

Southern Water: Isle of Wight update

17 October 2024



Agenda

- Welcome – George Eykyn
- Company update – Stuart Ledger
- Wastewater – Groundwater Infiltration update – Alex Saunders, Andy Webb and Chris O’Grady
- Clean Rivers and Seas Task Force – Keith Herbert
- Water – operational and capital delivery updates – Chris Weeks and James Stevenson
- Water Resources Management Plan (WRMP) – Sam Underwood and Sandra Norval
- Closing words



Company update

Stuart Ledger, Chief Financial Officer



Our Business Plan – 2025 to 2030

- In October 2023, we submitted our Business Plan to Ofwat for the period 2025-30.
- On the 11 July we received initial feedback from Ofwat, known as the Draft Determination
- We have now published our response, 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



Draft Determination response

- After carefully reviewing Ofwat's Draft Determination, we don't believe it would secure the investment required to deliver change required
- In our response we've said that to secure the investment required, essential change is needed to its draft determination to make plans affordable, deliverable and financeable.
- We've spoken to thousands of customers to inform our proposals, to further understand their priorities
- Our revised plan will achieve this and includes additional investment
- These changes will deliver more environmental improvements in a shorter timescale



Isle of Wight Environmental investment 2025–30



Total proposed environmental investment on the Isle of Wight

£267 million*

Isle of Wight

£267m

- Reduced use of storm overflows – 60% at 47 overflows.
- Water recycling plant at Sandown.
- Coastal resilience scheme at Ventnor.
- 47km of river improved.

* This is the proposed level of investment set out in our 2025–30 business plan, but is subject to change following Ofwat's Final Determination.

Wastewater – Groundwater Infiltration update



Our role

- Southern Water is responsible for managing flows within its network, taking wastewater from customers' homes to Wastewater Pumping Stations (WPS).
- Across Isle of Wight, we have 195 WPSs, which then pump flows into nearby Wastewater Treatment Works (WTWs).
- There are a variety of sewer network flooding risks, and we work very hard to find and fix an issue before it arises, but some are out of our control.
- Risks include:
 - High groundwater levels / rainfall
 - Fat, oil and grease (FOG) / Unflushables entering our network
 - Illegal connections



