean and Funtington
- Create a long-list of potential highway SuDS schemes with WSCC
- MOU in place with WSCC

## 2025-2030

- Approx. installing 5,000 slow the flow measures such as water butts on domestic properties
- Lining and sealing over 260km of public and private sewers
- Managing over 40km of highway drainage
- Planting over 1000 trees



# Water – operational update

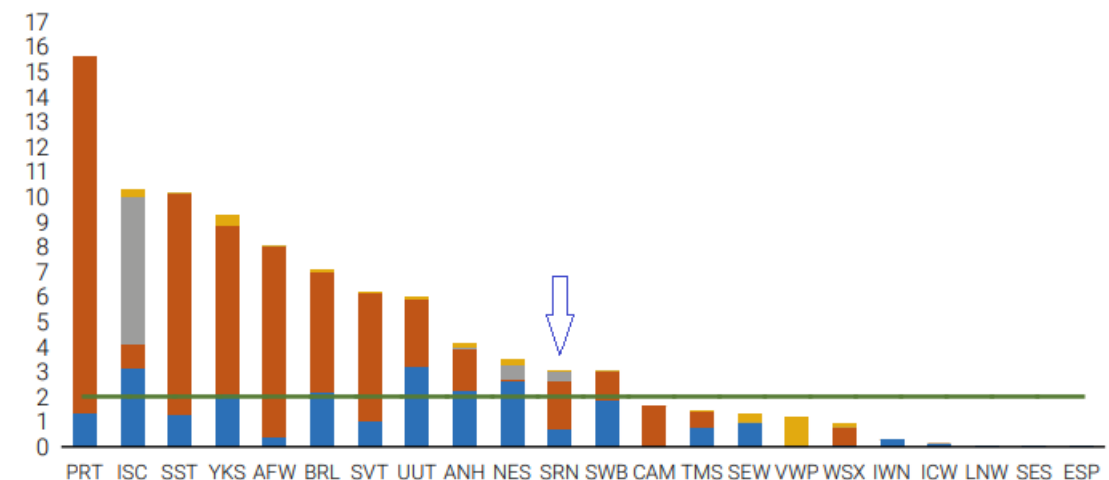
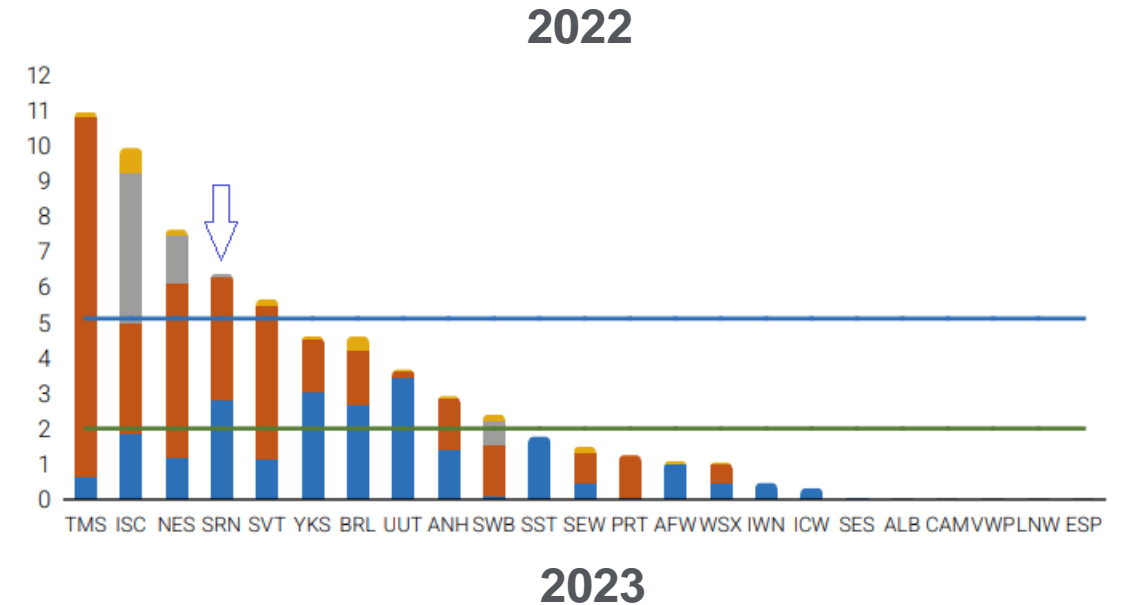


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# Water production – our sites in West Sussex

- 14 Groundwater sites in West Sussex – 12 operational, 2 undergoing enabling works
- 2 Surface Water sites  
**Hardham** – fully operational and currently being upgraded  
**Weirwood** – full upgrade ongoing and will return to supply in Dec 2025, when first phase is completed
- Both upgrades will improve the operability and resilience of the sites
- Water production capacity 149Mld, current customer demand 96mld (YTD)

## Year-end CRI (compliance risk index) performance



# Water network performance

- We have had a successful relining project at Binstead Woods (a 600-year-old ancient woodland) to mitigate repeat bursts in this location
- We're also nearing completion of a mains replacement project at Broomers Hill WSR
- Leakage in Sussex is currently 28 MI/d, driving an increase in our proactive leakage find and fix
- Increase in water network inspector resource over the past 12 months to drive more network calming schemes (pressure management and transient mitigation)





# Leakage in Sussex

## Total leak repairs 2022/23

|                | Sussex |
|----------------|--------|
| Bursts         | 663    |
| Customer leaks | 256    |
| Network leaks  | 7,576  |
| Total          | 8,495  |

