Southern Water: Kent update

14 November 2024

from
Southern
Water

Agenda

- Welcome – George Eykyn
- Company update – Tim McMahon
- Wastewater – Groundwater Infiltration update – Alex Saunders, Tony Morley and Chris O'Grady
- Clean Rivers and Seas Task Force – Jon Yates
- Water – operational and capital delivery updates – Wayne Novelli and Julian Smith
- Water Resources Management Plan (WRMP) – Sam Underwood and Ken MacDonald
- Closing words

Company update

Tim McMahon, Managing Director for Water

from Southern Water

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

WATER for LIFE from Southern Water

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

Kent Environmental investment 2025–30

WATER for LIFE from Southern Water.

Total proposed environmental investment

£1.61 billion*

Medway

£637m

- Nutrient reduction at 42 sites.
- Reduced use of storm overflows – 28% at 57 overflows.
- 205km of river improved.

River Stour

£562m

- Nutrient reduction at 12 sites.
- Reduced use of storm overflows – 21% at 14 overflows.
- Six power resilience schemes.
- 80km of river improved.

Rother

£119m

- Nutrient reduction at 20 sites.
- Reduced use of storm overflows – 36% at 21 overflows.
- 112km of river improved.

North Kent

£235m

- Reduced use of storm overflows – 37% at 8 overflows.
- 11km of river improved.

Burham Water Supply Works

£58m

- Increased resilience of water supplies to 169,000 properties, including South East Water customers.

* 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.

Kent Smart Metering – 2025 to 2030

- In the areas of Kent that we supply fresh water, **71%** of properties have automatically read water meters, **25%** are visual read meters and **4%** do not currently have a meter.

- **263,831** meters are planned to be **replaced in Kent** between 2025-30, as part of our smart meter replacement programme.

- These meters will have the latest technology, helping us predict water demand and identify leaks earlier.

Wastewater – Groundwater Infiltration update

from
Southern
Water

Our role

- Southern Water is responsible for managing flows within its network, taking wastewater from customers' homes to Wastewater Pumping Stations (WPS).

- Across Kent, we have 1,237 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 Kent became heavily saturated.

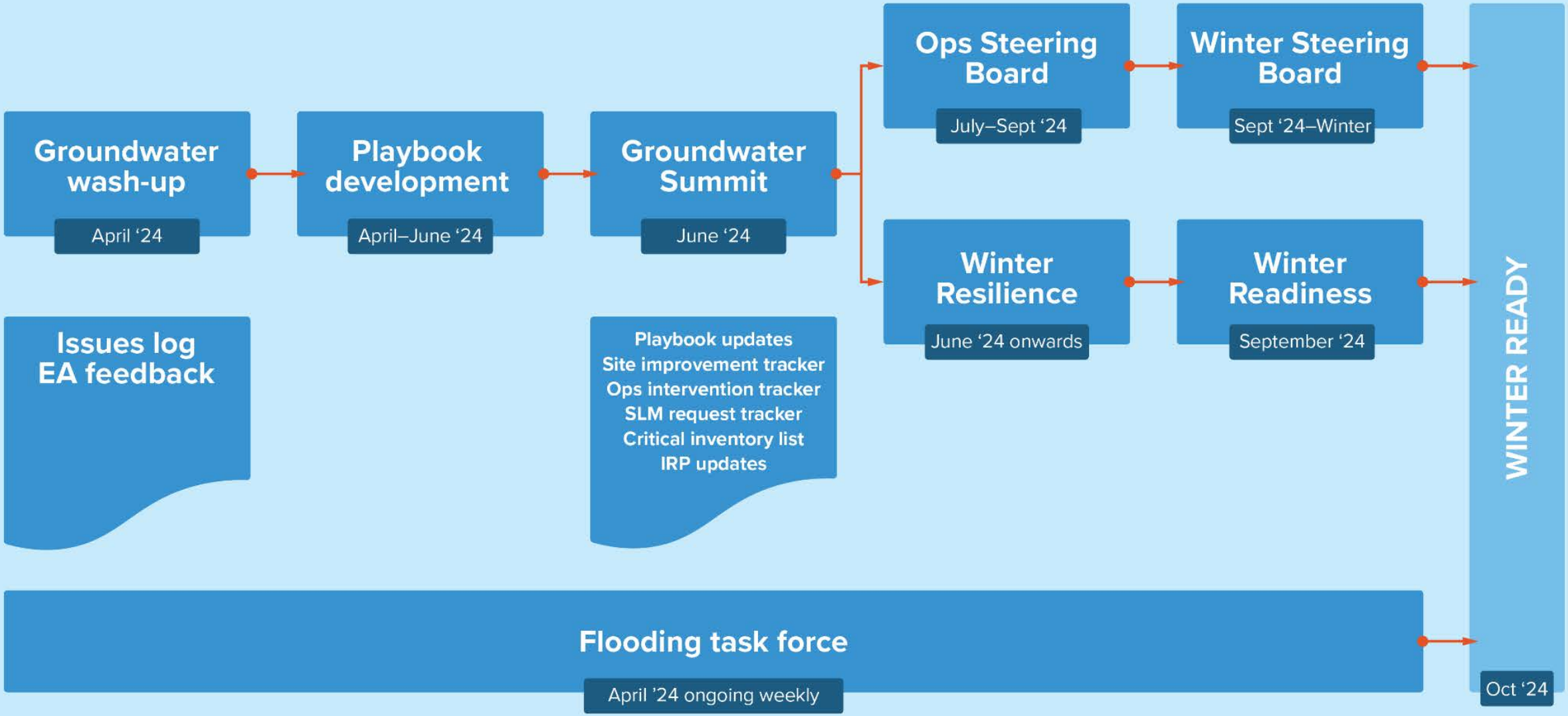
- The local drains and sewers were inundated with surface water run-off, which put significant pressure on our local WPSs. We experienced extreme levels of rain, which meant groundwater found its way into the sewer network.

- Areas that particularly suffered from groundwater infiltration were Copperfields, Lydd, Newington and Peene, Folkestone and Alkham, Dover.

