Southern Water: Isle of Wight Update

17 July 2024

from Southern Water

Agenda

- Welcome and Company update – John Penicud
- Wastewater – operational update – Andy Webb, Alex Saunders and Simon Tomlinson
- Clean Rivers and Seas Task Force – Keith Herbert
- Water – operational update – Chris Weeks and Simon Potter
- Our work in the community – Alex Willumsen and Nick Eves
- Closing words

Company update

John Penicud, Director of Wastewater Operations

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. 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…

Turnaround Plan

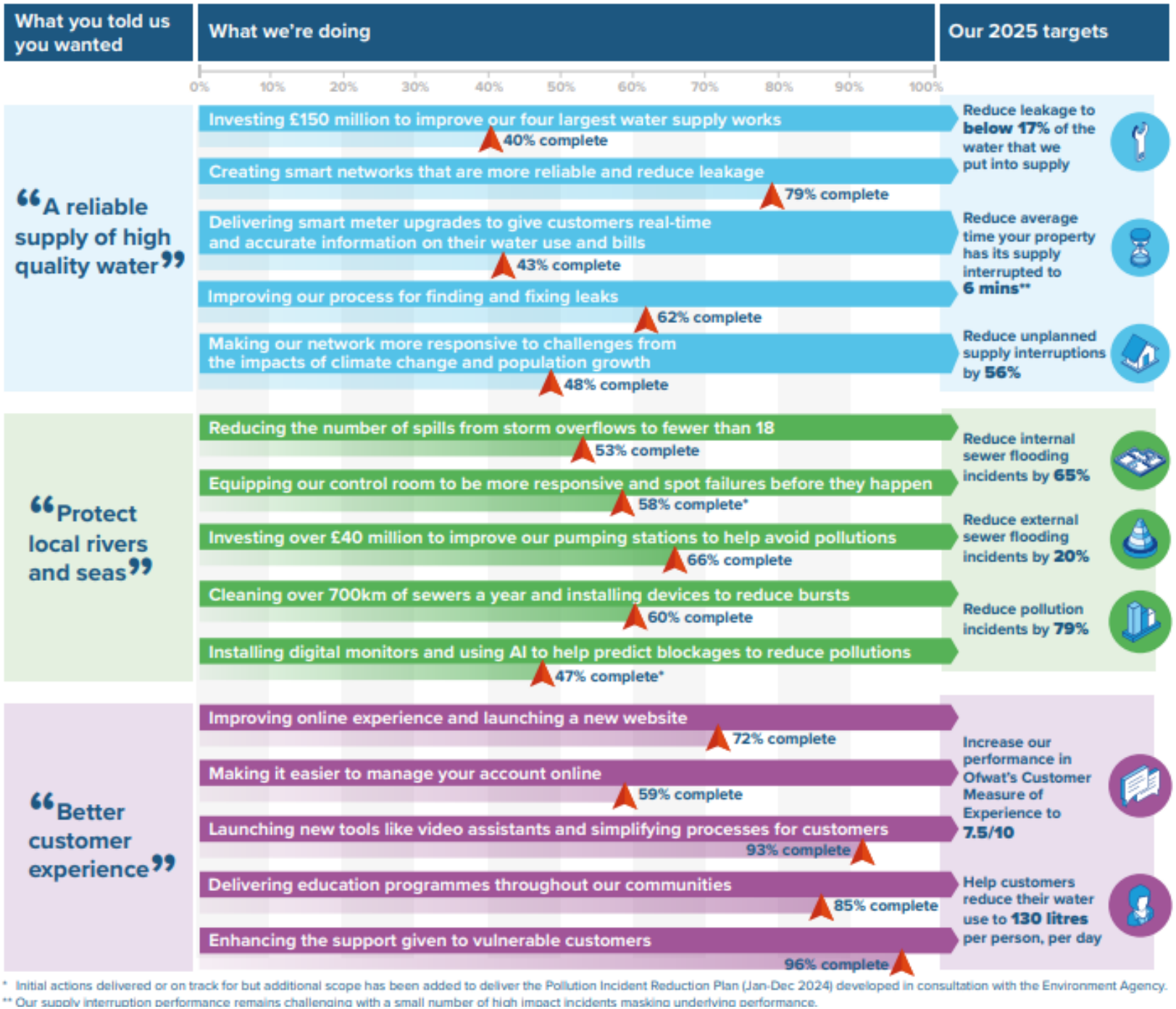
- In April 2023, launched an ambitious Turnaround Plan to deliver a step-change in our performance over two years.

- 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.



* 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.

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

- Turnaround Plan – May 2024 update

WATER for LIFE from Southern Water

Wastewater – operational update

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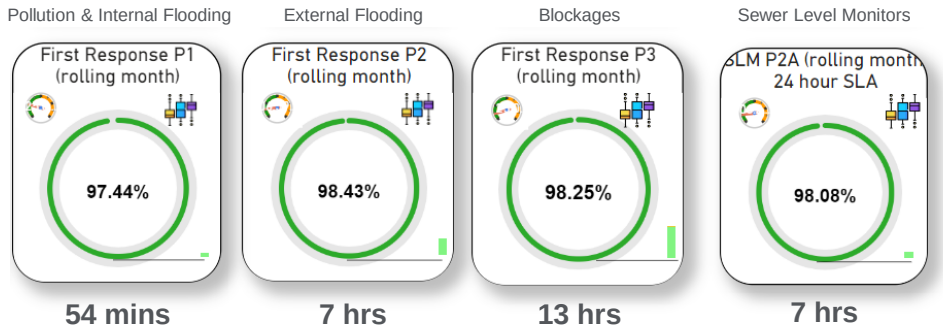
Wastewater Networks



A very wet winter

- This winter we experienced extreme levels of rain and the ground in certain areas of the island 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 North Hampshire (Mullens Pond) 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 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