A very wet winter

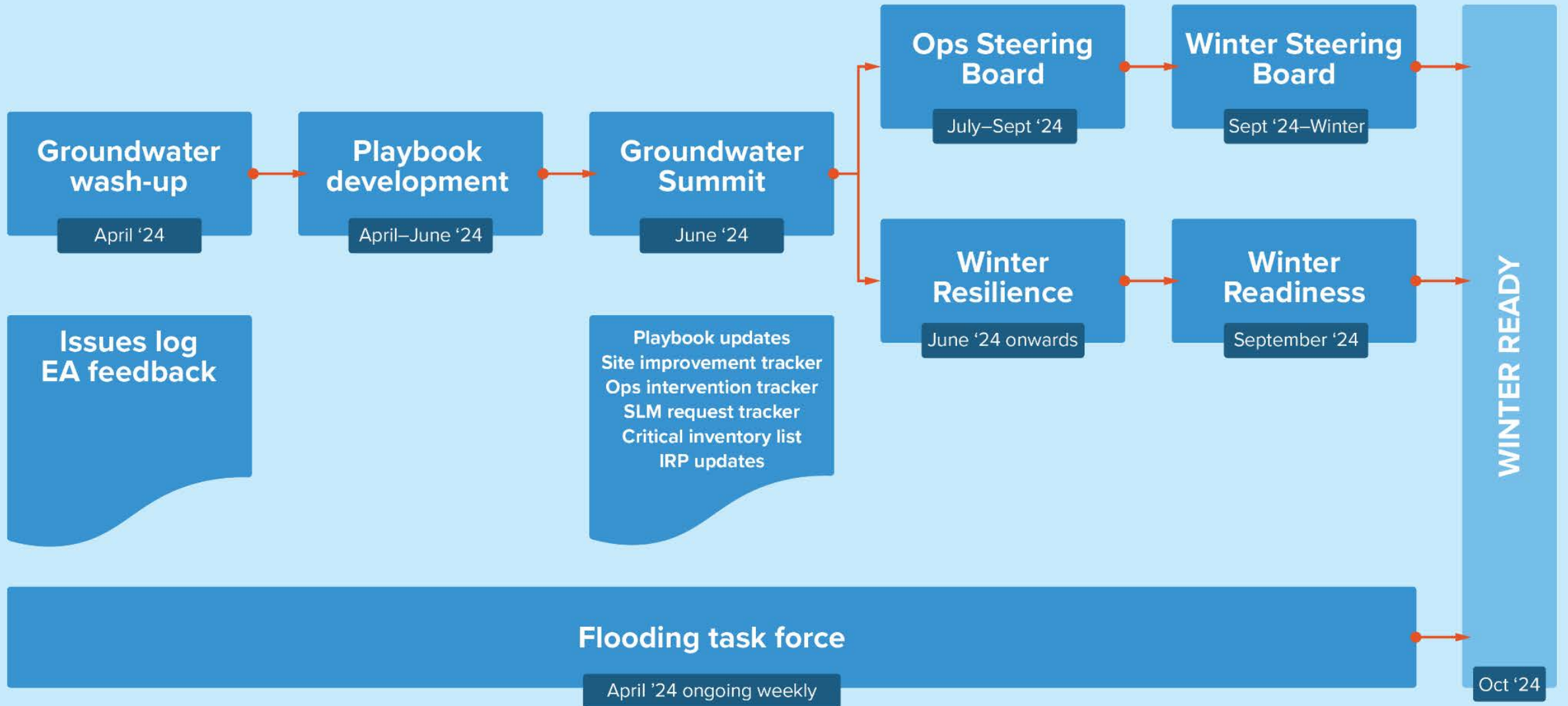
- Last winter we experienced extreme levels of rain and the ground in certain areas of the Isle of Wight became heavily saturated.
- The local drains and sewers were inundated with surface water run-off, which put significant pressure on our local WPSs. We experienced extreme levels of rain, which meant groundwater found its way into the sewer network.



Preparing for this winter



Our approach



Improving our response this winter – operational

- Created Groundwater playbooks for different scenario, to ensure we are best prepared for potential issues
- Enhanced use of our Sewer Level Monitors (SLMs): Live monitoring of our catchments, so we can react quickly if we can see sewer network levels rising
- A number of wet well cleans and Wastewater Pumping Station winter readiness checks completed, to ensure they are working as they should
- Pre-season jetting of our sewers in ‘hot spot’ locations, ensuring our sewer network is in the best possible condition before winter.



SP117HR MANHOLE 3400 CAMERA



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240808_141000_206.jpg, 00:08:15, 65.04 m
Infiltration, gushing at joint at 3 o'clock

Improving our response this winter – communication

- Spoke with customers on the ground to look at how we can reduce potential impact (tankering / generator locations etc)
- Improved customer communications with SMSs messages
- Improved transparency by using our Incident Map System, which customers can access to show areas where we have live groundwater issues
- Proactive stakeholder updates with elected members
- Weekly calls with the Environment Agency



How we're changing

Our future delivery model:

Southern Water

Lanes Group  **Lanes Group plc**

- Key Services:**
- Blockages
 - Cleaning
 - CCTV
 - Patch Lining
 - Gravity Sewer Tankering
 - Smart Network SLMs
 - Manholes – S81 & Customer led (Mainland)

Cappagh Browne 

- Key Services:**
- Dig down repairs
 - Rising Main repair
 - Low/No dig solutions
 - Chamber & benching repairs
 - Activity related flow management
 - Manholes – S81 & Customer led (IoW)

McAllister 

- Key Services:**
- Full length lining
 - Activity related flow management



Making sure our Wastewater Treatment Works (WTW) are ready for winter



Winter readiness – wastewater treatment

- To help with our groundwater infiltration response, we're also making sure our WTWs are also prepared for the winter months.
- Our winter readiness programme includes a 45-point check per site, to ensure we are resilient. Checks range from making sure our backup generators are working as they should in case of an emergency, to ensuring the site is gritted and staff are safe.
- Reviewing how we work with the Environment Agency and build on our work from last winter, pushing more flow through sites which have additional capacity beyond the flow to full treatment, to reduce storm spills and the impact of groundwater.
- We've also implemented storm outfall checks, following discharges. We are using machine learning and static models to generate tasks for our teams to check outfalls following genuine releases to the environment.