Preparing for this winter

from
Southern
Water

Our approach



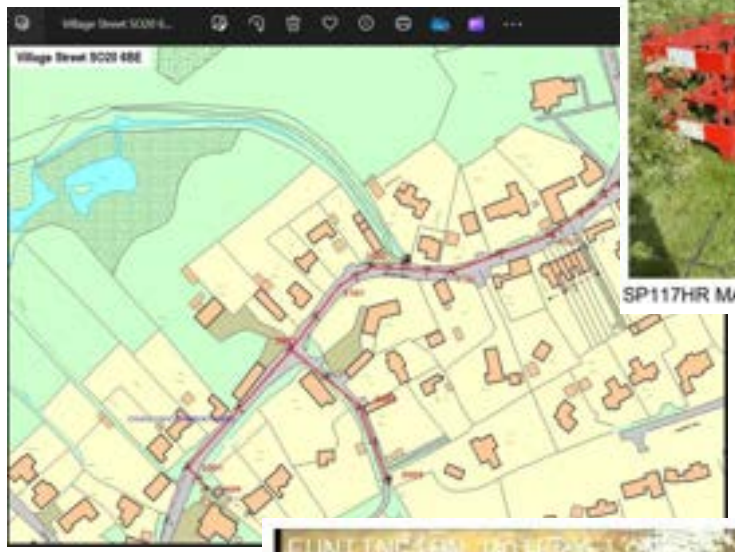
Improving our response this winter – operational

- Created Groundwater playbooks for different scenario, to ensure we are best prepared for potential issues

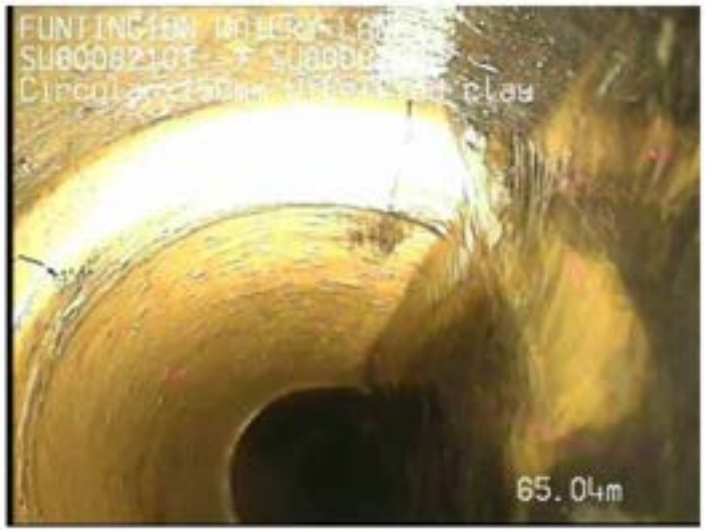
- Enhanced use of our Sewer Level Monitors (SLMs): Live monitoring of our catchments, so we can react quickly if we see sewer network levels rising

- Several Wastewater Pumping Station winter readiness checks completed, to ensure they are working as they should. More than 300 wet well cleans have also taken place, and this work is ongoing.

- Several CCTV surveys and Electroscans completed across Kent, locating points of potential infiltration. Pre-season jetting of our sewers in ‘hot spot’ locations also completed, ensuring our sewer network is in the best possible condition before winter.



SP117HR MANHOLE 3400 CAMERA



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Infiltration, gushing at joint at 3 o'clock

Kent Groundwater focus targeted investment

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

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

McALLISTER

Key Services:

- Full length lining
- Activity related flow management

WATER for LIFE from Southern Water

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

from
Southern
Water

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.

Swalecliffe WTW

Wastewater Capital Delivery Investments – Kent

from Southern Water

Wastewater Capital Delivery Investments – Kent

During AMP7 (2020-2025) we've **invested £229m** so far which includes:

- **Network Projects;** Rising Mains (**£14m**), Growth (**£23m**), Gorrel (**£7m**)

- **Treatment Enhancement**; Additional Storm Storage (**£29m**), Increase Flow to Full Treatment (**£7m**) & Improved quality of treated wastewater, including Phosphorus removal (**£49m**)

- This AMP, we've invested **£1.6m specifically in Kent** on flooding and groundwater schemes.
- This includes sewer relining and manhole sealing in **Horsmonden**, and installing a new surface water culvert, chambers and headwall in **Deal**, as part of our Pathfinder scheme to reduce flooding in Albert Road.

£34m still to spend this AMP, largely relates to **Treatment Enhancement**, vast majority schemes now on site.

Key Projects: Swalecliffe (**£20m**),Thanet (**£20m**) and Chilmington Green **(£15m**)

Wastewater Capital Delivery Investments - Kent

Photos

Ashford
Storm Tank Construction
Setting Level Rails for
Benching

Swalecliffe
Installation of new outfall

Queenborough
Installation of Reinforcement for
Hopper Complete

Wastewater Capital Delivery Investments - Kent

Top Ten Schemes

Project Name	Detailed Programme	Budget
Swalecliffe New Sea Outfall	Planned WTW capital maintenance	20,666
Chimington Green Ashford Growth	Waste - Network Reinforcement	15,180
Thanet PR19 Option 2	Thanet	14,012
Lingfield WWTW	WINEP WFD Quality	13,606
Military Road Rising Main Ph3	Rising Mains	10,529
Queenborough WTW Storm	WINEP Storm Capacity	10,232
Sittingbourne WTW - Growth	WINEP Storm Capacity	9,821
AMP6 Margate & Broadstairs Resilience	WPS Planned	8,019
AMP6-3 WTW Hawkhurst South NEP5	WINEP AMP6 Carryover	7,662
Gorrel Tank	Gorrel	6,959

Clean Rivers and Seas Task Force

Kent update

from Southern Water

Storm overflows

and how the Clean Rivers and Seas Task Force is reducing them

Our Progress in Kent

Misconnections

Kent: Investigating **30 misconnections** and seeking homeowner permission to fix them.

Optimisation

Swalecliffe: Changed permits to unlock 1,800m³ of extra storage, **reducing storm overflow releases from the associated outfall by 36%**.

Household SuDS

Deal: Installed 50 smart water butts and hundreds of slow-drain water butts which have **managed over a million litres of rainwater** so far.

Swalecliffe and Fairlight: Installed nearly 1000 slow-drain water butts which will **hold back around 100,000 litres of rainwater** each time it rains.

Highway schemes

Starting five potential highway sustainable drainage schemes across Kent to **manage rainwater run-off from roads**.

Margate: Gloucester Avenue in partnership with KCC due to start in **January 2025**

Working in Partnership

Cornwallis Circle: SuDS (KCC, CCC)

St Peters Road: Surface Water Connection (KCC)

Diamond Road CSO: Centaur (KCC)

Tankerton Road: Surface water connection (KCC)

Tankerton Circus CSO: Centaur (KCC)

Lang Court: Network Storage (Private owners)

Swalecliffe WTW: Reconfiguration (EA)

Russel, Woodman, Goodwin: Surface water connection (Private owners)

St Augustine's Business Park: Separate private network (Private owners)

Slow The Flow (Private owners)

Whitstable Library: SuDS (KCC, CCC)

Westmeads Rec: SuDS (KCC, CCC)

Railway Avenue: Surface Water Connection (Network Rail)

Slow The Flow (Private owners)

Tankerton: Sewer sealing (Private owners)

Old Thanet Way: Sewer sealing (Private owners)

KCC - Kent County Council
CCC - Canterbury City Council
DfE - Department For Education
EA - Environment Agency

- Working with both KCC and CCC
- Working with the EA
- Working with KCC
- Working with private landowners
- Working with Network Rail
- Working with DfE (SuDS in Schools)

Water – operational update

from
Southern
Water

Leakage in Kent

Total leak repairs 2023/24

	Kent
Bursts	557
Customer leaks	693
Network leaks	7831
Total	9081

Total leak repairs Apr 24 to date

	Kent
Bursts	457
Customer leaks	205
Network leaks	4109
Total	4771

Case study: Gore Street, Pluck Gutter leak repair

- Historically, leaks on our strategic water main in Plucks Gutter have required emergency repairs, and road closures have disrupted the local community.