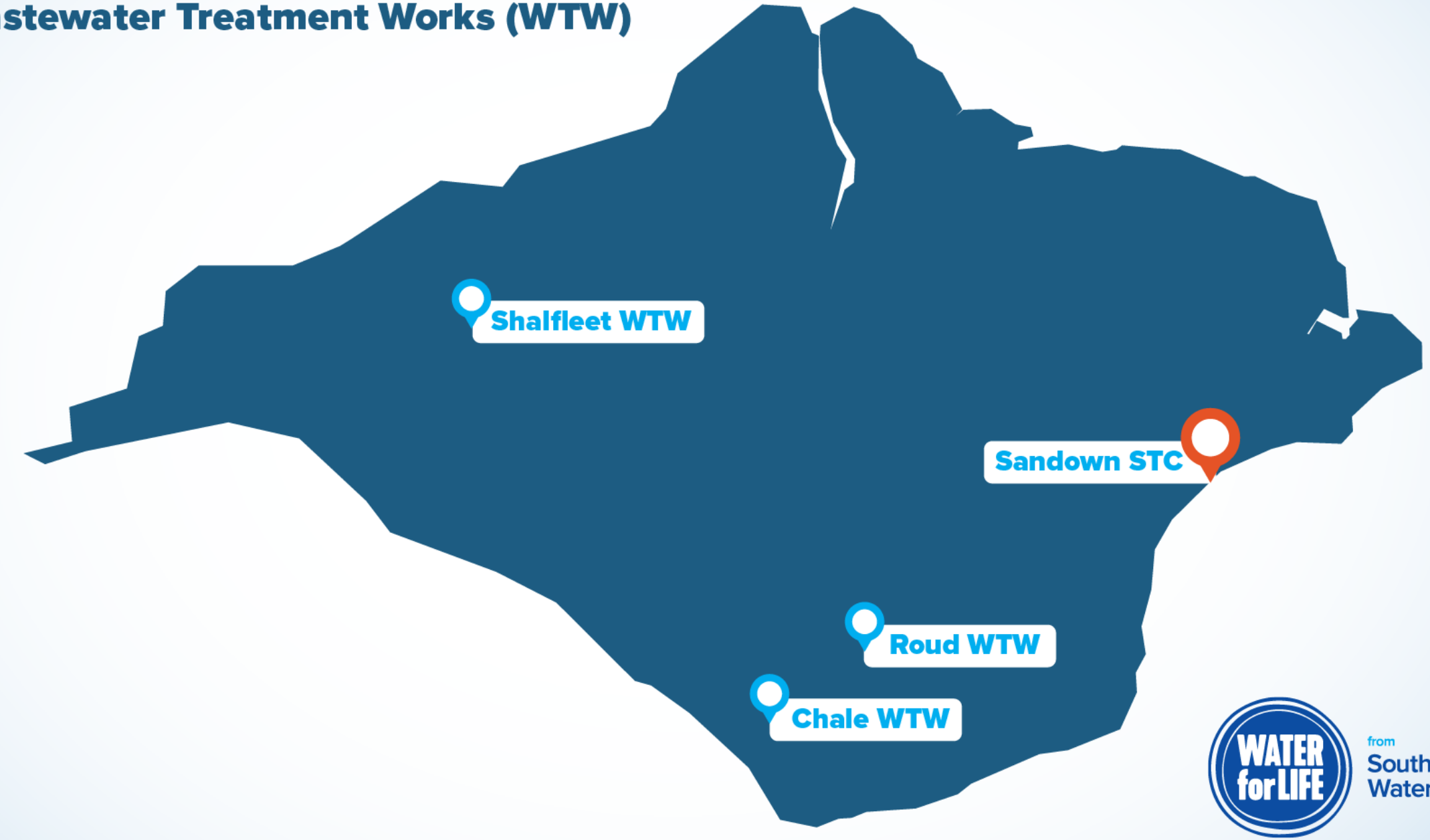
- Polymer modified mastic asphalt technique
- Reduced material waste
- Increased productivity
- First time fix
- Reduced carbon footprint

Sewer relining video

Wastewater treatment on the IoW

- 21 Treatment Works on the Island, key strategic site being our Sandown Wastewater Treatment Works (WTW). The treatment operation is run by a team of 19 with a mix of 24/7 shift workers, operators, mechanics, electricians and instrumentation, control and automation technicians.
- **Some Specific Site Updates**
- Roud WTW – Scheme to improve effluent quality to meet new permit conditions (Phosphorous) – Ferric dosing, additional storm storage, Sand Filters, additional sludge holding tank. 50% complete
- Shalfleet WTW – Scheme to improve effluent quality to meet new permit conditions (Phosphorous) – Ferric dosing, reed bed improvements. 50% complete
- Calbourne WTW – Scheme to improve effluent quality to meet new permit conditions (Phosphorous) – Ferric dosing, reed bed improvements, additional Final settlement tank capacity. Underway.
- Sandown WTW – Additional storm storage capacity. 75% complete (pictured)

Isle of Wight Sludge Treatment Centres (STC) and Wastewater Treatment Works (WTW)



WATER for LIFE from Southern Water

Capital Investments in Isle of Wight - Wastewater

- **During AMP7 (2020-2025)** we've **invested £24m** so far which includes:
- **Network Projects**; Rising Mains (£7m)
- **Treatment Enhancement**; Additional Storm Storage (£2m), Increase Flow to Full Treatment (£3m) & Improved quality of treated wastewater, including Phosphorus removal (£8m)

- **£11m still to spend** this AMP, largely relates to **Treatment Enhancement**, vast majority schemes now on site.

- **Key Projects**: Sandown (£8m), Appley (£7m), Roud (5m)

Clean Rivers and Seas Task Force
Isle of Wight update July 2024

from Southern Water

Task Force evolution

Established Nov 2021 → Set up Pathfinder projects with £7m funding 2022 → Agreed £35m accelerated funding April 2023 → Launched the Clean Rivers and Seas Plan Nov 2023

↓

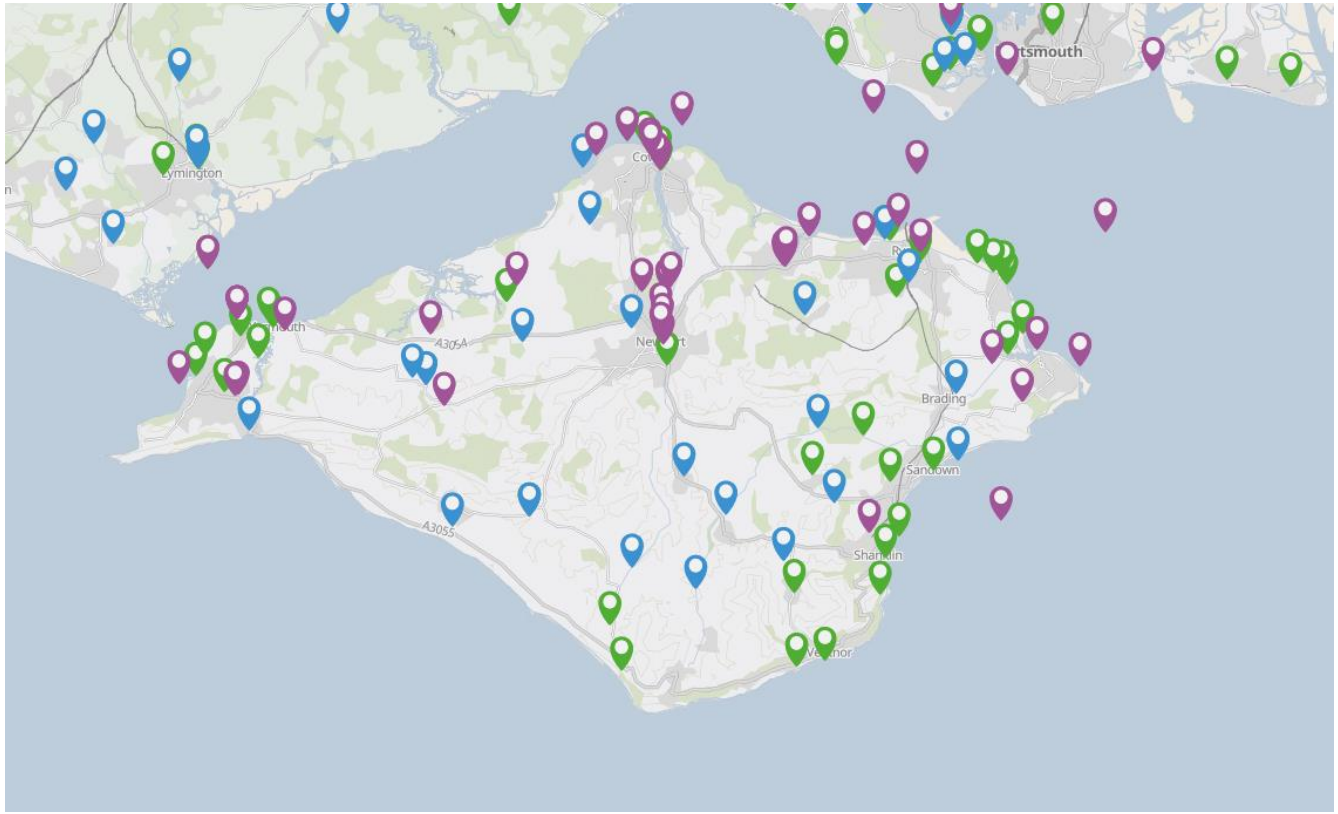
Agreed another £10m accelerated funding March 2024 → Starting AMP 8 work early, focusing on priority areas → Delivering overflow reduction for the next 5-year period