## Total leak repairs 2023/24

|                | Sussex |
|----------------|--------|
| Bursts         | 608    |
| Customer leaks | 104    |
| Network leaks  | 7,496  |
| Total          | 8,208  |

# Improving and investing in our assets

- To reduce water supply disruption and to improve customer experience, Sussex will receive a huge injection of investment in the coming years
- **In the next 5 years:**
- Invest c£35m on key ground water supply works in Sussex, to manage raw water deterioration challenges, and reduce unnecessary customer interruptions
- Planning to replace over 300km of water mains to address both leakage, to protect future resources, and aged assets. Sussex will be part of the targeted replacement programme. Specific areas TBC



# Improving and investing in our assets

- **Between 2020-30:**
- Plan to invest c£30m at **Hardham WSW** (supplying 248,000 people in the West Sussex and surrounding areas) to improve asset reliability and reduce customer disruption, along with building in greater asset redundancy
- Plan to invest c£80m rebuilding **Weirwood WSW** (supplying 13,500 people in Sussex and surrounding areas), to provide additional resilience
- South East region is heavily water stressed and we intend to invest c£200m to safeguard resources by developing external potable bulk supply/transfers, reintroducing a key groundwater site in **Brighton**, along with embracing water reuse technology



# Our work in the community

Dan Rodrigues, Community Engagement Officer

Ashley Marshman, Head of Customer Service



# Community Engagement – West Sussex

**Improving outcomes and building skills for our community**

**New Wave Education**  
 81K Young people reached in past 18 months through the programme.

- We have visited **54** schools reaching **7350** young people
- Online resources **78** schools downloaded reaching 5338 pupils
- 5 apprenticeships in West Sussex

**Making the Community stronger**

**Outreach Activity**

- 68 engagements in 2025
- Affordability drop ins
- Sewer Wise talks and visits
- Clean Rivers and Seas

**Littlehampton locality schools project**, in collaboration with RNLi  
**Crawley Junior Citizen**  
 24 schools attend each year

**Caring for the Environment together**

**Outdoor Learning**  
 Fully funded 19 sessions delivered by Southeast River Trust reaching 848 pupils

**School Tours – Wastewater sites**  
 3 school from West Sussex has visited Peacehaven WTW.

**Corporate volunteering**  
 2261 hours given back in West Sussex in 2023-2024

**Demonstrating our role as a good corporate citizen**

**Grants**

- £129K grants awarded since 2020
- AudioActive regional charity partner
- Community centre grants x 8
- Chestnut tree sensory garden
- Hardships Grants (low income)
- Non Household – water Saving schemes

Anna Sharkey said Bentswood Hub is an independent community centre run by community volunteers for the community, we are not government funded and no one takes a wage. This funding means that we can run as a warm space for our community through these colder months without worrying about how we are going to pay the ever-rising utilities. Our community centre is like a second home for some of our users, where the kettle is always on and the conversation is always flowing, thank you so much!

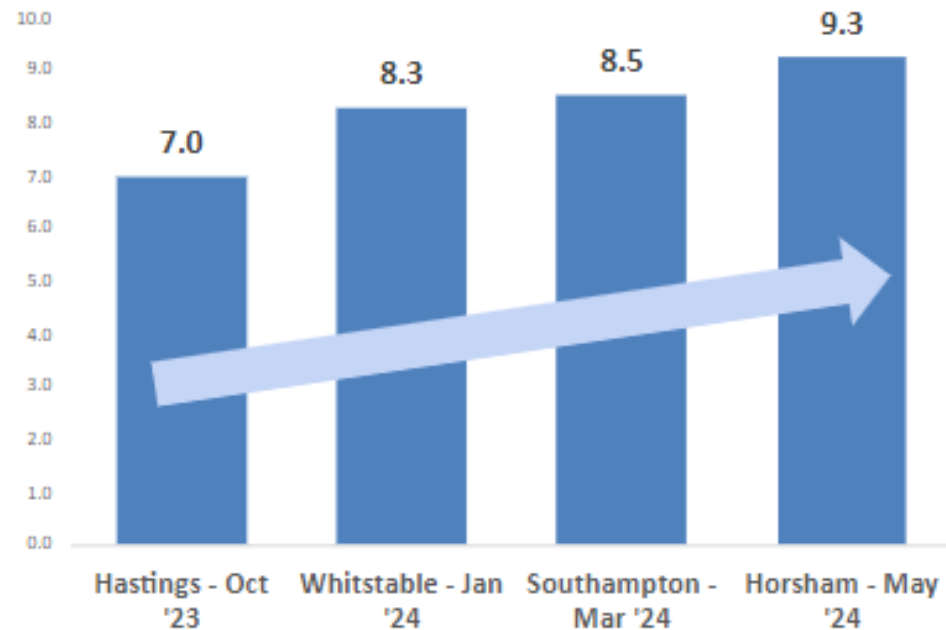




*“Website didn’t answer my query, but this did right away”*

### Overall Rating of Events

How did you find the event?