- Earlier this summer, we had two leaks in the area which were not an emergency, and we wanted to proactively fix them while minimising the local disruption.

- Fixing these leaks was essential because they were on our strategic main that supplies Thanet and if a major burst occurred, it would result in a large number of customers experiencing water supply disruption.

Case study: Gore Street, Pluck Gutter leak repair

- Through meetings with Sir Roger Gale MP and Preston Parish Council, we planned the leak repairs for August 2024 during the school holiday, to ensure children were not affected by the lack of buses coming through the village.

- Learning from previous road closures and capturing local insight meant we installed clear signage and also proactively contacted residents and businesses to ensure they were kept updated.

- Our Kent Highways permit was from 5 August to 2 September, and we worked extended daytime hours, seven-days-a-week, to get this repair completed ASAP.

- We worked very hard to complete the repairs ahead of schedule and we successfully reopened the road on Friday 23 August, ahead of the busy Bank Holiday weekend and popular Preston Summerfest.

Improving water quality in Thanet

- To ensure we meet the stringent water quality standards in the UK, we continuously look at ways we can improve our sites.
- We are currently investing £50m, to help reduce drinking water Nitrate levels in the Thanet area.
- We are installing Nitrate Removal plants at three Water Supply Works in the area – **Flemings**, **Wingham** and **Martin Gorse/Sutton**.

Improving water quality in Thanet

- Low Nitrate drinking water from these sites will then be blended in the network with water from other sites to ensure wholesome and safe drinking water across the Thanet region.

- Good progress is being made and we remain on track to have all three Nitrate Removal plants in supply by Spring 2025, with the project completed by Summer 2025.

Key investment at Burham Water Supply Works

- Burham Water Supply Works is one of our four largest, and most strategically WSW currently in operation
- We're committed to **substantial investment** at the site, to ensure we provide a resilient supply of water that meets future demand, and we are currently improving a number of assets
- Between 2020-25 we're investing £60m and between 2025-30 we plan to spend between £40m and £100m
- Scheduled to **finish in 2033**, we hope our key work will also increase the amount of water the site can produce
- Current improvement include renewing the concrete structures of our disinfection chambers, installing a new final water sampling point and constructing a cover for our on-site clarifier


GAC 2 – Filling of Chamber


Ozone plant new PLC

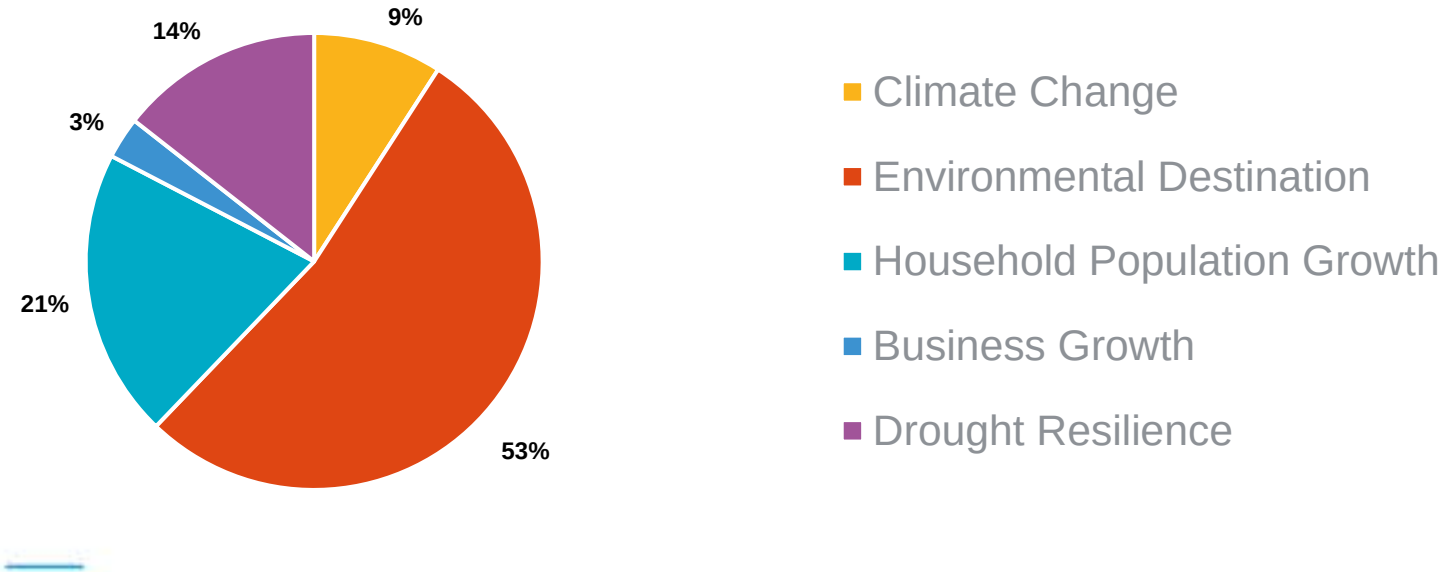
Water Resources Management Plan (WRMP)

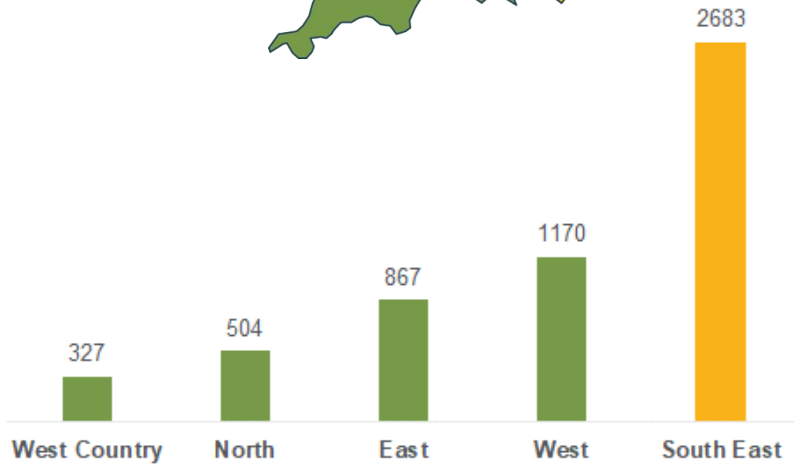
October 2024 update

from Southern Water

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.
- 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.