Overflows on the Isle of Wight

Key stats - IOW

103	Storm Overflows
64	Require work/investment to achieve Govt. targets before 2050
42	Overflows working on between 2025-2030

Approximately **£231m investment** in next five years



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

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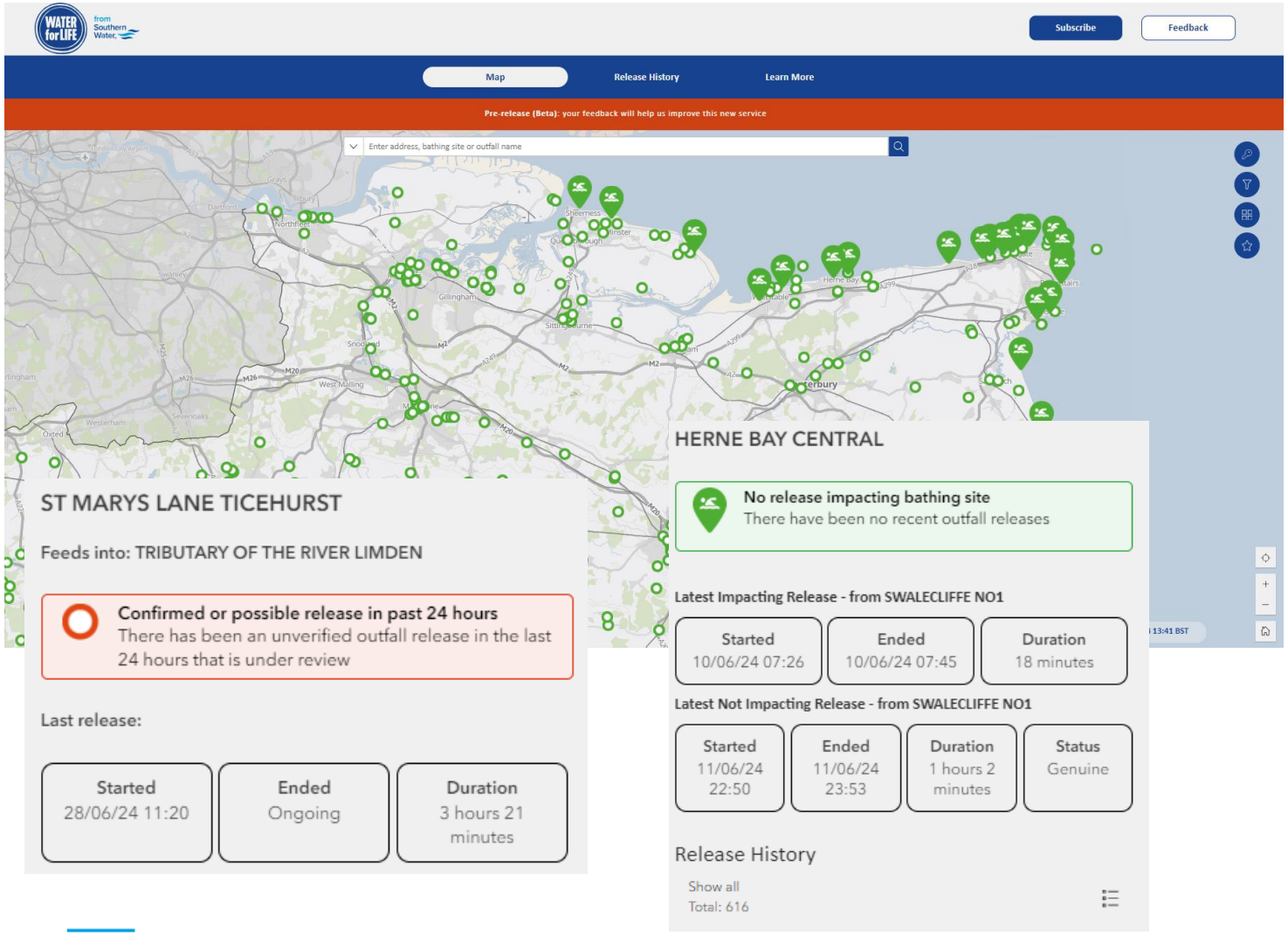
Rivers and Seas Watch



