

## Written evidence submitted by Water UK

1. Water UK represents all water companies in England, Wales, Scotland, and Northern Ireland. In view of the scope of the inquiry our response is focused particularly on behalf of companies in England.
2. Our sector is integral to the protection and enhancement of the UK's rivers and seas and the habitats around them; we invest over £1 billion every year on environmental improvements, including a programme over the next five years to enhance 7,500 miles of river.
3. For hundreds of years, environmental stewardship has been a core responsibility of those taking, managing, and treating water, or dealing with sewage. In recent decades society's expectations about the standards demanded of this stewardship have grown, at the same time as population growth, climate change and urbanisation have introduced new risks and complexity. Therefore, the environment is one of the biggest single priorities for water companies and our customers.
4. Investment by companies has improved our water quality:
  - Pollutant loads are down 70% since 1990s. Our goal is now to further drive down nutrient loading and support the move to increased recreational use of waterways through more freshwater designated bathing areas in rivers and lakes.
  - Storm Overflows will see a further £1.1bn of investment over the next 5 years. While a comparatively small contributor to overall water quality, we agree there is more to do beyond this investment, and industry is collaborating with Government, regulators, and NGOs on a new long-term direction.
  - Serious pollution incidents have reduced, with the most serious category falling by nearly two-thirds between 2001 and 2016. However, we recognise they are still too high and experience year-on-year variation.
5. We are committed to taking further action on all these issues. And we are proud of the efforts we have taken to date – often voluntarily, such as establishing Drainage and Wastewater Management Plans (soon to be recognised in statute), our commitment to achieving net zero carbon by 2030<sup>j</sup>, and national action on water efficiency.
6. In return, we are calling for Government's help where there are straightforward changes that will accelerate our efforts, and for other sectors to play their part. The latter is particularly important as 40% of waterbodies are impacted by pollution from agriculture, for example, compared to 36% from wastewater – so we need holistic plans that deal with catchments as a whole.
7. We welcome this inquiry in helping further bring light to ongoing issues, future challenges, solutions, and regulatory constraints.

*What are the best indicators for river water quality that could be used as targets being developed under the Environment Bill?*

8. Water UK believe good targets focus on the outcomes that are sought, rather than ‘proxies’ that measure individual chemicals or other outputs. By focusing on outcomes, organisations’ incentives will be most closely aligned with the goal we are trying to achieve, avoid perverse incentives, and promote innovation.
9. This is not a theoretical debate. There are examples in the water sector of companies being incentivised to ‘fix’ one issue at the cost of others or missing potential environmental benefits in the meantime. For example, the Urban Wastewater Treatment Directive can sometimes reduce our ability to deploy nature-based projects, pushing instead towards concrete-led approaches that are much worse for biodiversity and carbon.
10. Water UK believe there are four main outcomes of importance for rivers:
  - a. Resilient ecosystems with good ecological health
  - b. Sufficient flow, and availability of water
  - c. Public health
  - d. Aesthetic / well being
11. The first two are the most suitable subjects for national targets, while outcomes three and four will be much more location or designation specific.
12. On (a), WFD status indicators are a well-established (if in some cases limited) basis for UK targets, and we do not advocate moving away from them before 2027. However, slow progress means that, while flow can affect ecological status, we also need to see additional targeted action on (b). Water UK would support a Distribution Input (DI) target or DI per capita target to incentivise action on leakage and abstraction.
13. Targets alone are, though, insufficient. They need to be backed up by the right policy and regulatory framework. This particularly applies to allowing water companies to take stronger action to protect sensitive waterbodies, like chalk streams, or where there are high numbers of recreational users. We also need plans, investment and enforcement against all sectors affecting targets.