WATER for LIFE from Southern Water

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.
- In Kent, our proposed Aylesford Water Recycling Project Water would be capable of producing up to 14 million litres of purified recycled water a day, leaving more water in the River Medway during a drought.
- Our public consultation is due to launch next year. Construction could start in 2027 with the water recycling plant operational by 2031.
- Our plans are continuing to be developed – we'll update you further at a future meeting.

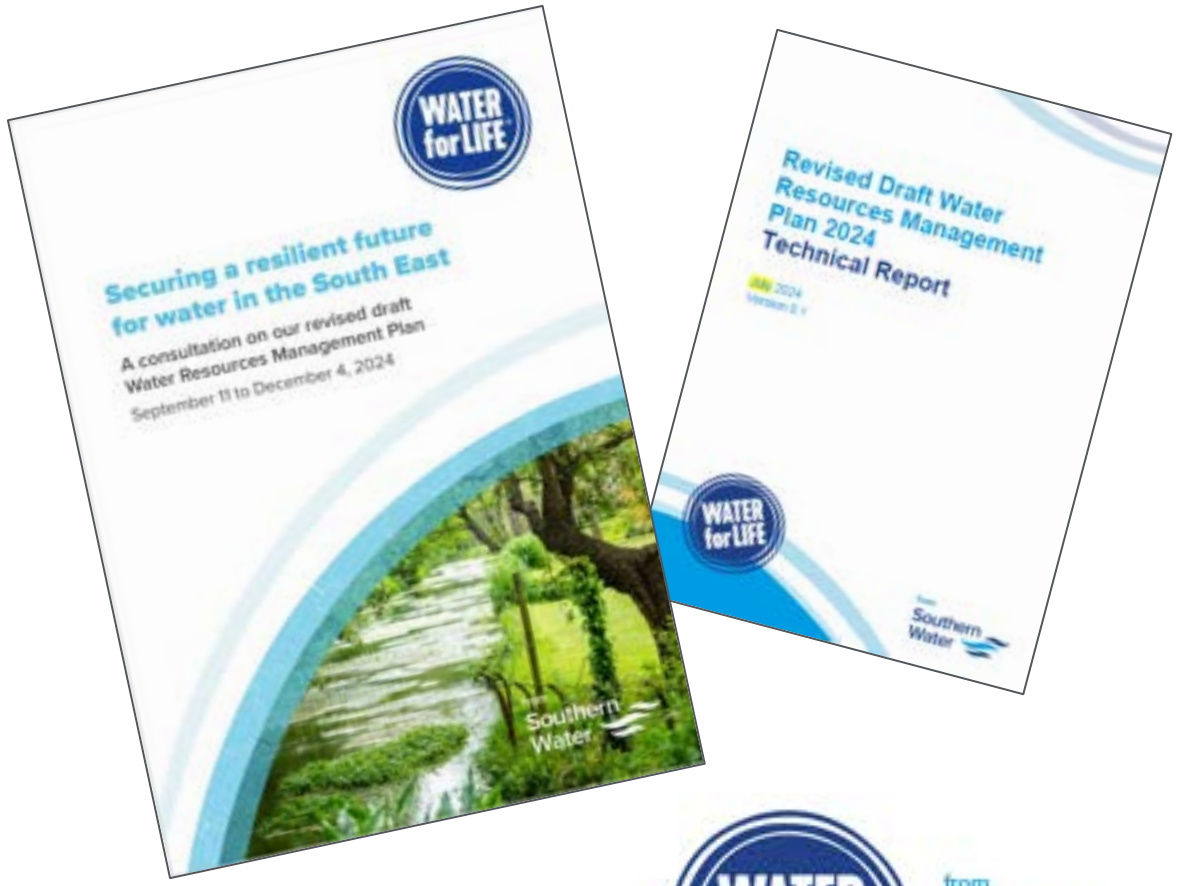
WATER for LIFE

from Southern Water

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

WATER for LIFE from Southern Water

Kent water strategy 2025-35

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

Kent

20. Reduce leaks
21 Help customers use less water
22. Apply for a drought permit/order on the River Medway to continue abstracting water during dry weather
23. Catchment schemes to address nitrates and pesticides and improve the resilience of our water sources
24. Recycle water from a water recycling plant near Aylesford and release it into the River Medway from where it will be abstracted and treated at a water supply works
25. Work with a large industrial water user to provide them with recycled wastewater and enable us to use their existing groundwater sources
26. Make improvements to an existing groundwater source near Gravesend

from Southern Water

Kent water strategy 2035-50

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

Kent

18. Reduce leaks
19. Help customers use less water
20. Catchment schemes to address nitrates and pesticides and improve the resilience of our water sources
21. Desalination plants on the Thames Estuary, and Thanet coast
22. Import water from South East Water to Canterbury and Rye
24. Recycle water from Tonbridge and store it in Bewl Water before treating it at a nearby water supply works
25. Stop the use of permits and orders to source more water during droughts after 2040-41 unless faced with a drought of more than 1-in-500 year severity

WATER for LIFE from Southern Water

Kent water strategy 2050-75

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

Kent

9. Reduce leaks
10. Help customers to maintain a sustainable level of water use
11. Ongoing work to use catchment management and nature based solutions to improve the environment
13. Increase the size of Bewl Water reservoir
14. Desalination on the Isle of Sheppey

WATER for LIFE from Southern Water

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

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Appendix

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Community Centre Grants

from
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Water

Community Centre Grants – Kent

- 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 ten will be awarded in Kent.
- 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:

The Lighthouse Church	Age UK Kent Rivers - Mackenney Daycare Centre
The Zone Youth Club, Broadstairs	Whitstable Umbrella Community Support Centre
The Hive - Senior Manager of Support Services	North Deal Community Company Ltd.
Mid Kent Mind	West Faversham Community Association
Whitstable Umbrella Community Support Centre	Queenborough Town Community Centre

Apply now

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

"This grant will enable us to maintain a safe and warm place for homeless adults and vulnerable community members to access in these dark, cold months. Thank you, Southern Water!"
Cat, The Hive, Chatham

WATER for LIFE from Southern Water

Business Partnership Fund

from
Southern
Water

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.