- 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

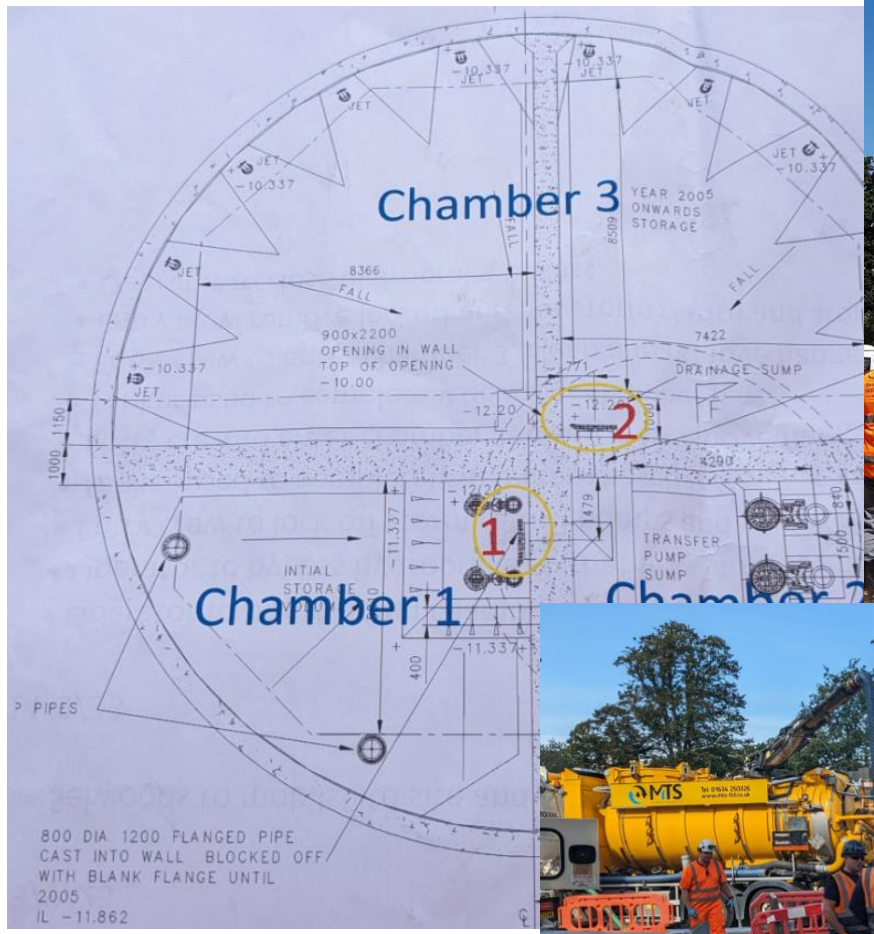
Isle of Wight Pathfinder in numbers

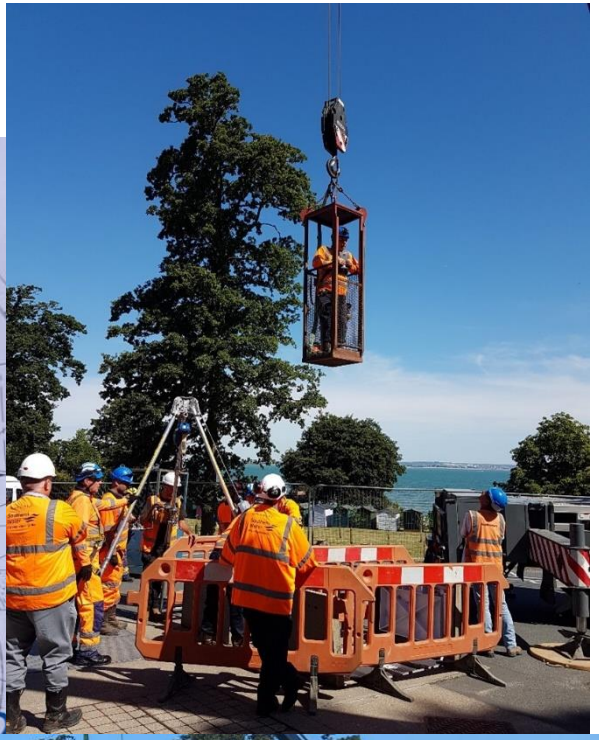
- Around 300 spills saved each year.
- Over 3500 slow-drain water butts installed.
- 175 large roofs managed
- 120 Surface Water Connections identified.
- Dozens of optimisation schemes on pumping stations and treatment works.
- Over 7 Hectares managed
- Over £10m spent on improvements

WATER for LIFE from Southern Water

Appley Pumping Station

- Quadrupled storm storage from 900m3 to over 4000m3
- Doubled flow rate from 120 l/s to 240 l/s
- **Saved 53 spills from March – May 2024**
- **Projected to save over 100 per year.**
- Citizen science monitoring at Sandown to prove no impact.



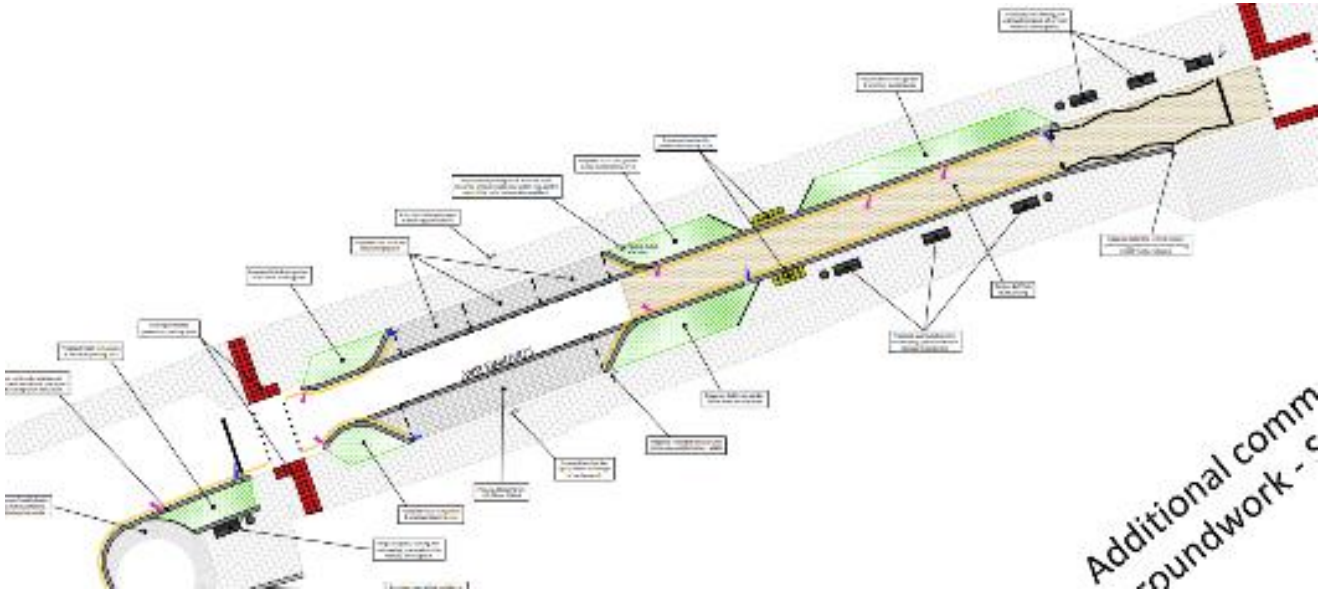


Terminus Road Centaur Gate

- A CSO that spilled over 80 times per year.
- **All spills eliminated due to smart network control**
- Downstream properties protected from flooding.