## Your Water Matters Drop Ins

1. Hastings – Oct '23
2. Whitstable – Jan '24
3. Southampton – Mar '24
4. Horsham – May '24
5. Hastings\* – Sep '24
6. Brighton – Sep '24
7. Thanet – Oct '24
8. Hampshire - South – Nov '24
9. Chatham – Jan '25
10. IOW – Mar '25

*Ensuring a spread across the region of high population areas*

**Wider Engagement:**

- From Jul '25 - Regional stakeholder workshops
- Regional 'Your water your say' sessions (Southern Water led)

*Highest % of lower income customers to greater provide financial support*



*\*Trialling a bespoke **dedicated** session – linked to operational incidents*

AOB



from  
**Southern  
Water** 



# Appendix



# Water Resources Management Plan (WRMP)

July 2024 update



from  
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Water** 

# 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 |
| <b>Total</b>                                 | <b>£1,791m</b> |                                                                                                                      |

\*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 <sup>st</sup> – Sussex North and Hampshire        | National Water Efficiency Fund and group established, key to recognising the true level of benefit possible and gov. requirements |

# West Sussex bathing waters



from  
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# West Sussex

| Bathing Water          | District   | No. samples 2024 | Samples above Excellent threshold | % Excellent samples | 2022      | 2023      | Projected 2024 | Headroom 2023 | Projected 2024 headroom | Change | Comment                                                           | Explanation                                                                    |
|------------------------|------------|------------------|-----------------------------------|---------------------|-----------|-----------|----------------|---------------|-------------------------|--------|-------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Southwick              | Adur       | 21               | 1                                 | 95%                 | Excellent | Excellent | Excellent      | 65%           | 65%                     | ↔      | All samples Excellent so far in 2024                              |                                                                                |
| Shoreham Beach         |            |                  |                                   |                     | Excellent | Excellent | Excellent      | 43%           | 40%                     | ↔      | All samples Excellent so far in 2024                              |                                                                                |
| Lancing, Beach Green   |            |                  |                                   |                     | Excellent | Excellent | Good           | 15%           | -18%                    | ↓      | Very high sample - no overflow operation                          | Some potential to recover to Excellent                                         |
| Littlehampton          | Arun       | 36               | 3                                 | 92%                 | Good      | Good      | Good           | 40%           | 37%                     | ↔      | All samples Excellent so far in 2024                              |                                                                                |
| Middleton-on-sea       |            |                  |                                   |                     | Excellent | Excellent | Excellent      | 19%           | 25%                     | ↑      | All samples Excellent so far in 2024                              |                                                                                |
| Felpham                |            |                  |                                   |                     | Good      | Good      | Good           | 8%            | 10%                     | ↔      | 1 high concentration sample. No overflow operation.               | Misconnection team work ongoing in the surface water cathment and sewer rehab. |
| Bognor Regis East      |            |                  |                                   |                     | Good      | Good      | Good           | 21%           | 19%                     | ↔      | All samples Excellent so far in 2024                              |                                                                                |
| Bognor Regis (Aldwick) |            |                  |                                   |                     | Poor      | Poor      | Poor           | -42%          | -49%                    | ↓      | 2 high concentration samples. One with PRF. No overflow operation | Misconnections team still tracking down issues. Recoverable by end of 2025.    |
| Pagham                 |            |                  |                                   |                     | Excellent | Good      | Good           | 43%           | 43%                     | ↔      | All samples Excellent so far in 2024                              |                                                                                |
| Selsey                 | Chichester | 13               | 1                                 | 92%                 | Excellent | Excellent | Excellent      | 45%           | 45%                     | ↔      | All samples Excellent so far in 2024                              |                                                                                |
| Bracklesham Bay        |            |                  |                                   |                     | Excellent | Excellent | Excellent      | 54%           | 54%                     | ↔      | 1 high concentration sample. No overflow operation.               |                                                                                |
| West Wittering         |            |                  |                                   |                     | Excellent | Excellent | Excellent      | 66%           | 66%                     | ↔      | All samples Excellent so far in 2024                              |                                                                                |
| Goring Beach           | Worthing   | 21               | 0                                 | 100%                | N/A       | N/A       | Excellent      | N/A           | 81%                     | N/A    | Newly designated. Excellent samples so far.                       | Investigation in AMP8                                                          |
| Worthing               |            |                  |                                   |                     | Good      | Good      | Good           | 3%            | 2%                      | ↔      | All samples Excellent so far in 2024                              | Misconnection team work ongoing.                                               |
| Worthing Beach House   |            |                  |                                   |                     | N/A       | N/A       | Excellent      | N/A           | 79%                     | N/A    | Newly designated. Excellent samples so far.                       | Investigation in AMP8                                                          |

- 95% Excellent samples so far in 2024.
- 2 newly designated bathing waters, both with all Excellent samples so far.



# Future Growth and Developer Services

Working with planners and developers to enable a water resilient future



# 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

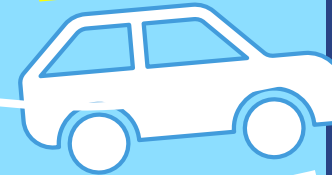
- ✓ Plan infrastructure growth schemes as required