## **Recommendations**

- **We urge the undertaking of a consultation to work up a range of sustainable performance indicators with regulatory and customer groups.**
- **All targets should start from our ‘four outcomes’ of ecosystems, flow, public health and aesthetic, and encourage decisions and investment that maximises benefit to them. That is**

**likely to mean outcome-level targets that are backed by a framework tested against enabling their delivery.**

*How could drainage and sewage management plans, introduced by the Environment Bill, play a role in reduced sewer discharges?*

14. The water industry strongly supports putting the water industry's Drainage and Wastewater Management Plans (DWMPs) on a statutory footing through the Environment Bill.
15. Provided that these plans are fully reflected in price review decisions by Ofwat, they will play an important part in helping reduce sewage overflows during storm conditions and managing surface water at times of increasing flood risk.
16. To be fully effective, DWMPs require an integrated approach. A vast swathe of other stakeholders having drainage and flood risk responsibilities. These other stakeholders are also Risk Management Authorities, who maintain drainage assets, and hold information and data which are crucial to the consideration of integrated long term drainage planning and management.
17. We were very pleased therefore to hear the Minister commit to addressing the current gap in the Environment Bill in her statement during the recent report stage<sup>ii</sup>[\[1\]](#) confirming the Government's intention to expand Section 13(1) of the Flood and Water Management Act 2010 to specify that all risk management authorities must co-operate in sharing data and information with one another on the preparation of DWMPs.

*How adequate are the monitoring and reporting requirements around water company discharges?*

18. Pollution incidents have fallen by two thirds since 2001, and the Environment Agency rates the industry's environmental performance overall as 'good', with an average score of three out of four stars. The Water Industry is committed to improving performance and the EA has also called for further reductions in the number of pollution incidents. This is a strong focus for companies and their regulators for coming years, and good data is core to achieving that.
19. We decided to create [www.discoverwater.co.uk](http://www.discoverwater.co.uk) to help stakeholders follow some of the data on these issues, and are very open to discussing other ways of providing (and making use of) information with customers, users of rivers, citizen scientists and regulators. We have also made new commitments to increase transparency on storm overflows as part of our membership of the Storm Overflow Taskforce<sup>iii</sup>.
20. However, in England and Wales there remains a critical gap in external monitoring and enforcement following a decade of increased resourcing pressures on the Environment Agency and Natural Resources Wales. Confidence in some parts of the UK by both the public and third

parties is threatened by the perception that companies are “marking their own homework” with insufficiently robust oversight. There are also gaps in regulators’ monitoring of broader waterbody impacts and health – something that no individual sector alone can fill. Confidence must be maintained in reporting systems, which means more resources for regulators to conduct independent testing of the quality of (and all sources of pollution into) waterbodies.

21. Finally, it is important to establish the focus of monitoring and reporting. Reporting on ecological status is well-established, while for other outcomes (potentially public health, for example) we might need new metrics – something we would be willing to help develop.

### Recommendations

- **Ensure environmental regulators have sufficient resources to understand the condition of (and all sectors’ impacts on) waterbodies; can quickly locate sources of harm; and take enforcement action accordingly – even against diffuse polluters.**
- **Build a taskforce to investigate how water quality indicators should evolve over time. This should consider the post-2027 landscape once the Water Framework Directive deadline is passed; take into account society’s changing objectives for its waterbodies; and cover all relevant sectors like wastewater, agriculture, mining and transport.**
- **Build on the work of the Storm Overflow Taskforce to support the development of a national register of all assets discharging materials into waterways (including local authorities and private individuals), particularly in sensitive catchments to ensure action to rectify problems can be taken.**

### *How can technology improve and assist with transparency and enforcement?*

22. Technology is providing opportunities not previously available for real-time water quality reporting for designated waters and sensitive catchment areas. Electronic monitors are being installed by companies across the networks where possible to provide real time data on overflows and at discharge points.
23. The industry has accelerated this planned work to ensure all overflows are monitored by 2023, two years earlier than initial plans.
24. New technology including use of artificial intelligence is also being trialed by companies to reduce wastewater network blockages and pollution through prediction modelling. Early warning systems using data to predict and identify changes in the network are also being adopted by companies to facilitate a ‘just in time’ to aim to resolve problems before pollution incidents occur.
25. The use of remote sensing, using unmanned aerial vehicles, drones, and satellites, could also serve as a useful tool in the armory of regulators to spot poor land management that contributes to pollution of watercourses.

26. Such use of technology will expand across the sector in coming years as trials and demonstrations show how they can work in real life situations.
27. As well as new technology driven solutions, the importance of trialing and expanding the role of nature-based, partnership-led solutions must not be overlooked in the benefits for both river quality and co-benefits including decreasing carbon emissions. Regulatory support is needed to maximise adoption of nature-based solutions, as identified later in this response.