WATER for LIFE from Southern Water

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

Sustainable Development - Industry Updates

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

Wastewater Asset Strategy and Planning

from
Southern
Water

There are four key themes encompassing our delivery plans

The Challenges

Climate Change

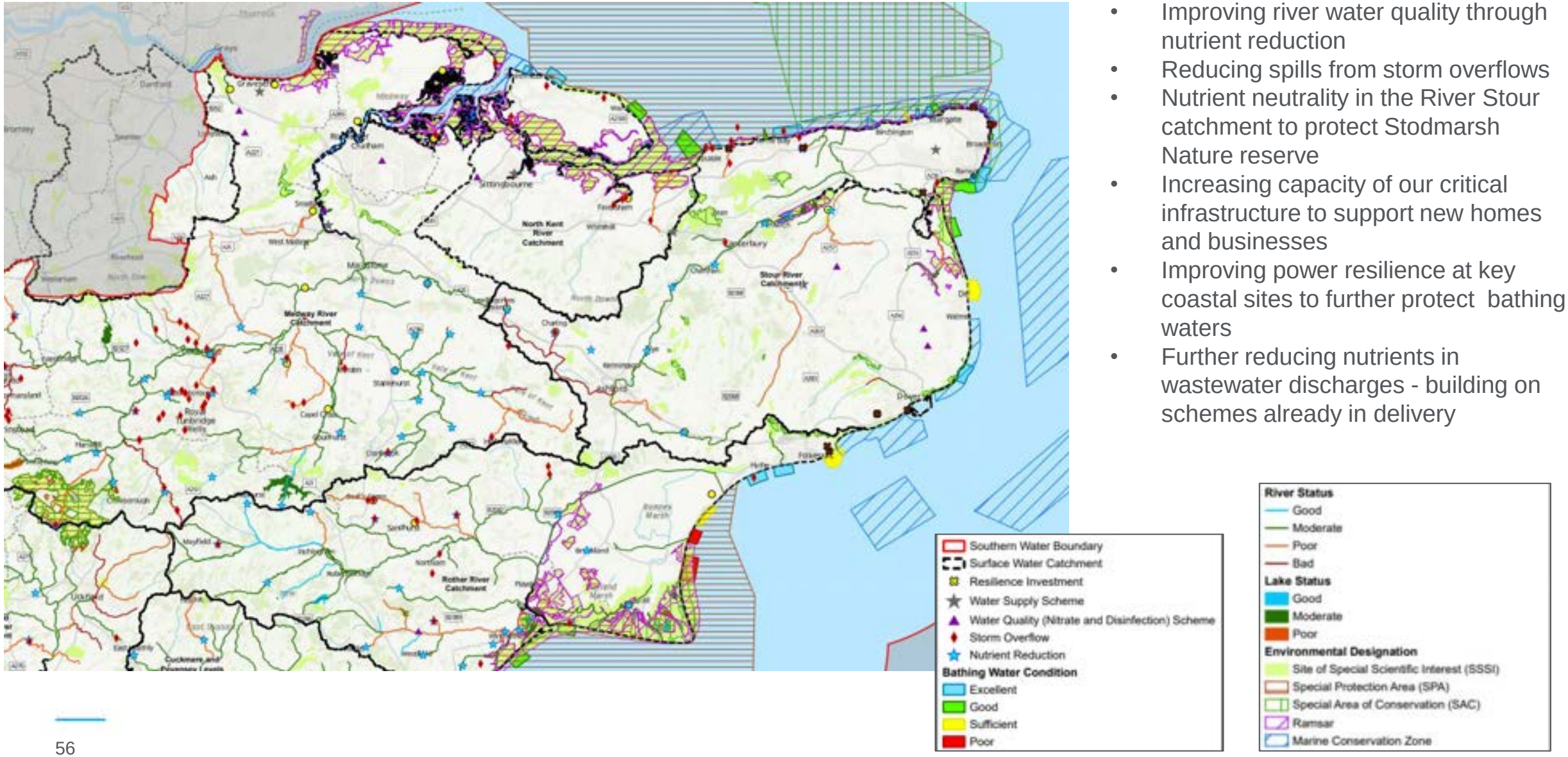
Population Growth

Environmental Capacity & Resilience

Affordability

Network flow management to reduce flooding and spills	• **Surface water separation** and **sustainable drainage systems** to keep rainwater out of sewers and prevent spills from storm overflows • Build **storage tanks** where other methods do not deliver. • **Smart networks** - sewer level monitors with artificial intelligence • Increasing **sewer capacity** for new homes and businesses
Recycling wastewater and nutrient removal	• Enhancing wastewater treatment to remove **nutrients and chemicals** • Increasing **wastewater treatment** capacity for new homes and businesses • Additional **UV treatment** to improve water quality for shellfish waters
Asset health and resilience	• Enhanced **maintenance programmes** to improve resilience • Improving **resilience** to power outages, increasing heat and flood risks • **Partnership working** to address coastal erosion • Enhanced **sewer sealing** to improve resilience to high groundwater
Bioresources	• Consolidate treatment sites and move to **Advanced Digestion** technology • Increased biogas production and **renewable energy** • Explore **Advanced Thermal conversion** technology

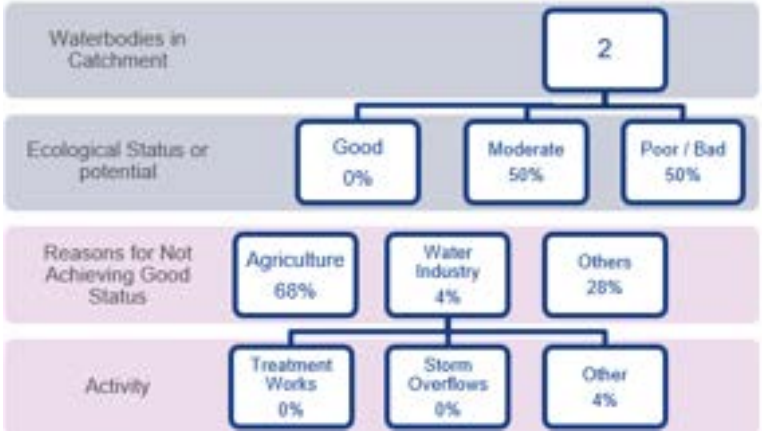
Kent environmental schemes – key areas of focus

