




Discharges

- **Is it true there was a discharge at Hill Head today and will it be safe to swim tomorrow?** The last storm water discharge at Hillhead was on 31 October 2021. Our Beachbuoy service provides information about storm water releases at each of the bathing water sites in our region. Storm water releases don't automatically affect the water quality or impact the environment, but Southern Water can't make any safety recommendations for water users. Users are advised to use their own discretion when entering the water.
- **Could you ask Southern Water how often they discharge into Stoke Lake on Neap tides.** Storm releases are an automated process, releasing when the volume of water stored in the storm tanks is exceeded. As such, the state of the tides is not taken into account during a release.
- **I'd be interested to understand why Southern Water spill in days where there hasn't been any rain?** Combined Storm Overflows (CSOs) are also used as emergency outfalls for operational incidents such as power failures or blockages caused by rag and debris. In these instances the CSO would be used as an emergency outfall to prevent homes and businesses from flooding.
- **When sewage is released into the sea, it is not only a risk to those entering the water, but when the wind blows sea spray onto the shore, surely it is contaminating those walking on the shore with bacteria droplets. Has the potential health impact of this to the public who may not be monitoring apps been assessed?** Southern Water are unable to provide advice on public health. We aren't unaware of any instances from our area of operation or indeed around the country of this being an issue. Our Beachbuoy notification service does not provide information as to the risk to public health, it indicates whether there has been a release or not within the last 72 hours. Pollution risk forecasts are provided by the Environment Agency and the Local Authority take the decision whether to close a beach or not based on this information. We are working to pilot real-time water quality information to provide guidance for water users as to the impact on water quality that a storm release has had. Storm releases are highly diluted waste water and can be up to 96% rainwater.

Climate Change

- **With climate change we will see more heavy rain – so can we expect more problems, more frequently unless something is done?**
- **Why haven't Southern Water planned for the increased population and increased wet weather patterns?**

In terms of climate change, sewers are typically designed to meet severe storms (ie 1 in 30 year return period) but we have seen more extreme weather becoming increasingly common in recent years; one of the wettest winters on record in 2019/20 and the wettest February. In fact 2020 was the UK's third warmest, sixth wettest and eighth sunniest year for 100 years. 2020 is the only year that features in the Top 10 ranking for all three areas. More commonly though we are seeing extreme events that cause increasing flooding across all drainage systems. We are targeting a number of investments to develop longer term solutions to these issues, working across stakeholder groups, planning for the long term and the challenges of climate and growth are key within our planning.



We work closely with Local Authorities to align our investment plans with their Local Development Plans as part of our price review, typically looking forward 10 years. Through the new Drainage and Wastewater Management planning we are extending this planning horizon to 25+ years, accepting the level of certainty drops as we move into the future. When we make significant upgrades to our treatment works or network we include a design horizon of 15 years to minimise the need for repeat upgrades. More local development often requires local reinforcement to the network to manage flooding risks and this is carried out on a rolling basis as new developments progress. There is a balance to be taken about when the reinforcement is delivered. Too soon and the reinforcement may not be needed as plans change, and too late could delay completion of the development. On the water resources side we carry out similar planning through our Water Resource Management Planning (WRMP). We are currently developing our WRMP plans for the next 5 years. These plans look forward to 2050 and we do this for the Southern Water region and alongside the other water companies in the South East. Again, planning includes modelling growth and climate impacts and ensuring that what we create a plan that can be adapted for future uncertainties.

To combat the current impacts of growth and climate we are making a number of key interventions. We're making significant investment to reduce the level of infiltration into our sewers at times of high groundwater and piloting a number of new solutions to resolve this. This includes repair techniques and how we work collaboratively with customers and stakeholders to resolve issues on their parts of the network, and where the source of flooding comes from. We have also recently implemented a CSO taskforce to look at how we reduce the volume of surface water within our sewers. This will cut the number of CSO spills and reduce the longer term risk of flooding by improving the capacity in the system. During periods of high rainfall, surface water run-off from roads, rooves and other non-permeable surfaces can make up 95% of the volume in the sewer network. We need to find new ways to remove this surface water and recognise that we need to work with other partners to achieve this. Our Pathfinder projects will demonstrate how we will do that. Over the next two years we will work with local stakeholders in developing more sustainable and nature based solutions for surface water separation, and look at what this means for future development and housing.