SuDS – Highways

- Town Centre SuDS schemes for Ryde and Newport final designs approved.
- Projects moving forwards to delivery with IoWC



- Plans submitted to the Isle of Wight Council to transform 5 roads in Gurnard with rain gardens and permeable paving.
- This will manage over 4 hectares

WATER for LIFE from Southern Water

What will investment / activities in IoW look like for…

By April 2025

- HAZ schemes delivered
- SuDS installed on 5 Gurnard Roads
- Pathfinder site works and roof works complete
- MOU in place with IoW Council
- New surface water policy

2025-2030

- A multi million pound investment programme to address 42 to 64 overflows
- Around 100km of roads to be managed
- New treatment works and significant upgrades.
- Household interventions

WATER for LIFE from Southern Water

Water – operational update

from
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Water network performance

- Leakage is currently 5.75M/LD on the island. This is changing weekly, and we're hoping to reduce over the summer

- To reduce leakage, we're successfully completing our Pressure Reduction Valve (PRF) and District Metered Area (DMA) schemes, to help reduce the pressure in the water network. Currently 90% complete

- Heavy rain this winter caused land movement and asset damage in the St Lawrence and Ventnor undercliff areas. We have since replaced more than 100m of water main in the area, providing a more resilient supply

- Repair and Maintenance backlog significantly reduced in recent months, and we're also relaying over 100m of main in Brook, to improve the resilience of our asset that we recently had issues with

Leakage on the Isle of Wight

Total leak repairs 2022/23

	IoW
Bursts	219
Customer leaks	94
Network leaks	1697
Total	2010

Total leak repairs 2023/24

	IoW
Bursts	179
Customer leaks	72
Network leaks	1732
Total	1983

Our Leakage Technicians - video

Water production

- Knighton WSW: Works starting imminently to improve our treatment process on site, which includes the replacement of the three Rapid Gravity filters, which will provide more resilience and improved water quality. Scheduled completion September 2024 This should be completed by the end of sept this year

- Due to the rainy summer so far, water supply demand on the island is currently around 32ml/d, which is low for this time of year. Usual demand in July is 38-40Mld

- Maximo, our new work management system, is being launched on the Isle of Wight this week. This will transform how we manage and maintain our assets, while streamlining existing processes by making it easier for teams to complete their work

Improving and investing in our assets

- **Sandown Water Supply Works improvements**
- In our efforts to improve our sites and replace ageing assets, Sandown WSW is benefitting from a £15m upgrade.

- **Phase 1:** Replacement of the existing clear water tank and high lift pumping station.
- **Phase 2:** Improving of wash water discharge and flood resilience on site
- **Phase 3:** Installation of equipment and storage facilities

- Good progress is being made and we remain on track to complete by Spring 2026.

Improving and investing in our assets

- **In the next 5 years:**
- We intent to invest c£3m on key ground water supply works in the Hampshire and Isle of Wight area, to manage raw water deterioration challenges, to reduce unnecessary customer interruptions

- As a company we are planning to replace over 300km of water mains to address both leakage, to protect future resources, and aged assets. Hampshire and Isle of Wight will be part of the targeted replacement programme, however the specific areas are TBC

Our work in the community

Alex Willumsen, Community Partnerships and Programme Manager

Nick Eves, Head of Insight and Digital Experience

from Southern Water

Community Engagement – IoW July 2024

Improving outcomes and building skills for our community

New Wave Education
- 81K Young people reached in past 18 months
- 5 Apprenticeships for Multi Skilled Maintenance Technicians – 2 under 18 years 1 Female
- 3 Apprentices starting in September – 2 under 18 years

Making the Community stronger

Outreach activity
- 10 Affordability Outreach team visits during 2024
- Safe Swim Session – 2 years

"As we are surrounded by water on the Isle of Wight, with just two lifeguarded beaches, our pre-season education is so important. The programme is immersive, with children being taken into the sea. It is much more effective than our traditional school talks." Todd Miller Ryde Lifeguards

Caring for the Environment together

Outdoor Learning Session with Southeast River Trust

Sandown Wastewater site due to open for school tours 2025

National Poo Museum

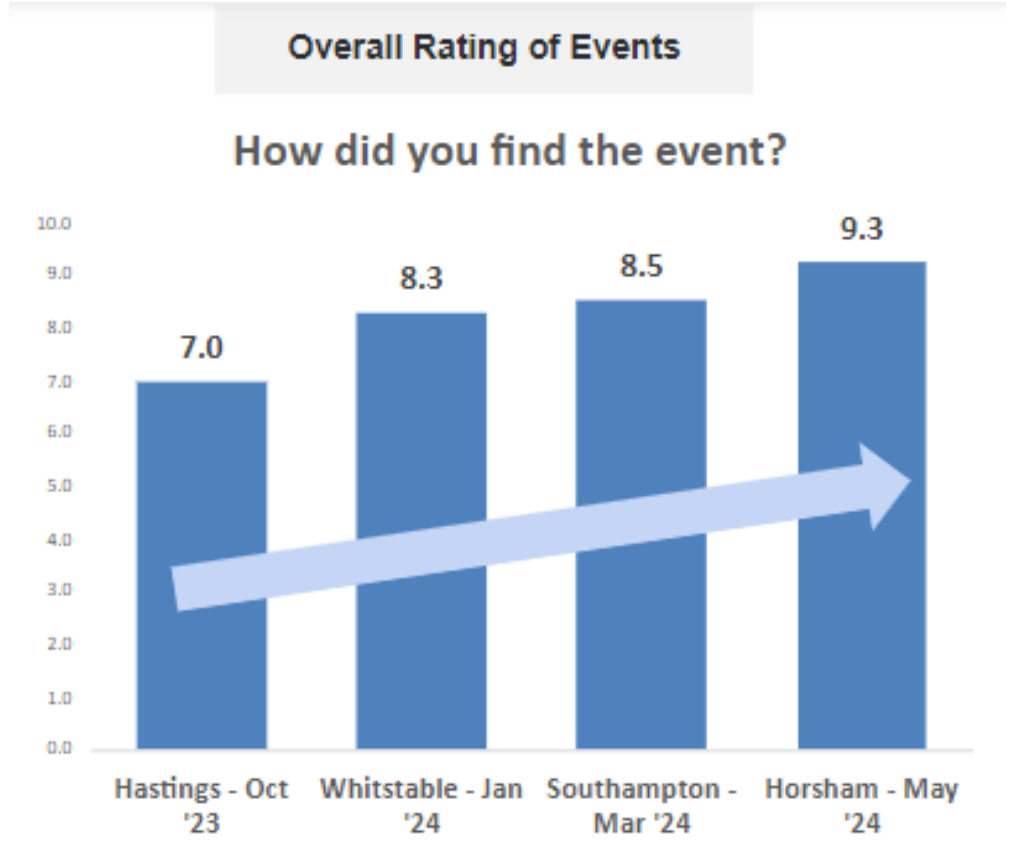
Employee volunteering

Demonstrating our role as a good corporate citizen

Grants
- £115K grants awarded since 2010
- Independent Lifeguard Stations
- Community Centres x 8