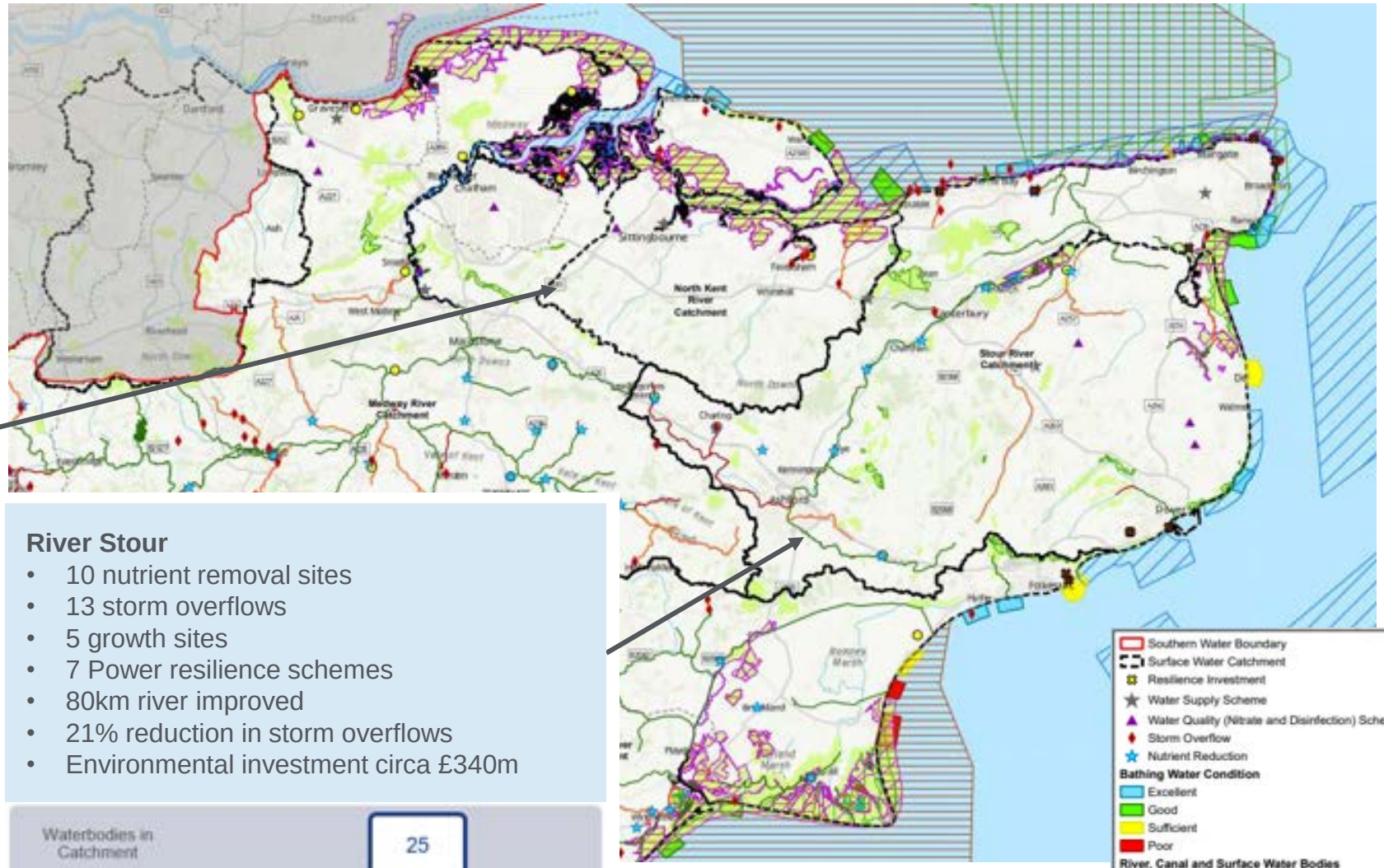


- Improving river water quality through nutrient reduction
- Reducing spills from storm overflows
- Nutrient neutrality in the River Stour catchment to protect Stodmarsh Nature reserve
- Increasing capacity of our critical infrastructure to support new homes and businesses
- Improving power resilience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

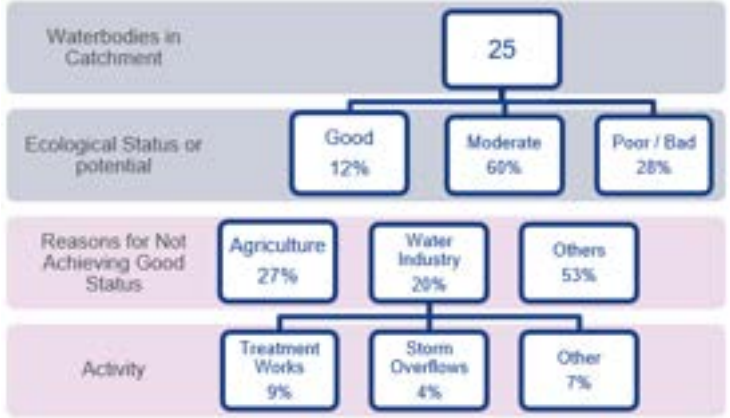
Kent enhancements
(slide 1 of 2)