How will you meet COP requirements? We are committed to being net zero by 2030. In addition we are investing £2 billion across our network by 2025. This investment will further increase the resilience of our network. Our Water for Life Hampshire programme is protecting the health of our local rivers by reducing how much we take from them by investing in new water sources for the region. T100 provides advice on reducing water usage to 100 litres per person per day, and our Unflushables campaign helps customers understand the impact of placing unflushable items (wet wipes, nappies, sanitary products, along with fats, oils and grease) into the sewer network. We also have a dedicated CSO Taskforce who are working towards our aim of reducing the use of storm overflows by 80% by 2030.

Housing Developments

Given the recent housing development on Newgate Lane what plans are there to increase capacity? The most efficient, cost effective and environmentally beneficial way of reducing storm releases is to separate surface water drainage from the sewer system. We know from some preliminary work in the summer that reducing the amount of rainwater run-off from roads and roofs by around 40 per cent would mean an 80 per cent reduction in storm water releases. This would provide additional capacity within the network, allowing new developments to connect without the risk of overloading the system.

The Gosport Peninsula and surrounding areas are seeing more housing developments and new roads so how will Peel Common WWRC be developed to increase capacity to cope?

Our current plan includes a £35 million investment at our Peel Common site, which, along with refurbishing our existing process assets, will increase its treatment capacity. This means we can increase the amount of water that can be sent for full treatment before having to use the storm tanks.

Is surface water assessment carried out as part of housing development applications? When we receive a consultation on a planning application, it is assessed in terms of impact on the foul drainage network (for foul inputs only) and surface water network if one exists in the vicinity. Where insufficient capacity is identified in the surface water drainage network, we will request a planning condition as follows;

‘Construction of the development shall not commence until details of the proposed means of surface water run off disposal in accordance with Part H3 of Building Regulations hierarchy as well as acceptable discharge points, rates and volumes have been agreed by the Lead Flood Authority, in consultation with Southern Water.’

Not all areas are served by separate surface water sewers, and parts of our foul drainage network is still combined. In situations where surface water is being considered for discharge to our network, we require the below hierarchy for surface water to be followed which is reflected in part H3 of the Building Regulations. Whilst reuse does not strictly form part of this hierarchy, Southern Water encourages the consideration of water reuse (eg rainwater harvesting) for new developments.

- Reuse
- Infiltration
- Watercourse
- Storm Sewer
- Combined Sewer

Infrastructure

- **How much money is being invested in updating infrastructure?** We have planned investment of £2 billion across our entire network for the period 2020 - 2025. Along with maintenance and refurbishment of existing assets, we are investing in additional storage capacity for storm water and increasing the volume of water we are able to send through the full treatment process before having to use storm tanks. Additionally we are investing in natural capital, using nature-based solutions for surface water separation and are looking at new water sources to protect the health of our local rivers and waterways.
- **Having lived in Stubbington since the mid 80’s I have been aware of the ‘Peel Common Pong’ and the works that were undertaken to improve this in the early 2000’s however in recent months the ‘pong’ has returned. Is this a consequence of the Peel Common works becoming closer to capacity and ‘material’ having to be stored on site?** Our Peel Common site recently had to take and store sludge deliveries from another site that was undergoing maintenance. This took longer than expected but has now completed and Peel Common is back to its normal operating levels, reducing the odour levels. Work is also being done on the odour control units which should reduce the odour further. In terms of capacity, our calculations suggest the site has enough room in the current works, but a growth scheme is incorporated in the current asset management programme to 2035 and beyond.
- **Under the Environment Bill Southern Water will need to demonstrate a reduction in discharge of raw sewage. What plans do you have to invest and why has this not been done in the past by re-**

investing profits in line with the scale of development in the area? We have planned investment of £2 billion across our entire network for the period 2020 – 2025 and have committed to reducing all pollution incidents by 80% within this timeframe.

What is your annual investment budget for systemic improvements intended only for the reduction of raw sewage discharge into the sea? How do you report on measurable and demonstrable improvements as a result of this annual investment? Our environmental programme includes significant investment to increase the flow to treatment and increase storm tank capacity, which will benefit both rivers and our coastline. Over the 2020 to 2025 period, our plan includes circa £195m to deliver these improvements. We report regularly on any spills to the environment and have recently made this fully transparent through our Beachbuoy app on the website.