"We exist to support and provide a community hub for the residents of East Newport, which includes the Isle of Wight's most disadvantaged area, and this funding will really make a difference in these tough financial times when the cost of living crisis is biting so hard for so many". Rachel Tomson – Pan Together

"Website didn't answer my query, but this did right away"



WATER for LIFE from Southern Water

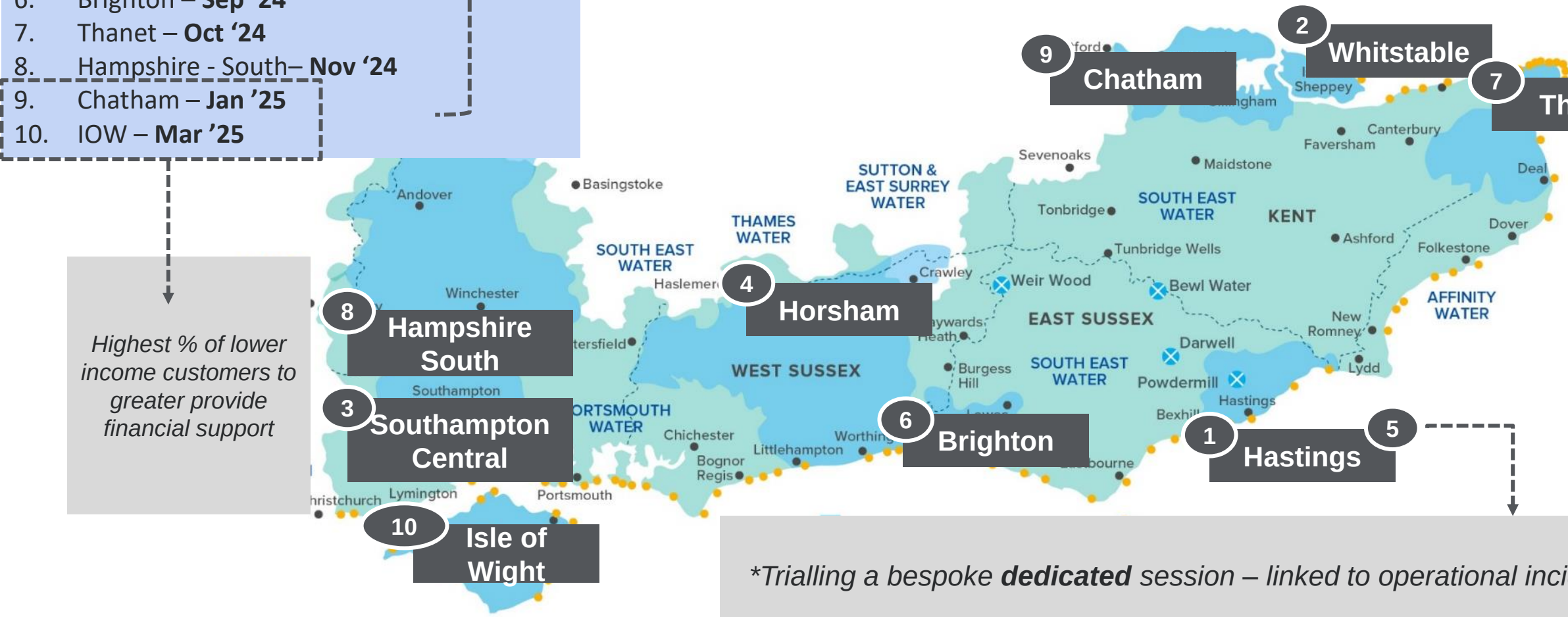
Your Water Matters Drop Ins

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

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Appendix

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Water Resources Management Plan (WRMP)

July 2024 update

from
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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
Managing leakage	£239m
Transfer pipelines	£164m
5 Water reuse plants	£651m
Short term drought mitigation options	£91m
Other supply schemes and long-term transfers	£326m
Havant Thicket reservoir	£134m
Total	**£1,791m**

We will be smart metering all our customers to help them manage usage and identify leakage

5 Water reuse schemes providing new sources of water through recycled water

We are delivering a new reservoir with Portsmouth Water as part of an integrated system for Hampshire

Replacing 300km of water mains to drive our lowest levels of leakage and provide increased resilience

We are working on collaboratively on long term plans to bring water from a new reservoir proposed in the Thames area

*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 *(will not be ready for consultation)*
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 1st – Sussex North and Hampshire	National Water Efficiency Fund and group established, key to recognising the true level of benefit possible and gov. requirements

Isle of Wight bathing waters

from
Southern
Water

Isle of Wight

Bathing Water	No. samples 2024	Samples above Excellent threshold	% Excellent samples	2022	2023	Projected 2024	Headroom 2023	Projected 2024 headroom	Change	Comment	Explanantion
Compton Bay	81	2	98%	Excellent	Excellent	Excellent	70%	70%	↔	All samples Excellent so far in 2024	
Totland Bay				Excellent	Excellent	Excellent	39%	38%	↔	All samples Excellent so far in 2024	
Colwell Bay				Excellent	Excellent	Excellent	69%	67%	↔	All samples Excellent so far in 2024	
Gurnard				Good	Good	Good	32%	31%	↔	All samples Excellent so far in 2024. Longer term improvement.	Misconnection work and sewer rehab in AMP7. Possible to return Excellent at the end of 2024, but likely to be at the end of 2025..
Cowes				Excellent	Excellent	Excellent	56%	56%	↔	All samples Excellent so far in 2024	
East Cowes				Excellent	Excellent	Excellent	69%	71%	↔	All samples Excellent so far in 2024	
Ryde				Good	Good	Good	49%	48%	↔	All samples Excellent so far in 2024. Longer term improvement.	Misconnection work and sewer rehab in AMP7. Possible to return Excellent at the end of 2025.
Seagrove				Excellent	Excellent	Excellent	31%	35%	↔	All samples Excellent so far in 2024	
St Helens				Excellent	Excellent	Excellent	70%	70%	↔	All samples Excellent so far in 2024	
Bembridge				Excellent	Good	Good	35%	36%	↔	2 high samples in July 2023 led to drop	No overflows impacted. Possible to return Excellent at the end of 2025
Whitecliff Bay				Excellent	Excellent	Excellent	67%	67%	↔	All samples Excellent so far in 2024	
Yaverland				Excellent	Excellent	Excellent	44%	52%	↑	2 high samples so far.	
Sandown				Excellent	Good	Good	46%	46%	↔	All samples Excellent so far in 2024	Possible for Sandown to return Excellent at the end of 2024
Shanklin				Excellent	Excellent	Excellent	30%	34%	↔	All samples Excellent so far in 2024	
Ventnor				Excellent	Excellent	Excellent	80%	80%	↔	All samples Excellent so far in 2024	