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**

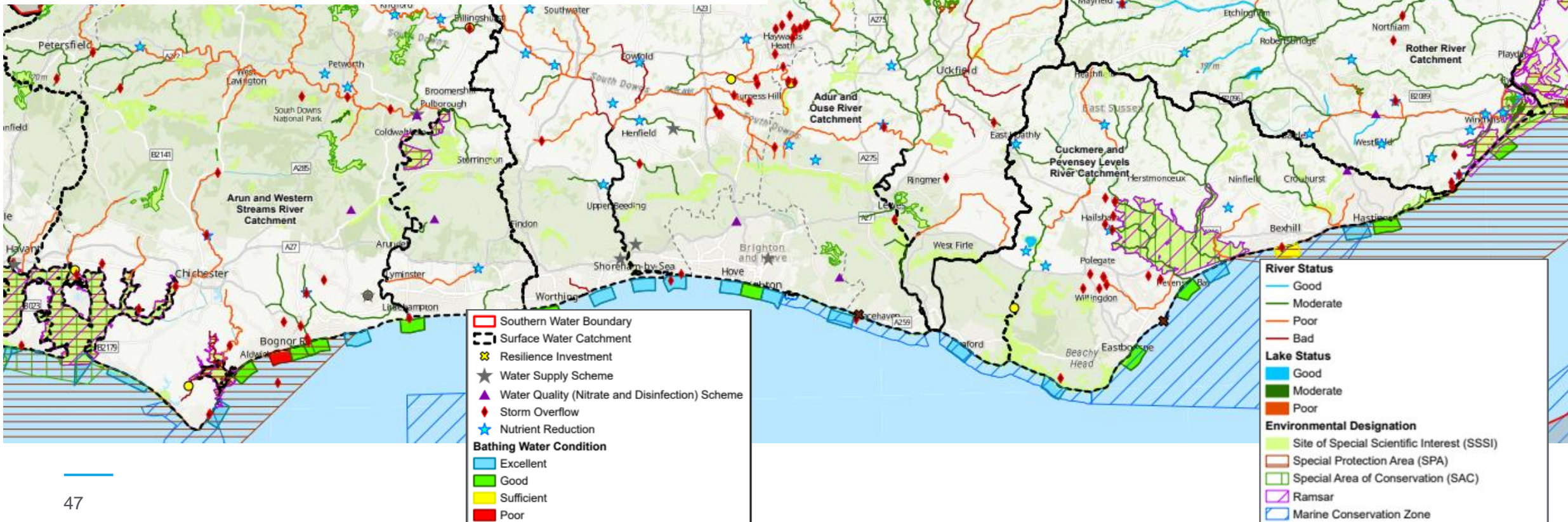
- Enhanced **maintenance programmes** to improve resilience
- Improving **resilience** to power outages, increasing heat and flood risks
- **Partnership working** to address coastal erosion
- Enhanced **sewer sealing** to improve resilience to high groundwater

**Bioresources**

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

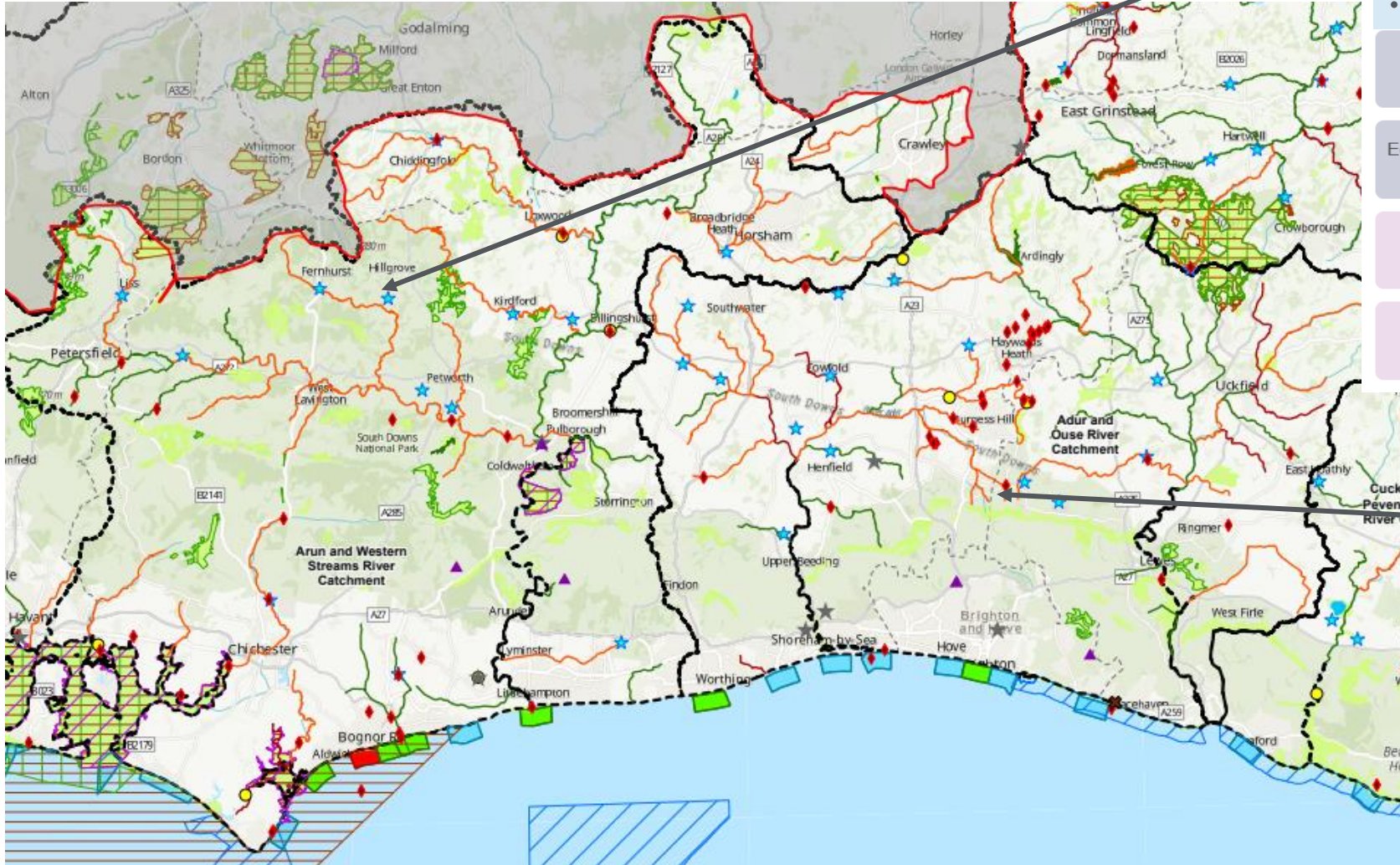
# Sussex environmental schemes – key areas of focus