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

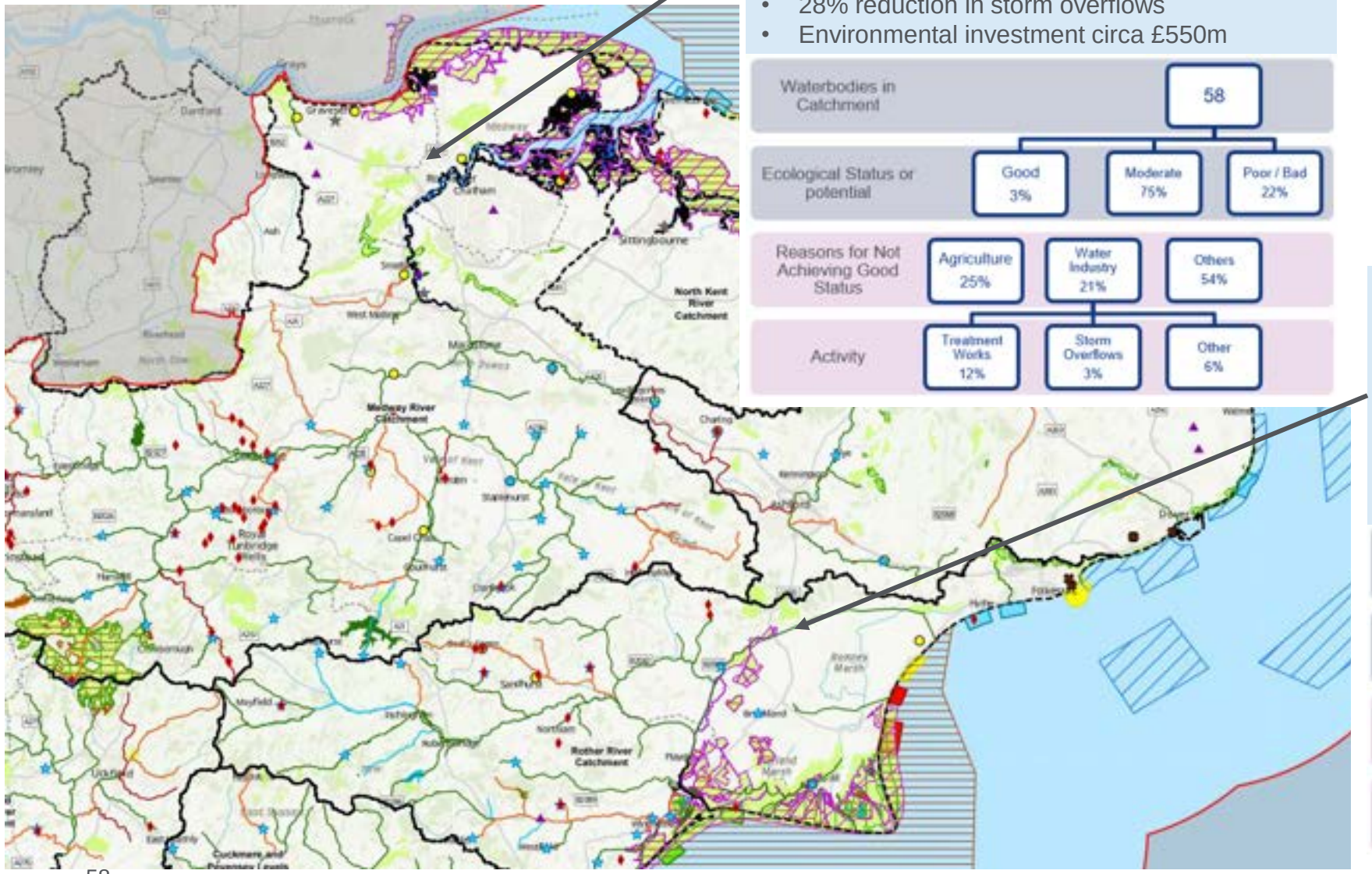




River Stour
- 10 nutrient removal sites
- 13 storm overflows
- 5 growth sites
- 7 Power resilience schemes
- 80km river improved
- 21% reduction in storm overflows
- Environmental investment circa £340m

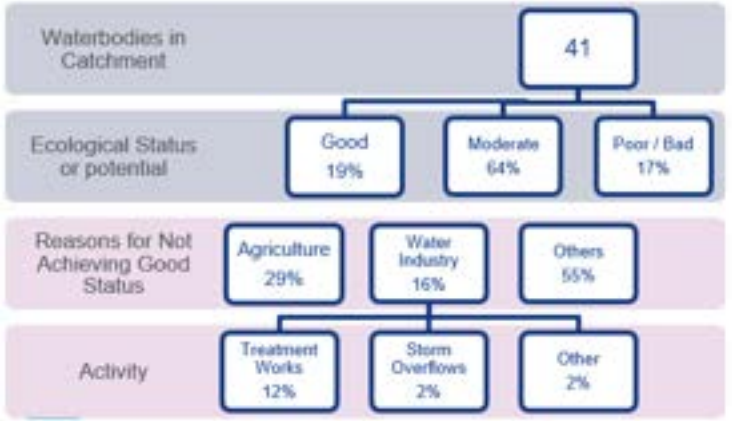


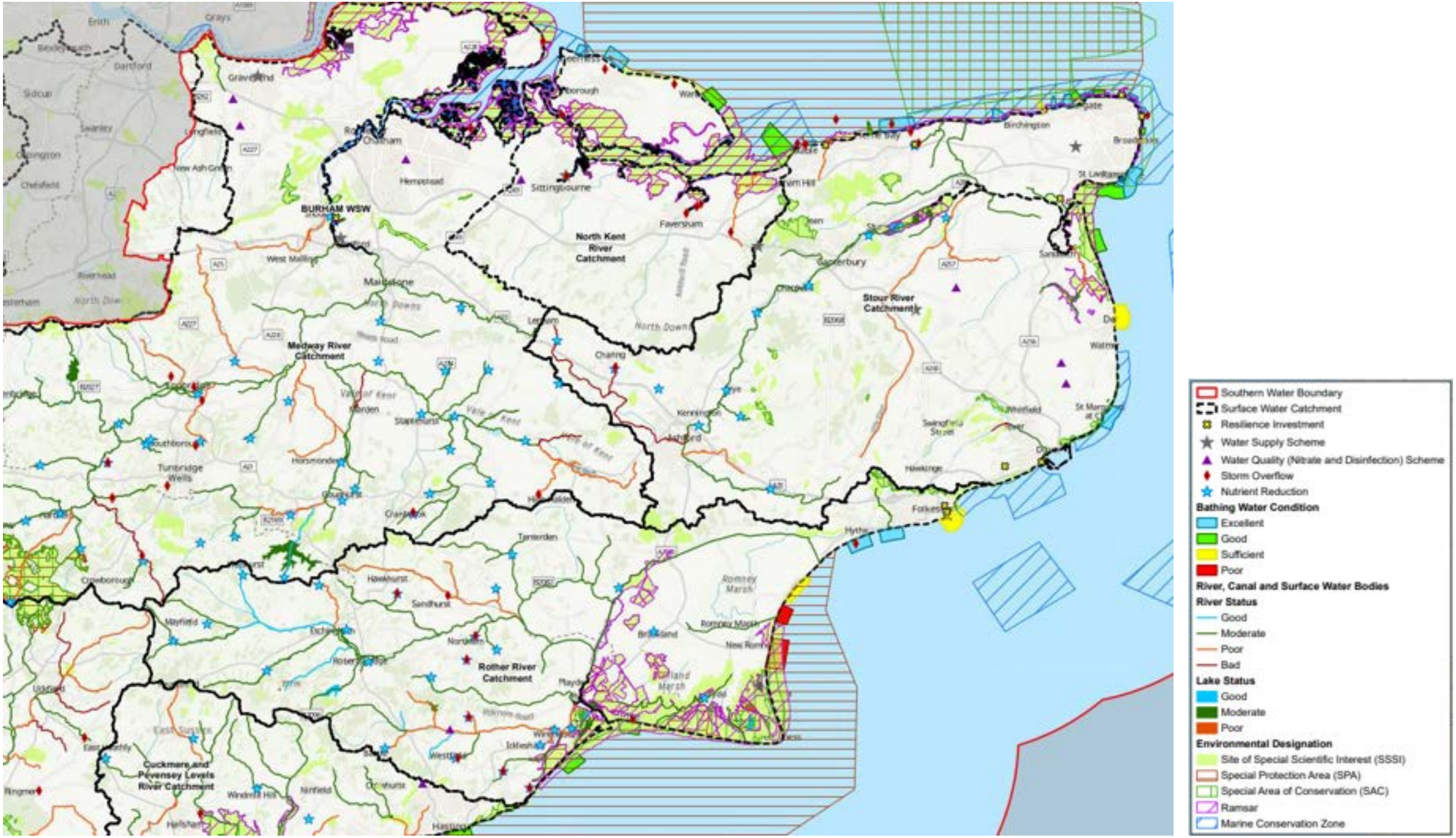
Kent enhancements
(slide 2 of 2)



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

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




BURHAM WSW
North Kent River Catchment
Medway River Catchment
Stour River Catchment
Rother River Catchment
Cuckmere and Pevensey Levels River Catchment
Southern Water Boundary
Surface Water Catchment
Resilience Investment
Water Supply Scheme
Water Quality (Nitrate and Disinfection) Scheme
Storm Overflow
Nutrient Reduction
Bathing Water Condition
Excellent
Good
Sufficient
Poor
River, Canal and Surface Water Bodies
River Status
Good
Moderate
Poor
Bad
Lake Status
Good
Moderate
Poor
Environmental Designation
Site of Special Scientific Interest (SSSI)
Special Protection Area (SPA)
Special Area of Conservation (SAC)
Ramsar
Marine Conservation Zone