- 98% Excellent samples so far in 2024.
- Long term improvement at Ryde and Gurnard, as a result of misconnections and sewer rehabilitation

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

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

WATER for LIFE 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

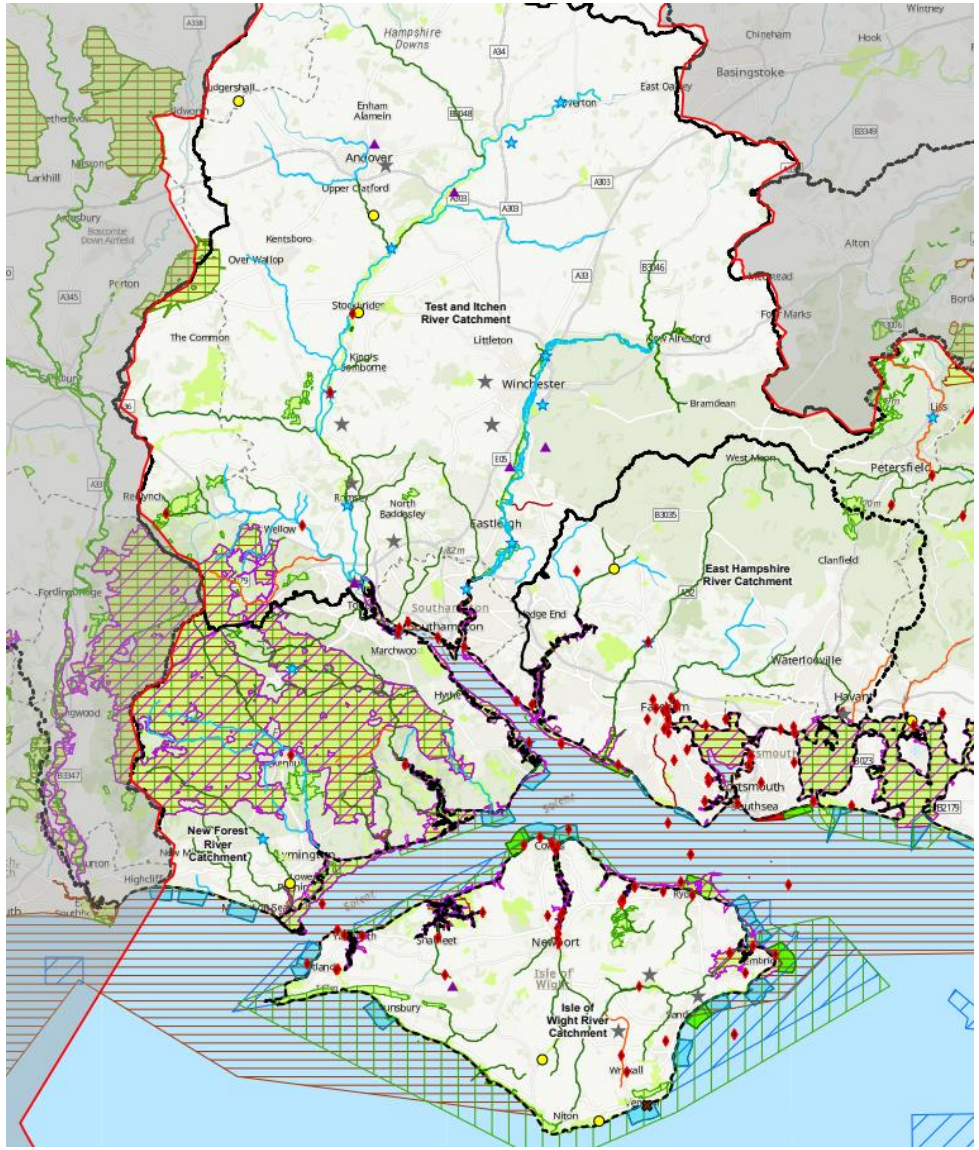
Population Growth

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

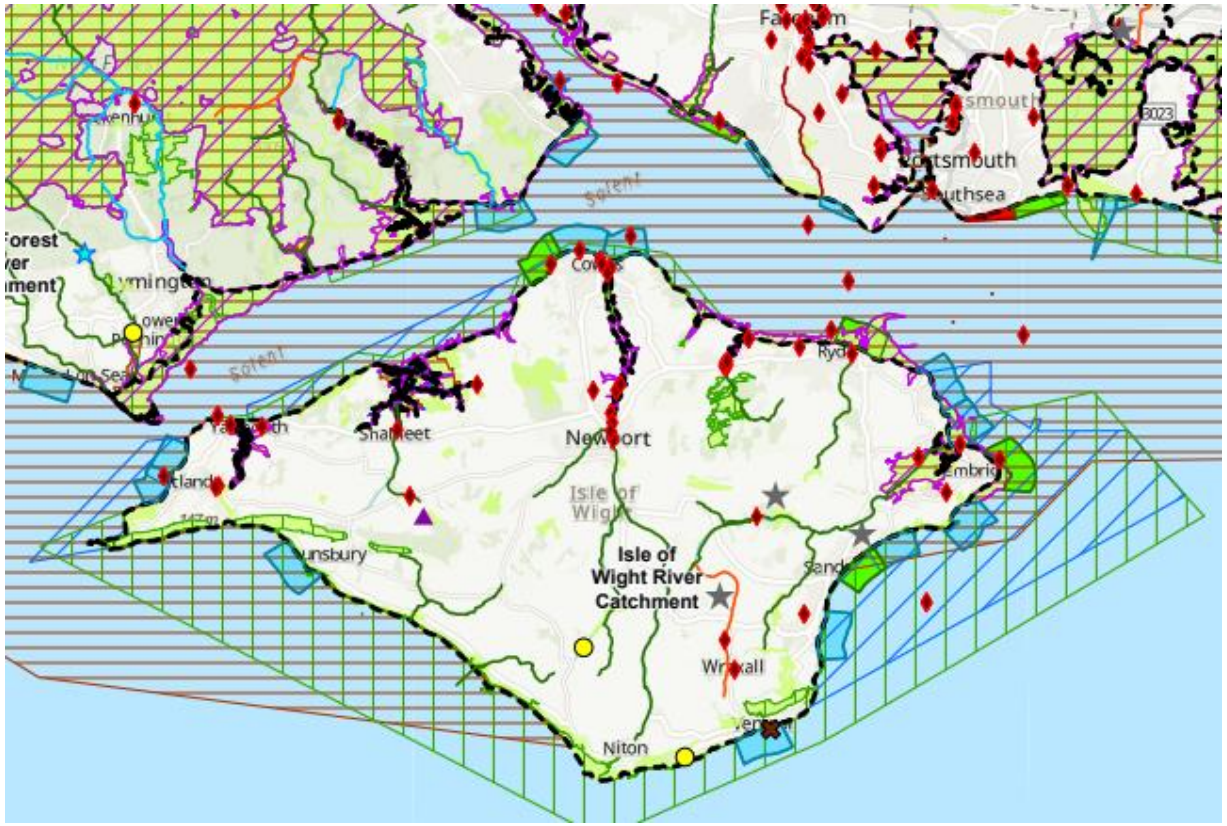
Isle of Wight environmental schemes



Isle of Wight

- Reducing spills from storm overflows through better management of rainwater and keeping it out of foul sewers
- Improving resilience from coastal flooding – working with Environment Agency to protect communities and critical infrastructure
- Water recycling to improve resilience of water supplies on the island