*What is the impact of plastic pollution and other materials on drainage and water quality in rivers and what should be done to mitigate it?*

*How can consumers be persuaded to change their behaviour to minimise pollution?*

28. Both macro and micro plastics present significant challenges for the water industry. While wastewater and water treatment plants are extremely effective at removing microplastics<sup>iv</sup>, control at source is the most sustainable and effective tool to prevent all plastics ending up in the environment.
29. While consumer behaviour has a role to play, removing the choice of unnecessary plastics will be a more effective solution to address the ingress of plastics into water systems. A combination of policy tools will be needed.

#### Wet wipes

30. Currently, the design of most wet wipes – which account for more than 90% of material in fatbergs – means that they do not break down in sewers. This causes 300,000 sewer blockages every year in the UK, costing customers more than £100 million to resolve, causing homes to flood, and resulting in serious incidents of river pollution. The vast majority of these products contain plastics, and their product labelling can cause confusion amongst consumers, increasing the problem of sewer blockages.
31. Without either a regulatory imperative or cost incentive, damaging products will remain on the market. Clear labelling would help inform consumers and company consumer information campaigns, such as ‘Bin It, Don’t Block It’, show informing customers can have an impact<sup>v</sup>. However, the scale of impact on behaviour change is not be sufficient in itself and changes to product formulations will also be needed. Regulatory tools will therefore be required.
32. Part 3 of the Environment Bill includes two clauses (49 and 50) on producer responsibility obligations. We strongly support the inclusion of these clauses because they allow the costs of cleaning up pollution to be directed to those causing the problem, rather than relying on the taxpayer or customer to fund cleanups instead.
33. The water industry standard for flushability, known as Fine to Flush<sup>vi</sup>, is the only standard that sufficiently mimics real-world forces present in the sewerage network. The standard assesses

products through a series of rigorous tests to ascertain whether they disintegrate sufficiently in the sewer system, and whether or not the product contains plastics. 'Fine to Flush' is increasingly being adopted by manufacturers<sup>vii</sup>. However, mandated 'Fine to Flush' accreditation for any product that is market as flushable, alongside a requirement for clear 'Do Not Flush' labelling for uncertified products, is necessary to ensure that products do not continue to contribute to blockages and pollution incidents.

### Microplastics

34. While water company treatment processes remove over 99% of microplastic particles, new measures are needed to control microplastic pollution at source.
35. Stronger incentives and penalties must be put in place to encourage producers to avoid harmful formulations in other products (such as tyres and clothes), and to take responsibility for preventing pollution and cleaning up the environment.

### **Recommendations**

- **Government should introduce an extended producer responsibility scheme for sanitary products to ensure that manufacturers pay the full costs of labelling, awareness raising and cleaning up blockages and pollution (as under EU Single Use Plastics Directive).**
- **Mandate 'Fine to Flush' accreditation for any wet wipe product that is marketed as flushable, and require wipes that have not passed the Fine to Flush standard to display clear labelling as 'Do Not Flush' on the front of the packaging.**
- **Mandate producers of sanitary products to remove plastic from their products and for better labeling to support consumer awareness and action.**
- **Extend the trade effluent regulations to food service establishments to make them dispose of fats and oils responsibly.**

*What is the required investment level needed to minimise storm overflows vs the scope for sustainable drainage and nature-based solutions?*

36. We are committed to reducing the impact of overflows. The industry will invest £1.1bn over the next five years to that end.
37. Sustainable drainage and nature-based solutions are an extremely important part of the further action needed. Not only do they often require much less capital investment, but they also bring wider benefits. That helps companies with the business case for acting, as the water quality harm from overflows is often much lower than other sources (for example, they are perhaps involved in 17% of reasons for not achieving good ecological status), and so concrete-based solutions can sometimes struggle to obtain approval.
38. Our cost estimates for dealing with the complete elimination of overflows are highly uncertain, but our (rough) estimate puts it somewhere in the region of £100bn. We are doing more work now, in collaboration with the Storm Overflows Taskforce<sup>viii</sup>, to produce a better estimate, and

understand how different levels of investment could reduce overflows' impacts to different levels. This will also take into account the potentially huge disruption caused by carrying-out the engineering required<sup>x</sup>, which is likely to make complete elimination impractical in some areas, but which could again be partially ameliorated by nature-based approaches.