- Improving river water quality through nutrient reduction and reduction in storm overflows
- Increasing capacity of our wastewater systems to support new homes and businesses
- Enhancing climate resilience with greater use of green solutions to reduce spills from storm overflows, power resilience at treatment works, and protecting 1 site from coastal erosion



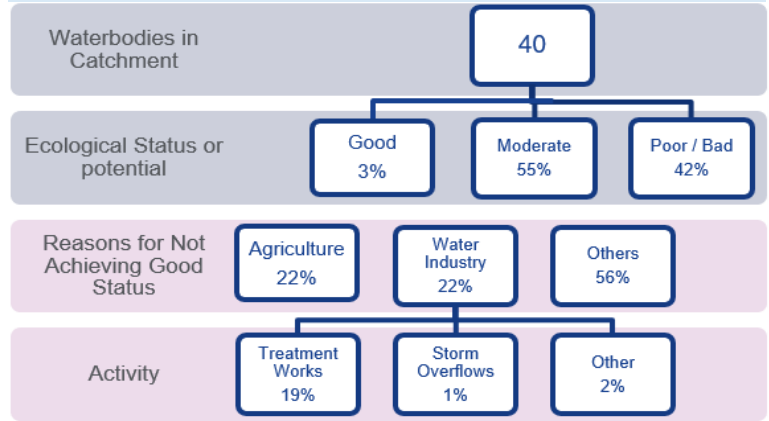
# Sussex enhancements

(slide 1 of 2)



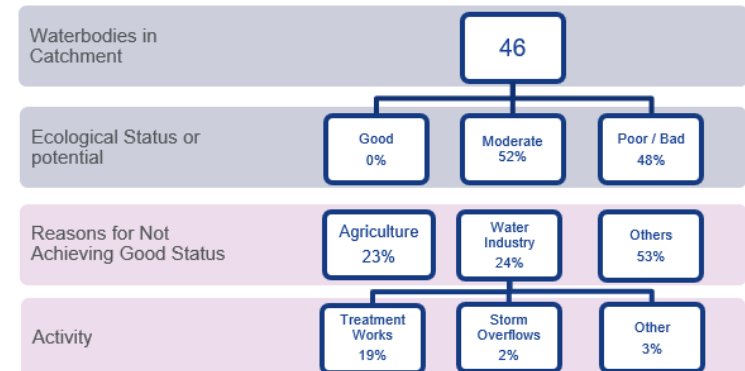
## Arun & Western Streams

- Nutrient reduction at 13 sites
- Storm overflows at 28 sites
- 5 growth sites
- Length of river improved 145km
- 54% reduction in storm overflow discharges
- Total environmental investment £330m



## Adur & Ouse

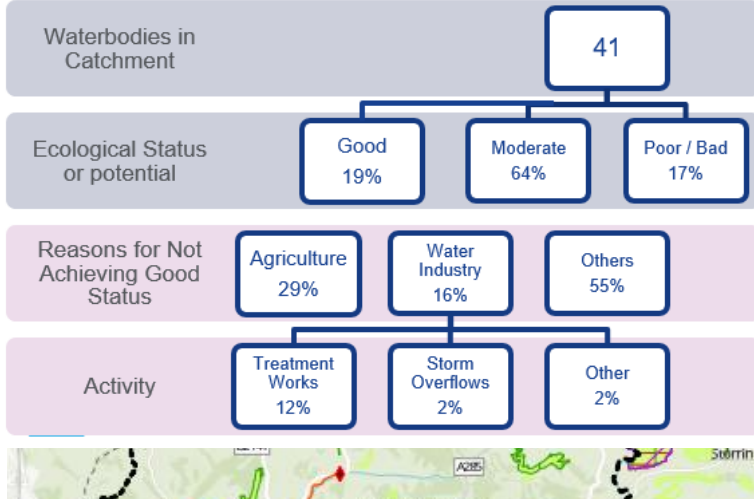
- Nutrient reduction at 13 sites
- Storm overflows at 34 sites
- 3 growth sites
- 1 coastal resilience scheme
- Length of river improved 135km
- 34% reduction in storm overflow discharges
- Total environmental investment £260m