Isle of Wight



- Southern Water Boundary
- Key Site
- Surface Water Catchment
- Water Abstraction Point
- Storm Overflow
- Nutrient Reduction

Bathin Water Condition

- Excellent
- Good
- Sufficient
- Poor

River, Canal and Surface Water Bodies

River Quality

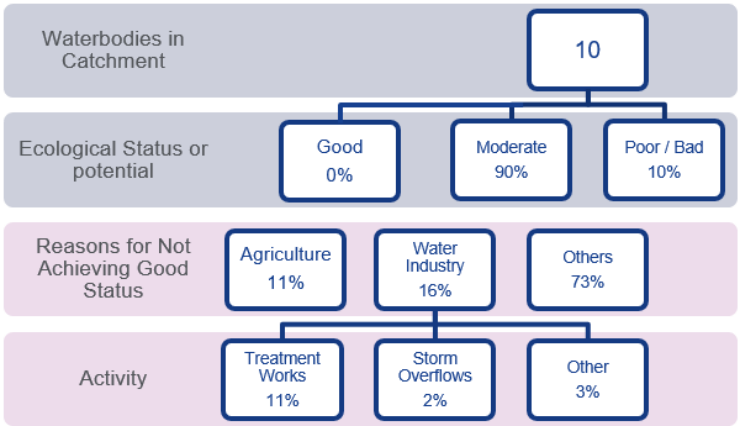
- Moderate Status
- Poor Status
- Bad Status

Environmental Designations

- Site of Special Scientific Interest (SSSI)
- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- Ramsar
- Marine Conservation Zones

Isle of Wight

- 47 storm overflows
- 2 growth sites
- 47km river improved
- 60% reduction in storm overflows
- 1 water reuse scheme
- 1 coastal resilience scheme
- Environmental investment circa £360m



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

We are notified that planning permission has been granted or receive a local plan for future developments.

We are not statutory consultees and can only comment on applications.

A preliminary capacity check completed.

Yes

A connection point is agreed and the development can connect with no conditions

No

A detailed detriment analysis to give a better view on network capacity

Yes

No

The Site is Tracked and prioritised for reinforcement

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

Hampshire groundwater Nitrate

Sustainable abstraction and chalk stream

Kent groundwater Nitrate, pesticides and PFAS

Sustainable abstraction

Isle of Wight turbidity and nutrients

Sustainable abstraction and chalk stream

West Sussex groundwater Nitrate, sediment, pesticides and PFAS

Sustainable abstraction Arun & Rother

East Sussex groundwater Nitrate

Sustainable abstraction

WATER for LIFE

from Southern Water

Isle of Wight

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 planning delivery of measures to reduce risks to water quality from sediment sources and nutrients in the Eastern Yar.

Water Resources

- We are creating a sustainable abstraction regime to protect important habitats.
- We are delivering a programme of river environmental enhancements for ecological resilience on the Lukely Brook.

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).

Lukely Brook, Isle of Wight 2023

The Lukely Brook is a Chalk winterbourne stream located on the Isle of Wight, flowing from the rural central downs north through Carisbrooke and into the Medina Estuary in Newport.

We have delivered a programme of improvements to enhance the ecological resilience of this chalk winterbourne stream and adjacent ecologically designated floodplain meadows. To date, the environmental enhancement works have included two floodplain reconnection schemes, realignment and reprofiling of a historically modified section of channel, and removal of a weir along with reprofiling of banks in a town centre public amenity space.

Isle of Wight Catchment Partnership

Hosted By

ISLAND RIVERS

All about rivers on the Isle of Wight

The Vision

improving the quality of the Isle of Wight's water environment and engaging more local people into understanding, appreciating, protecting, enhancing and enjoying our water-courses

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

Island Rivers, Wildlife trust and Southern water looking for partnership nature based solutions

The Isle of Wight 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!

Hot topics

Re-connecting floodplains

Sediment / turbidity

River Corridor Habitats

In river structures and modifications (weirs/sluices)

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								

WATER for LIFE from Southern Water.

Incident Response

from
Southern
Water

Improvements Made

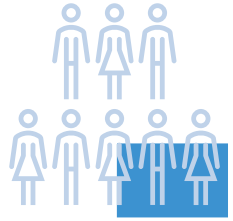
Bottled Water

- 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.

Case Study – Isle of Wight October 2023

Incident Overview

Incident occurred on 25th October. Intense rainfall on the Isle of Wight – largely unexpected. Caused very high turbidity in raw water, specifically impacting Carisbrooke Water Supply Works.

Output was reduced from 12.5ml/d to 8.5ml/d, threatening water supplies to customers in the southeast of the island.

Carisbrooke recovered by 27th October. Incident then progressed into Storm Ciaran.

Vulnerable Customers

Vulnerable customers were supported through doorstep water deliveries.

4 Water Service Reservoirs potentially at risk.

2,457 PSR Customers initially identified. Increased to over 5,000.

Bottled Water Stations

3 Bottled Water Station Locations used during this incident: Amazon World Zoo, Pound Lane Car Park, Ventnor and The Grove Car Park Ventnor.

Westridge Leisure was prepared due to Ryde risk. Not needed.

Locations were agreed in partnership with the LRF at the time of the incident.

Alternative Water

5,459
Doorstep deliveries each day to PSR Customers and all Ventnor homes.

145,056
Litres of water delivered directly to customers.

400,000
Litres of bottled water available every 24 hours.

850,000
Litres of water added by tankers to Brading Reservoir per day.

Collaboration

The LRF on the Isle of Wight were engaged with throughout, supporting with Bottled Water Locations and Vulnerable people data.

DEFRA were kept well informed with regular meetings and updates.

Incident progressed and developed into Storm Ciaran, with TCG's and SCG's held.

Key Learnings

Requirement to better identify internal resources, including re-tasking contractors and partners.

Improved mapping of hydrant locations to maximise tankering impacts – Tolt WSR isolated and kept in supply with a tanker.

Need to increase available support for PSR customers – secondary courier company.