Sandown WTW



Wastewater Capital Delivery Investments – Isle of Wight



Wastewater Capital Delivery Investments – Isle of Wight

During AMP7 (2020-2025) we've invested £25m so far which includes:

- **Network Projects;** Rising Mains (£7m)
- **Treatment Enhancement;** Additional Storm Storage (£1m), Increase Flow to Full Treatment (£4m) & Improved quality of treated wastewater, including Phosphorus removal (£9m)

£8m still to spend this AMP, largely relates to Treatment Enhancement, vast majority schemes now on site.

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



Wastewater Capital Delivery Investments - Isle of Wight



Photos

Sandown
Storm Shaft



Wastewater Capital Delivery Investments - Isle of Wight

Top Ten Schemes

Project Name	Detailed Programme	Investment Budget
Appley 1050 Sewer Collapse	Sewers	7,340
Sandown WTW Storm	WINEP Storm Capacity	5,119
Roud WWTW	WINEP WFD Quality	4,936
AMP6-3 WTW Wroxall NEP5	WINEP AMP6 Carryover	2,955
Godshill WWTW (WFD IMP)	WINEP WFD Quality	2,775
Calbourne WWTW	WINEP WFD Quality	2,675
Shalfleet WWTW	WINEP WFD Quality	2,344
Sandown New WTW	WINEP Flow to Full treatment	2,321
St Helens WTW U_IMP5	WINEP Flow to Full treatment	1,753
Shorwell WTW	WINEP Storm Capacity	356



Clean Rivers and Seas Task Force Isle of Wight update





Norton 72

Woodvale 30

Marsh Road 20

Market Hill 41

Terminus Road 80

Appley 87 (since March)

Wooton 51

Fairlee 40

Havenstreet 22

Rookely 53

Annual spills saved

© 2014 Google

Learnings, other works and future

- Storage is generally ineffective and success in catchment and treatment
- Storm water management policy
- Additional resource to assist with investigation, enforcement, engagement and delivery
- Over 100km of highway needs to be managed prior to 2035.



from Southern Water.



Water – operational update



from
**Southern
Water** 

Leakage on the Isle of Wight

Total leak repairs 2022/23

	IoW
Bursts	219
Customer leaks	94
Network leaks	1,697
Total	2,010

Total leak repairs 2023/24

	IoW
Bursts	161
Customer leaks	232
Network leaks	1,568
Total	1,961

Total leak repairs Apr 24 to date

	IoW
Bursts	79
Customer leaks	117
Network leaks	855
Total	1,051

Our water network on the island

- Leakage is currently 5.45 ML/d, which has improved since our July meeting. This is a moving target but we're heading in the right direction.
- Repair and Maintenance backlog significantly reduced in recent months, and we have also completed our project to relay over 100m of water main in Brook. This will help improve the resilience of the main, which we previously had issues with.
- 21 outstanding leaks, one over 10 days due to traffic management issues and 70 outstanding maintenance jobs.



Sandown Water Supply Works investment

- In our efforts to improve our sites and replace ageing assets, Sandown WSW is benefitting from a £17m upgrade.
- The project has been broken into three phases.
- **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:** Work to mitigate any risks associated with low raw water pH
- We remain on track to complete by Spring 2026.



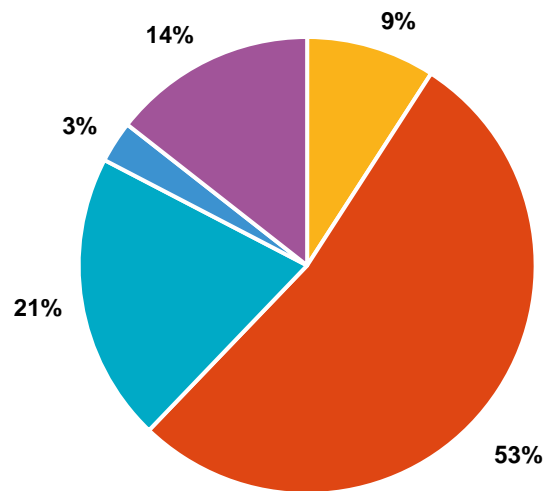
Water Resources Management Plan (WRMP)