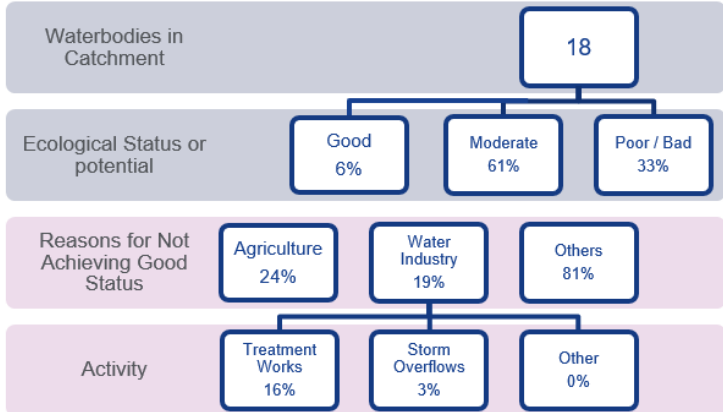
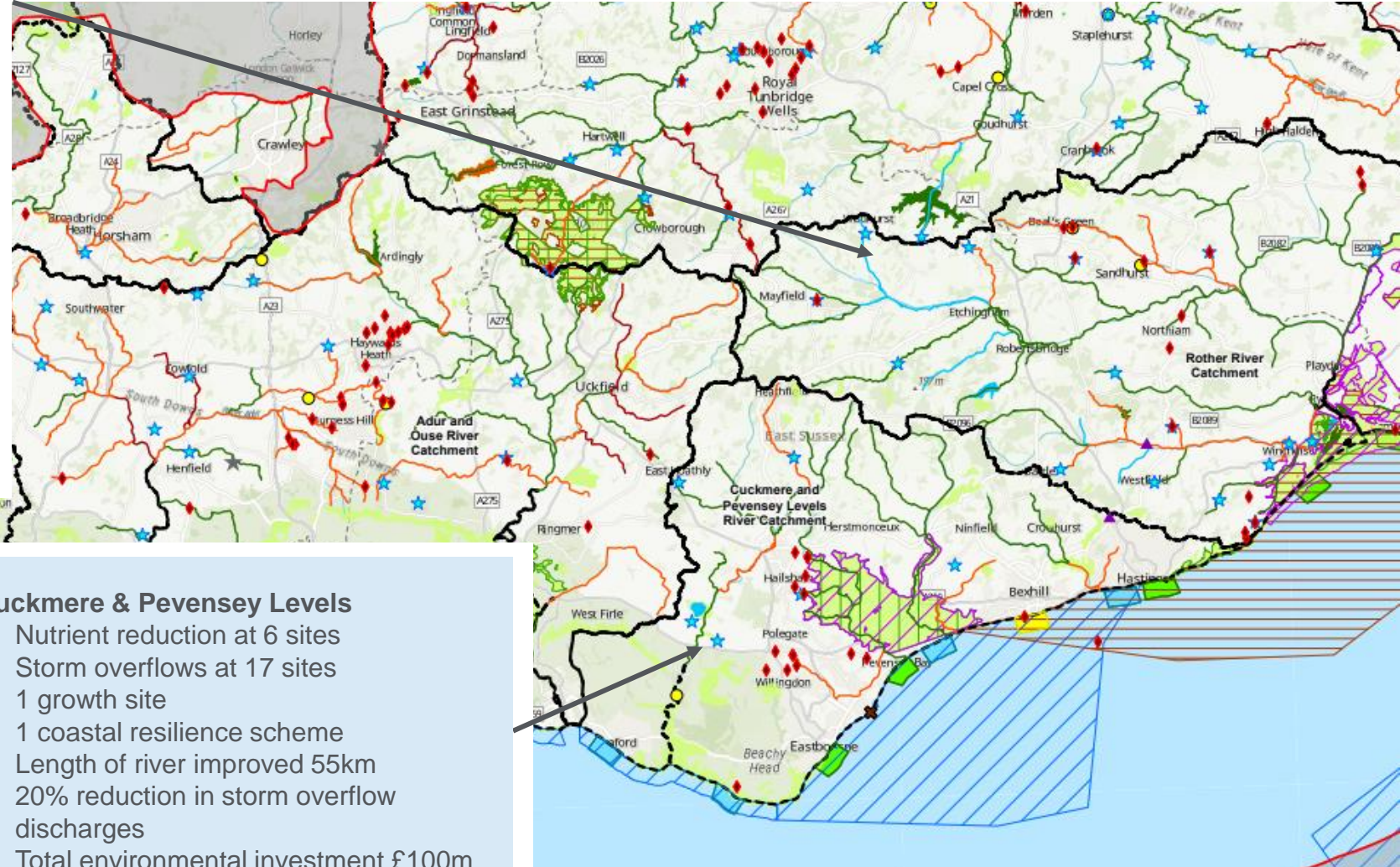
## Rother

- Nutrient reduction at 18 sites
- Storm overflows at 11 sites
- 4 growth sites
- Power resilience at 2 site
- Length of river improved 112km
- 36% reduction in storm overflow discharges
- Total environmental investment £130m



# Sussex enhancements

(slide 2 of 2)



## Cuckmere & Pevensey Levels

- Nutrient reduction at 6 sites
- Storm overflows at 17 sites
- 1 growth site
- 1 coastal resilience scheme
- Length of river improved 55km
- 20% reduction in storm overflow discharges
- Total environmental investment £100m