Surface Water

- **Scotland have been separating foul water from surface water since '80s and all new developments must do separation, why don't Southern Water start this process?** We worked in conjunction with Portsmouth City Council on a scheme to remove surface water from the city's combined system. The scheme significantly reduced the risk of flooding and provided the system with the resilience to withstand the impact of a 1:76 year storm event, where typical sewerage systems are designed to a 1:30 standard.
The scheme, although successful, was costly and disruptive. Although we are not discounting similar engineering schemes, we are also looking to use natural capital in providing nature-based solutions to surface water separation, which are more cost-effective and are more beneficial to the environment.
Additionally, our policy asks new developments to:
 - separate surface water from connecting to the public sewer
 - install water efficiency devices that will help achieve our Target 100 aims
 - have properly designed and maintained sustainable drainage systems (SuDS)
 - offset any existing development
- **What are your plans for separating rain run-off from sewage water in the long term? Why can't rainwater from roads be directed straight into the sea?** Reducing the use of storm overflows is a complex task. It requires a coordinated multisector approach to address the root cause of the issue, which is surface water entering the sewerage system during storm events. In times of heavy rainfall the volume of rainwater can overwhelm the sewage system, necessitating the need for CSO discharges. Without the CSO discharging, there is a risk of flooding to homes, hospitals, schools and businesses. We believe that the most effective and environmentally considerate approach is through surface water separation and attenuation, which will reduce the volume of rainwater entering the sewer system. Simply building more storm capacity requires careful consideration. With increases in storm frequency, new and larger assets are potentially only part of the solution to address future climate scenarios. The installation of large underground concrete structures and the associated treatment capacity also carries an environmental impact in terms of the materials needed to construct them and the carbon footprint in delivering and operating them.
Although CSOs are part of the design of the sewerage system in the UK, we entirely accept that this is out of step with the expectation from our customers and stakeholders. We fully support the revised Environment Bill and welcome the opportunity to accelerate improvements beyond our current regulatory obligations. As a result we have set up a new dedicated CSO task force with the aim to reduce the storm discharges by 80% by 2030. In the short term (next two years) we plan to demonstrate at scale how this will be achieved in a number of catchments across our region. This approach will include the necessary actions to stop the surface water run-off entering the

combined sewer system and be managed and filtered in a way as not to harm the environment. We will publish more information on these plans on our website as the projects progress.

How realistic is it to remove 40% highway run-off from an existing infrastructure network? For new builds this is already managed through regulation, but retrofitting can be challenging and expensive. We are developing a number of possible surface water separation solutions using a combination of engineering and nature-based approaches, which are more cost-effective and have more benefit to the environment. Over the next two years we plan to demonstrate, at scale, how this will be achieved in a number of catchments across our region. We will publish more information as the plans progress.

Why has no investment been made in separating foul water from runoff water many years ago to mitigate cost? It is not accurate to say “no” investment has been made. Historic investment has been made to separating surface water to typically reduce the risk of flooding. Surface water separation has been made across the region, Portsmouth being one of the largest schemes. The use of combined sewer overflows to protect properties in times of high rainfall is part of how sewers used to be designed. Investment to separate surface water has typically focused on areas where there has been a localised but significant flooding or environmental impact. The major factor as to why this hasn’t attracted focus historically, is that the investment drivers and direction from Government and Regulators has not been in this direction. Now that the public and national emphasis has changed to spotlight storm overflows we are reacting rapidly to expectation. As the environmental benefit receives a higher weighting so the cost benefit equation will swing to more positively promote these type of schemes.

You talk about directing road run off straight to the sea, but surely there is a considerable amount of pollution in that water, tyre residue, other fuel-based hydrocarbons and other deposits on the road. Surely this cannot go directly into the sea with no treatment can it? This is true and we would not propose to send contaminated road run off straight to sea it would need to go via a nature based solutions, such as swales designed to treat/trap contamination. More information on swales can be found on the following link: <https://www.susdrain.org/delivering-suds/using-suds/suds-components/swales-and-conveyance-channels/swales.html>

May we have the reference to your aspirations to waste water and run off separation? We published a letter from our CEO Ian McAulay on our website here; <https://www.southernwater.co.uk/the-news-room/the-media-centre/2021/november/the-time-to-act-on-storm-releases-is-now> We will post further information and updates on our website as the initial programme is delivered over the next two years.