October 2024 update

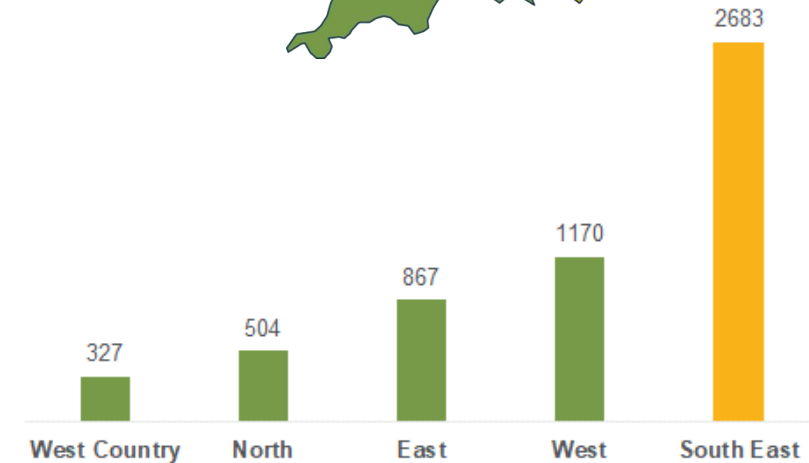
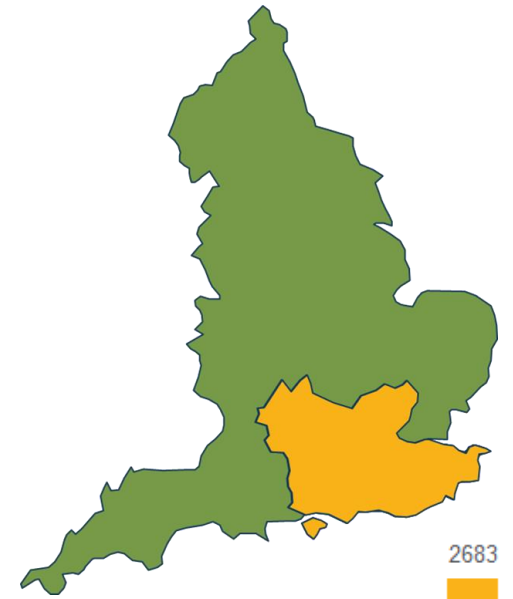


The South East of England is seriously water-stressed

- The Environment Agency has identified that by 2050, almost 5 billion extra litres of water will be required every day, to maintain public water supplies in England.
- More than half that need is in the South East.
- The main driver in the South East is what the EA defines as “Environmental Destination” which means improving and enhancing the natural world.



- Climate Change
- Environmental Destination
- Household Population Growth
- Business Growth
- Drought Resilience



Water Recycling – a new source of water for the future

- Reducing leakage and improving water efficiency are important priorities for us but we need to look at other ways of using water wisely.
- Water recycling creates a new source using water we currently waste.
- Water recycling plants use advanced treatment techniques to turn treated wastewater into purified recycled water.
- Purified recycled water can be stored in rivers or reservoirs and used for public supplies – following treatment to strict UK drinking water standards enforced by the Drinking Water Inspectorate.
- We're currently developing four water recycling plants across our region, as part of our current Water Resources Management Plan.
- Together these four water recycling plants would be capable of producing 97.5 million litres of water a day.
- That means we can leave almost 100 million litres more water in the environment during a drought – when nature needs it most.



The Isle of Wight Water Recycling Project



Protecting our natural resources

- One-third of the IoW's water comes from the River Test.
- Water recycling will make the IoW more self-sufficient and leave more water in the River Test during a drought.



Maintaining public water supplies

- The project would be capable of producing up to 8.5 million litres of water a day during a drought.
- All water supplied to customers will continue to meet strict UK Drinking Water standards.
- Our public engagement is due to launch in September 2024, followed by a public consultation in November.
- Construction could start in 2025 with the water recycling plant operational by 2030.