Nature-based solutions as a first choice

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

How:

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

Approach:

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

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

Current Growth Process

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

Water Production

from
Southern
Water

Key statistics - Kent

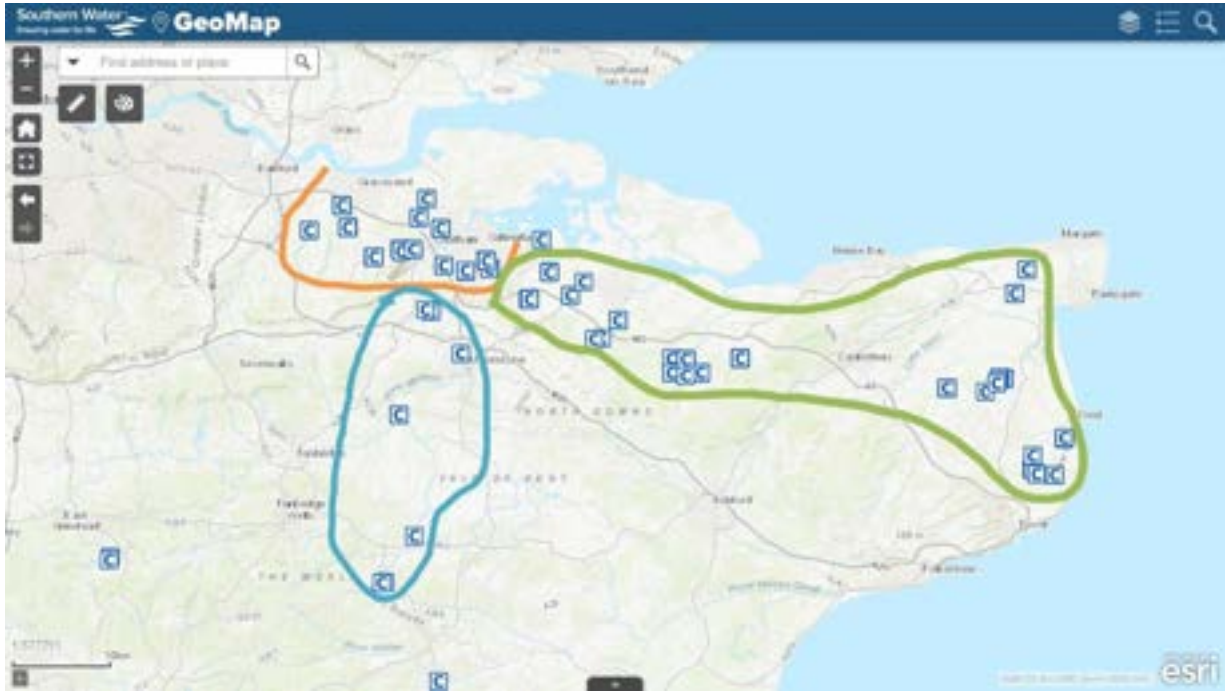
Assets

- 30 Groundwater water supply works
  - 4 offline for maintenance or capital investment (all due back within 12 months)
- 1 Surface water works (Burham near Maidstone)
- Production capacity = 238 million litres per day
- Water demand = 163 million litres per day

People

- 3 teams comprising 34 Operators, Apprentices, Field Coordinators, and Field Managers
- 1 team of 17 Mechanics, Electricians, Instrumentation engineers, Apprentices

The geographical spread of water production assets in the Kent operational area



Water Process Performance - Kent

- Short-lived warm/dry spells in Kent kept water demand at long-term average levels, allowing planned maintenance to continue uninterrupted and water resources to remain healthy. Few summer-storm and subsequent power outages helped site reliability.
- Raw water nitrates continue to remain elevated in Thanet, but three nitrate removal plants are due to be commissioned in the coming months.
- Upon completion, we will be able to reintroduce mothballed sites near Deal and Minster, producing 7 million more litres per day and reducing the need to transfer water from our neighbouring Medway zone.
- Work to complete the new emergency drain-down facility at Bewl continues in earnest, with the reservoir being kept artificially low until January to enable the siphon pipework to be installed.

Bewl dam crest – September 2024

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

West Sussex groundwater Nitrate, sediment, pesticides and PFAS

Sustainable abstraction Arun & Rother

East Sussex groundwater Nitrate

Sustainable abstraction

Isle of Wight turbidity and nutrients

Sustainable abstraction and chalk stream

WATER for LIFE

from Southern Water

Kent

Water Quality

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

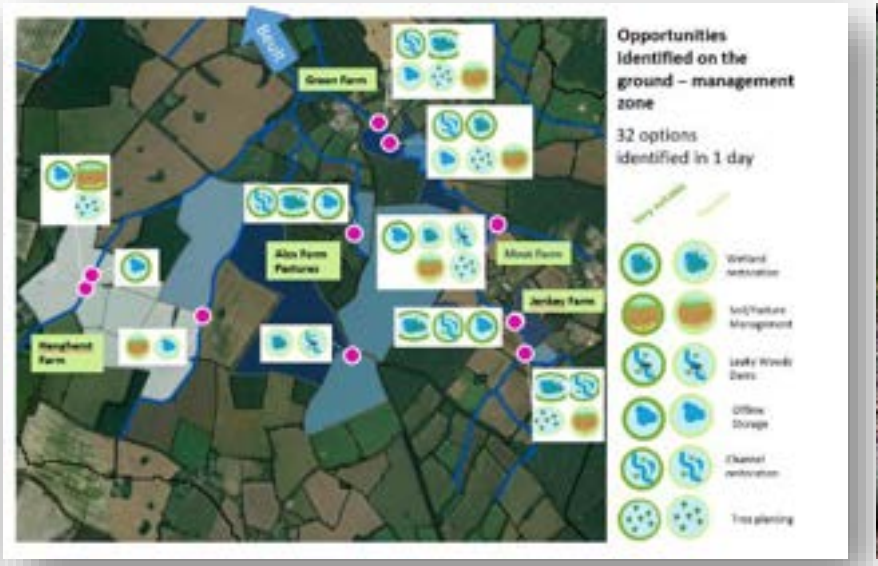
Water Resources

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

Environment Strategy

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

Pilot Project: Upper Beult Catchment Resilience



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

Medway Catchment Partnership

Hosted By

south east rivers trust

The Vision

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

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

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

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

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

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

... And many more!

Hot topics

- Invasive Species
- Agricultural Land Use
- Highways Run-off
- Invasive Species
- Eel & Fish passage

Southern Water input timeline

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

WATER for LIFE

Southern Water.