# 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

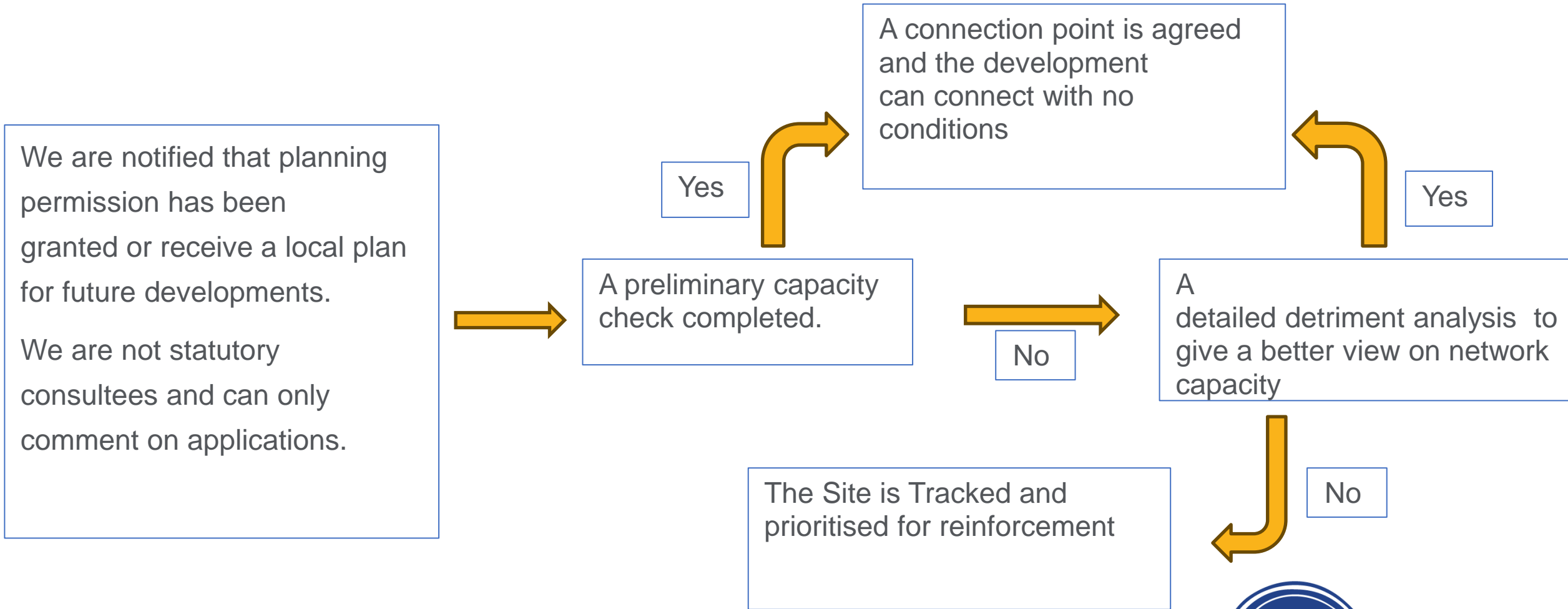
## Approach:

- 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



# Incident Response



from  
**Southern  
Water** 



## Water Quality

- Nitrate is impacting our groundwater drinking water sources, and we are working in partnership with landowners and farmers to reduce the risk.
- We are implementing measures to reduce risks to water quality from sediment, pesticides and PFAS sources in the Arun & Rother.