Southern Water - General

How can we trust that you’ve changed your ways since 2017 – who have the power to check up on you and what powers will they have to ask you to change your ways and raise alarms for the public? The new management team has ensured that since January 2017 the focus of the business has been on putting into place processes, people and systems that will protect the environment and benefit our customers.

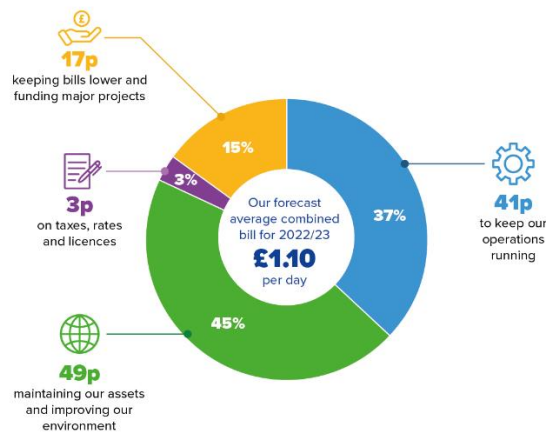
Southern Water are the only water company to publicly support the recent strengthening of the Environment Bill regarding water pollution. We have a dedicated CSO Taskforce who are looking at a number of solutions to the issue, and we have pledged to reduce the use of storm overflows by 8- % by 2030. Water industry regulators Ofwat, as well as Defra and the Environment Agency all have a set of strict operating guidelines that all water companies must adhere to.

So how did we get here? Negligence, policy, the fallout from privatisation? Southern Water is a very different company now. Since the new management team took control in 2017 the focus has been on putting in place processes, people and systems that will protect the environment and benefit our customers. We are investing £1.5 billion in the period 2020 – 2025 to create an

- improved and more resilient network, and have set targets to reduce pollution by 80% by 2025, which we are on track to achieve.
- . **Why does it take so long for Southern Water to respond to company complaints? I emailed about sewage discharges and am still waiting for a response.** Some of the queries we receive asking for data relating to discharges are logged under Environmental Information Regulations (EIR). These requests can take up to 20 working days to process.
- . **Can Southern Water provide a copy of the letter of support to the Environment Bill which Ian referred to please?** The letter has been published on our website and is available to view here; <https://www.southernwater.co.uk/the-news-room/the-media-centre/2021/november/the-time-to-act-on-storm-releases-is-now>
- . **Ian implied that a meeting needs to be arranged with the Highways Agency and an appropriate Government agency to solve the expensive problems of surface water run off. Could we be notified when the meeting takes place and the action plan for progress on this?** Once this meeting has been arranged we will inform our stakeholders and publish a media release.
- . **Will you meet us again with a progress report?** Yes.
- . **Can we have a copy of the slide pack?** Yes, a copy of the slide deck has been sent to Caroline's office.
- . **Would it be possible to have email addresses to contact with points and questions please?** Queries or complaints can be emailed to customerservices@southernwater.co.uk. There is also a contact form on our website, as well as a Live Chat function.
- . **As a Gosport & Fareham Womble, after stormy weather, I am picking up a huge amount of toilet plastic (period products, condoms, wipes etc) on the Solent foreshore, how much of a problem is this waste to the overall discharges issue?** Unflushable items are a big problem for the industry as a whole, with 75% of sewer blockages being caused by people putting the wrong things down the loo and sinks. Water companies are spending around £90 million per year on clearing blockages from the network. Our Unflushables team target hotspot areas with door to door campaigns and work closely with our operational team to identify areas where these items have the biggest impact.
- . **Are Southern Water able to degrade WFD standards?** No.
- . **Do you think your Environmental Policy is ambitious enough, in particular the reference to 'serious' pollution seems to imply that a certain level of pollution will always be inevitable and acceptable?** Yes, we do. No pollution is acceptable to us, and we have ambitious targets to reduce pollution incidents by 80% by 2025, which we are on track to achieve.

Investment


- . **Southern Water are reported to have made a £130m profit last year, what is the justification for not reinvesting this almost entirely back into the system?**
- . We did. No equity dividend was paid, and we invested multiples of our operating profit in the asset base - £394m.
- . We have not paid dividends to external shareholders since 2017.
- . Plans in the current investment period (2020 – 2025) show £2 billion being invested across our region to create a more resilient network that will provide the service our customers and the environment deserve.
- . The following graphic illustrates how our customer bills are invested. Our 24/7 operations, billions of additional investment, and environmental and social value are being delivered for [£1.10] per day.