Find out more at:

www.southernwater.co.uk/water-recycling



Water Resources Management Plan (WRMP)

Consultation 11 September to 4 December 2024

- What is the WRMP?
- Why are we consulting on it?
- Where can you find it?
- How to provide feedback



Visit www.waterresources.southernwater.co.uk



Isle of Wight water strategy 2025-35



Isle of Wight

Key

- Less than five million litres of water each day.
- Between five and 50 million litres of water each day.
- More than 50 million litres of water each day.

- Reduce demand for water
- Drought action
- New sources of water and transfers
- Catchment or nature-based scheme

1. Reduce leaks ●
2. Help customers use less water ●
6. Catchment schemes to address nitrates and pesticides and improve the resilience of our water sources
7. Recycle water from our Sandown site

3. Apply for a drought order on the River Test to continue abstracting water during dry weather in droughts until 2033-34 and after that only in droughts more severe than 1-in-200 year likelihood; apply for a drought permit and order on the Lower Itchen until 2029-30 and a drought order at Candover until 2033-34 ●●
10. Bring in water from Norway in sea tankers in droughts between 2031 and 2034 ●●



Isle of Wight water strategy 2035-50



Isle of Wight

1. Reduce leaks ●
2. Help customers use less water ●
4. Make improvements to an existing groundwater source on the Isle of Wight ●
7. Develop our groundwater source at Newchurch
8. Stop the use of all supply-side drought permits and orders after 2040-41 unless faced with a drought of more than a 1-in-500 year severity

Key

- Less than five million litres of water each day.
- Between five and 50 million litres of water each day.
- More than 50 million litres of water each day.
- Reduce demand for water
- Drought action
- New sources of water and transfers
- Catchment or nature-based scheme

Isle of Wight water strategy 2050-75



Isle of Wight

1. Reduce leaks ●
2. Help customers to maintain a sustainable level of water use
3. Ongoing work to use catchment management and nature-based solutions to improve the environment

Key

- Less than five million litres of water each day.
- Between five and 50 million litres of water each day.
- More than 50 million litres of water each day.

■ Reduce demand for water

■ Drought action

■ New sources of water and transfers

■ Catchment or nature-based scheme



from
Southern
Water. 

Our consultation on securing a resilient water future for the South East

Have your say on our revised draft Water Resources Management Plan before Wednesday 4 December 2024.

Please encourage your local communities to take part....

We'd love to hear from you!

Visit waterresources.southernwater.co.uk



from
Southern
Water. 

AOB



from
**Southern
Water** 

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

Appendix



Community Centre Grants



from
**Southern
Water** 

Community Centre Grants – Isle of Wight

- As part of our programme to support making the community stronger, our Community Centre Grant is back for a third year.
- This year we're providing over 30 grants of £1,000 each and four will be awarded on the Isle of Wight.
- These grants have directly alleviated the burden of rising energy and operational costs, ensuring that vital services continue to be accessible to the local community.
- Previous Community Centre grants have been awarded to:

Newport Minster	Wroxall Community Association
The Veterans Hub (IOW) CIC	Whippingham Community Association
Music Craft CIC	The Lighthouse Church
Pan Together - Downside Community Centre	



"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 Thompson, Centre Manager Pan Together

Apply now

Applications opened on 1 October and close on 31 October 2024 at 5pm.



Business Partnership Fund



Business Partnership Fund goes live

- The third round of our popular Business Partnership Fund is now open.
- We're on the look-out for new and innovative ideas to help reduce water use in businesses across our region.
- Ideas include harvesting rain or shower water, fitting flow restrictors on taps or harnessing new technology to save water.
- The fund is open to all retailers, businesses and third-party conservation providers.
- More details: [Business Partnership Fund – Southern Water](#)



Apply now

Applications close on 31 December 2024.