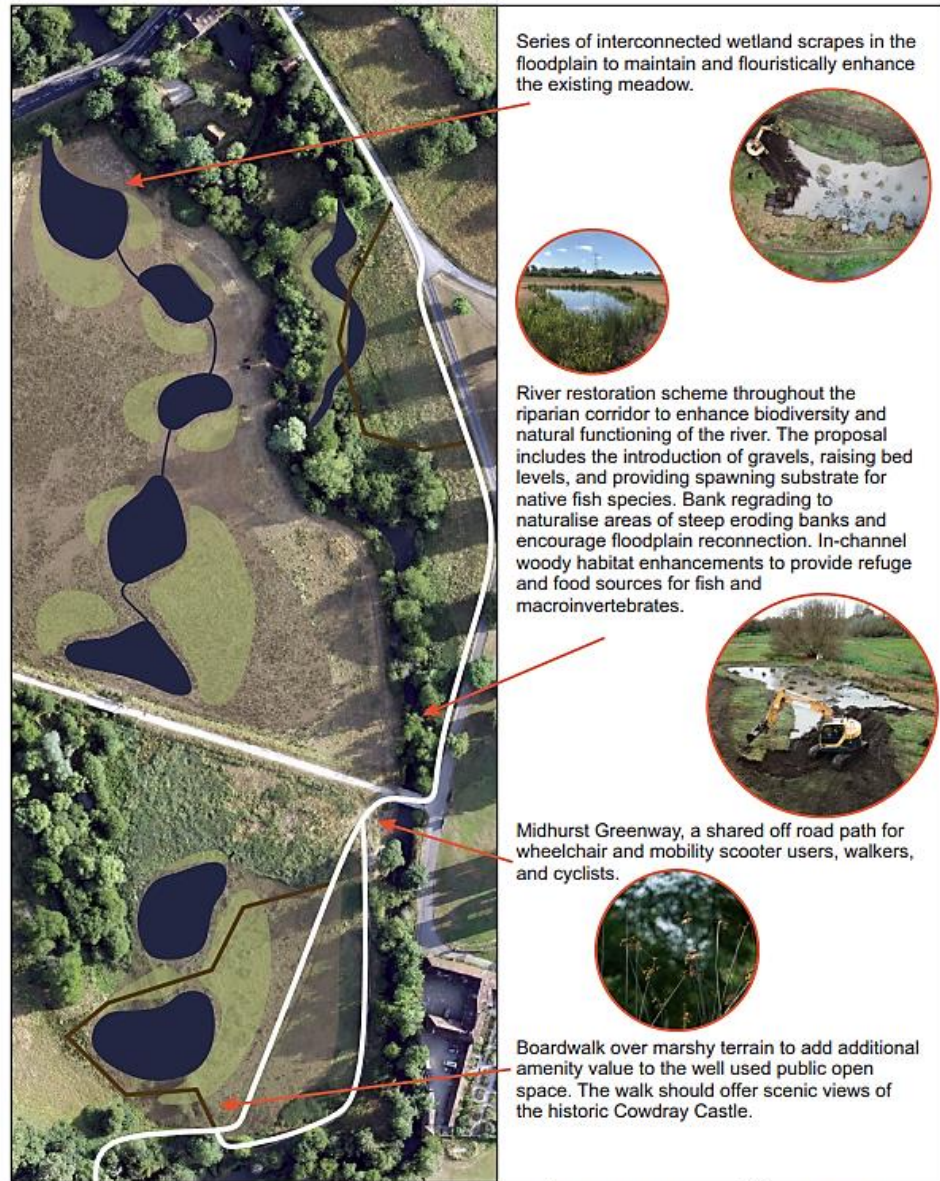
## Water Resources

- We are creating a sustainable abstraction regime to protect important habitats.
- We are planning delivery of a programme of river environmental enhancements for ecological resilience on the Arun & Rother

## 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).





Series of interconnected wetland scrapes in the floodplain to maintain and flourishically enhance the existing meadow.



River restoration scheme throughout the riparian corridor to enhance biodiversity and natural functioning of the river. The proposal includes the introduction of gravels, raising bed levels, and providing spawning substrate for native fish species. Bank regrading to naturalise areas of steep eroding banks and encourage floodplain reconnection. In-channel woody habitat enhancements to provide refuge and food sources for fish and macroinvertebrates.



Midhurst Greenway, a shared off road path for wheelchair and mobility scooter users, walkers, and cyclists.



Boardwalk over marshy terrain to add additional amenity value to the well used public open space. The walk should offer scenic views of the historic Cowdray Castle.

|                                                                                                                |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                    |        |      |       |     |       |    |    |    |    |    |                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------|-------|-----|-------|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Key:</b><br>                                                                                                | <b>General notes:</b><br>Visualisation of proposed wetland and amenity value elements of the Town Meadows river restoration scheme funded by Southern Water. Visualisation created utilising drone imagery taken in 2022. | <b>NOT FOR CONSTRUCTION</b><br><small>© Five Rivers Ltd all rights reserved 2023</small><br><table border="1"> <tr> <td>Author</td> <td>Plan</td> <td>Check</td> <td>Rev</td> <td>Scale</td> </tr> <tr> <td>SR</td> <td>SR</td> <td>SR</td> <td>SR</td> <td>SR</td> </tr> </table> | Author | Plan | Check | Rev | Scale | SR | SR | SR | SR | SR | Client: Southern Water<br>Project: 2906D - Midhurst Castle<br>Title: Town Meadows Restoration Scheme Visualisations<br>Drawing number: SR-2906D-200<br>Scale: Not to Scale |
|                                                                                                                | Author                                                                                                                                                                                                                    | Plan                                                                                                                                                                                                                                                                               | Check  | Rev  | Scale |     |       |    |    |    |    |    |                                                                                                                                                                            |
| SR                                                                                                             | SR                                                                                                                                                                                                                        | SR                                                                                                                                                                                                                                                                                 | SR     | SR   |       |     |       |    |    |    |    |    |                                                                                                                                                                            |
| <br>Hangat SA<br>Traddon Airfield<br>Alton<br>Hampshire<br>SP11 8PN<br>Tel: 01722 763041<br>www.fiverivers.com |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                    |        |      |       |     |       |    |    |    |    |    |                                                                                                                                                                            |

# Pilot Project: Town Meadows

We are investigating opportunities for multiple benefit river and floodplain wetland restoration on a site in Midhurst, West Sussex in partnership with Cowdray Estate.



# Arun & Western Rother Catchment Partnership

Hosted By



## The Vision

Riverscapes which enable native wildlife to thrive and which people will enjoy and value for generations to come

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

At a recent catchment partnership meeting, Southern Water hosted a catchment speed networking session to identify shared goals



The Arun & Western Rother 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
- Sediment and erosion
- Citizen Science
- Highways Run off
- Agricultural land use

## 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    |          |          |          |          |          |          |          |      |
| 2 Collating CP info     |          |          |          |          |          |          |          |      |
| 3 Defining shared goals |          |          |          |          |          |          |          |      |
| 4 Co-creation of a plan |          |          |          |          |          |          |          |      |
| 5 Co-delivery of a plan |          |          |          |          |          |          |          |      |



# Improvements Made

## Bottled Water



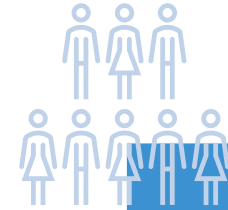
- Increased amount of water available per day to 400,000 litres. Equivalent to water for 40,000 people.
- Identified, visited and gained pre-approval for 127 bottled water supersites.
- Created a process for using small community hubs to distribute water.
- Increased our rota of Southern Water employees 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



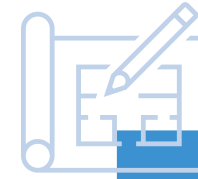
- Investment in becoming more self-sufficient; Increased water storage and internal capabilities to distribute water. Part of PR24 investments.
- Ability to better support key customers, such as schools and care homes with “Always in Supply devices”.
- Introducing improved internal and external traffic 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.