- In addition, following the investment in Southern Water by a fund managed by Macquarie Asset Management we are now committed to investing significantly beyond our Final Determination to accelerate improvements.
- **What are your plans to improve your service? Are you getting funding from the Government? When will improvements be completed? Are you reducing bonuses to executives?** We are investing £2 billion during the period 2020 – 2025. The investment plans include the installation of new assets, alongside an upgrade and maintenance programme for our existing assets to improve the current network. We are also funding new schemes that look at using nature-based solutions to assist in slowing or separating the flow of surface water from entering the sewerage system.
- We do not obtain any funding from the Government directly. All of our funding comes from our customers and where efficient and possible third-party funders to reduce the impact on customer bills.
- As part of our existing strategy, we are with support of our regulators seeking to improve our operational performance, resilience, and environment. Our PR24 business plan, building on the investment and improvement delivered in the five years to 2025, will continue to set challenging long-term ambitions.
We have a detailed and transparent executive compensation framework published in our annual report. This explicitly links remuneration with performance delivered.
In addition, our CEO Ian McAulay requested a reduction in bonus range two years ago and this has been implemented.

Public Alerts

- **Swimmers use the beaches all year round, along with other users. We need a public notification system placed at the beach to warn water users when there has been a sewage release through the local CDO so please can make informed choices.** Our Beachbuoy service provides near real-time information about releases of storm water or wastewater across the bathing waters in our region. This is the first system of its kind, and while we accept that the service is not perfect, we have created a working group of local stakeholders to help us continue to develop and improve the service.
- **Does the Beach Buoy system take into account the tidal conditions at the times of the CSO discharge?** No, tidal conditions are not factored into CSO discharges or reflected on Beachbuoy. The discharge process itself is automated and only occurs when the volume of storm water exceeds our capacity to fully treat it.
- **How do tides effect the discharges and does Beach Buoy take this into account?** CSO discharges are an automated process, which occur when the volume of storm water stored in our storm tanks



exceeds our capacity to fully treat it. They work much like an overflow in a sink or bathtub, and release when necessary, regardless of the tide times. Beachbuoy currently only monitors when an outfall has discharged. We are continually developing the service with the assistance of a working group consisting of local stakeholders and interested parties. Our aim is to show additional information relating to water quality, displayed in real time, and we will update our website with our progress.

What can the public do?

- **It would be helpful to understand how we can all work together. If it is inevitable that there will sometimes be discharge, is there a time when least impact occurs, allowing for time of day, tides etc?** Fitting water efficiency devices around your home and installing a water butt are simple ways to use your water supply more wisely. A major cause of blockages in the sewerage system is caused by unflushable items entering the network. Each week we remove tons of unflushable items from the system (wet wipes, nappies, sanitary products etc) at our treatment works. Additionally, fats, oils and grease collect inside the sewers after being poured down the sink. Over time this hardens to a concrete-like material which restricts the flow of wastewater through the pipes, costing water companies millions of pounds to clear. Instead, cooled fats, oils and grease should be put into containers and placed in the bin.

The design concept of our sewage system; combining surface water with wastewater, dates back to the Victorian era. Although network repairs and improvements that have taken place in the past 40 years have separated surface water where possible, 16% of our domestic waste system is still based on the original combined design. Additionally, we know that over the years, many more rainwater connections from new developments and building extensions have been made to large parts of the foul water sewer. It is the increased volume of surface water during rainfall that causes a storm water discharge. If the system didn't release through the outfall, water would back-up through the system and flood homes and businesses. The cost of replacing the entire sewage system is far too prohibitive to be viable, and the disruption from the works would be unacceptable. Instead, we are looking at various ways to separate surface water from the combined system using a combination of engineering and nature-based solutions. Our research and modelling shows that by removing 40% of surface water from the system, we can reduce the use of storm overflows by 80%. We have a dedicated taskforce who will demonstrate over the next two years how this will be achieved in a number of catchments across our region.

- **What can 'we' the users/general public do to help?** As above – it's mainly about understanding and educating what should and should not enter the sewerage system.