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

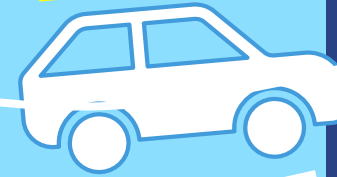
- ✓ Plan infrastructure growth schemes as required

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



Catchment First



Sustainable Drainage



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



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

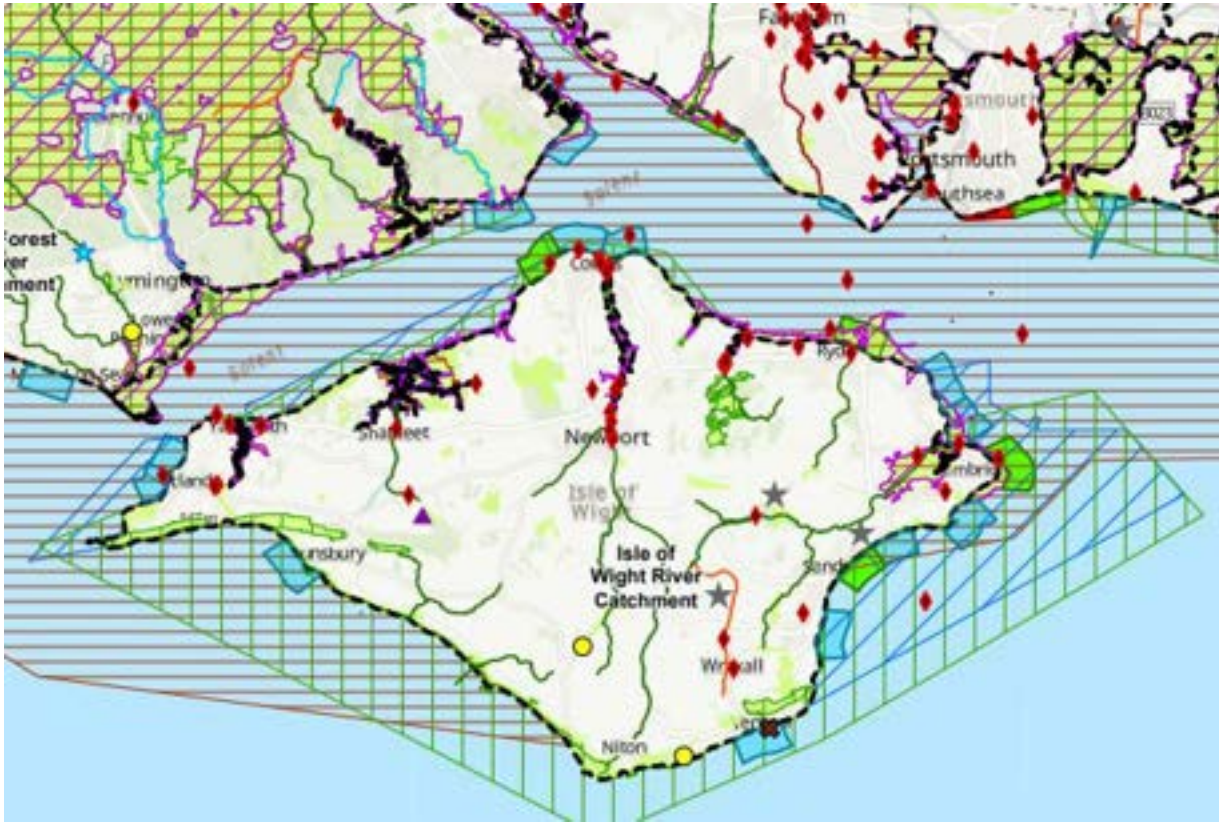


Isle of Wight

- 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

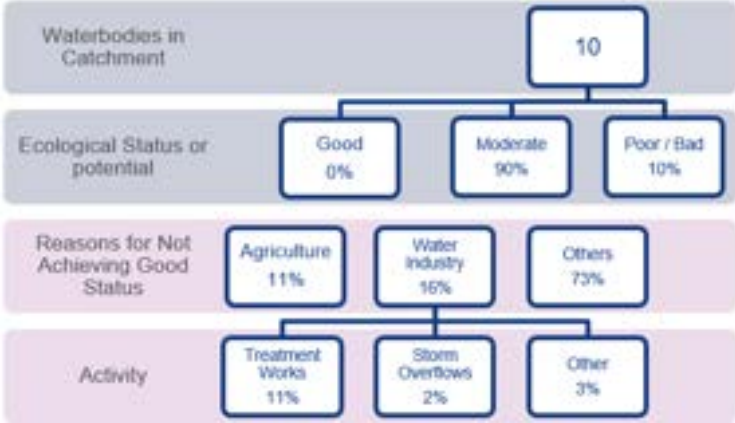


Isle of Wight



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:

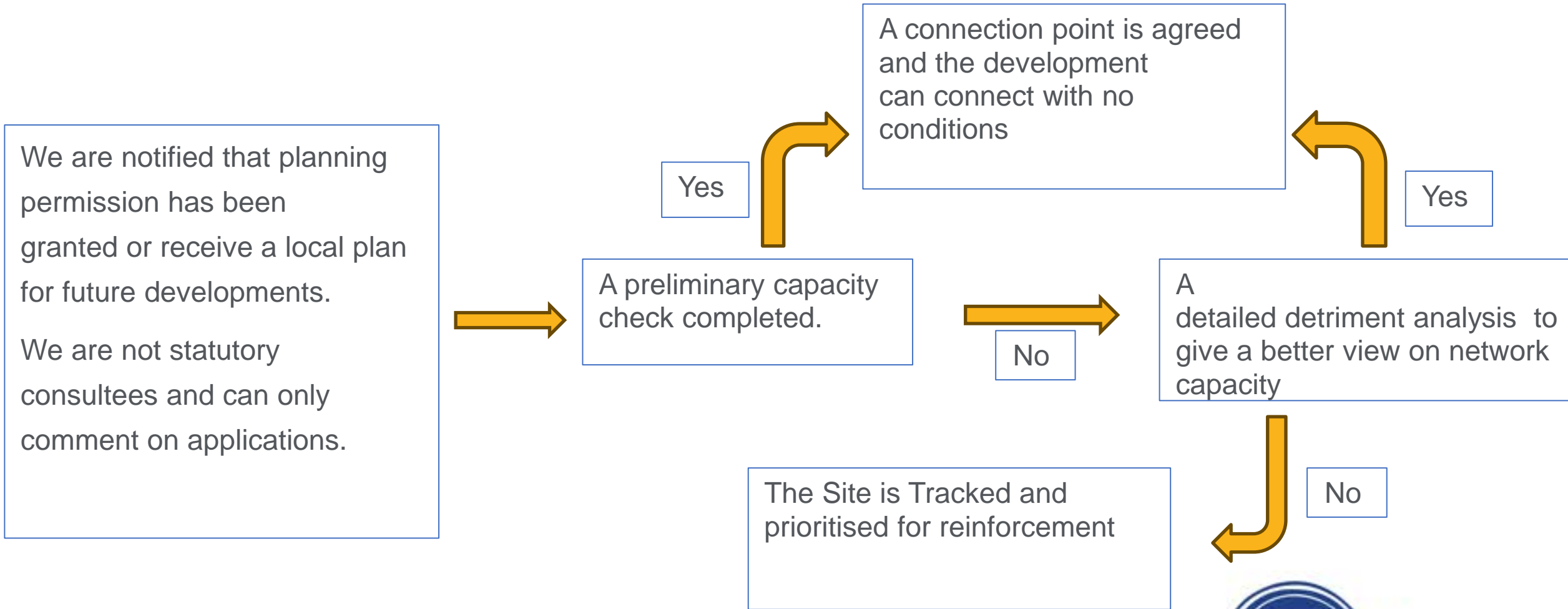
- Catchment and nature-based solutions
- Wetlands, swales, ponds
- Rainwater capture and harvesting
- Green roofs, planters, water butts



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



Current Growth Process



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



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



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!



Re-connecting floodplains

Sediment / turbidity

River Corridor Habitats

In river structures and modifications (weirs/slucices)

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	AMPS
1 Collating SWS info	Green	Green	Green	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
2 Collating CP info	Green	Green	Green	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
3 Defining shared goals	Light Blue	Light Blue	Light Blue	Orange	Orange	Light Blue	Light Blue	Light Blue
4 Co-creation of a plan	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Orange	Orange	Light Blue
5 Co-delivery of a plan	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Orange