39. Importantly, any solution to this problem has to involve a large package of measures: not just the promotion of – and enabling investment in – nature-based solutions, like sustainable drainage, to reduce surface water-run off. It also requires other measures, including legislative and policy change to reduce the ever-increasing volume of water entering foul sewers; new approaches to groundwater infiltration into sewer systems; and changes to how we dispose of products, like wet wipes, which cause spill-triggering blockages.

#### **Recommendations:**

- **Ensure overflows and the promotion of sustainable drainage are part of strategic guidance to regulators and companies, including the Strategic Policy Statement planned by Defra for later this year. This should be consistent with – and ensure progress towards – the long-term strategic goal set out by the Storm Overflows Taskforce.**
- **Change legislation that ends the untenable situation of new developments continually making the situation worse by adding ever-greater volumes of water:**
  - **Ensure all new developments meet minimum water efficiency thresholds.**
  - **Withdraw the automatic right of allowing new surface water connections to the combined sewer network – instead, promoting reliance on 'Sustainable Drainage.'**
  - **Encourage and facilitate separation of surface water from combined sewers to promote more sustainable solutions than attenuation solutions.**
  - **Encourage and facilitate the prevention of groundwater ingress into private drains.**

*How effective are the planning policy and standards around sustainable drainage systems to reduce urban diffuse pollution in England?*

40. Immediate action to increase use of sustainable drainage solutions (SuDS) in new developments is needed. Currently, local authority planners have a responsibility for ensuring new developments are drained in a sustainable way, but this is not binding guidance. Often, in practice, the consideration of SuDS is merely a tick-box exercise as many options for not adopting SuDS are provided.
41. As identified in a review by Defra in May 2020 on Surface Water Drainage<sup>x</sup>, the approach adopted in England to deliver and maintain effective sustainable drainage systems is widely seen to be insufficient and not fit for purpose - a view which we also hold.
42. Retrofitting SuDS and other nature-based solutions should also be considered where appropriate. While costs may be high, co-benefits for the local environment, provision of green spaces for public enjoyment and lower carbon impacts of such changes should also be considered<sup>xi</sup>.

43. In addition to the need to change guidance, there remain outdated practices, supported by regulation, which increases pressures on our wastewater and surface water management systems.
44. The use of the automatic right to connect surface water to combined/foul water systems is commonplace. In practice, alternatives are rarely adopted and are not seen as a priority. Continuing with the status quo in planning will place unplanned and increasing pressure on systems adding to potential overflows, as well as introducing increasing carbon costs associated with treating surface water that does not need treatment.
45. Water UK believe the longer the automatic right remains, the pressure on existing infrastructure (including Storm Overflows) will grow at time when it needs to be eased to facilitate housing growth.
46. Failing to change the approach on automatic connection rights means continued missed opportunities for the many additional co-benefits from SuDS - including health and wellbeing, biodiversity gains and better surface water management.
47. An additional and related outdated practice relates to surface water management. Pressure on existing infrastructure could be additionally eased if there were greater options automatically available for water companies to manage surface water through discharge into other surface water systems, such as canals or rivers. Currently this is often subject to fees which make it cost prohibitive. By allowing surface water to surface water discharge, there would be additional carbon reduction benefits as it will reduce the amount of unnecessary water treatment.
48. In short, the Environment Bill should embed a 'natural by default' approach to surface water management, facilitated through changes to the planning system.

### Recommendations

- **Remove the right to connect surface water to combined/foul water systems.**
- **Update planning guidance to reflect new environmental policy objectives and ensure all schemes incorporate high-quality SuDS.**
- **Non-statutory technical standards for SuDS should be made mandatory.**
- **Embed the 'natural by default' approach, including the right to discharge surface water to surface water.**

*Should local authorities and highways agencies be given a duty to prevent pollution to watercourses without prior treatment?*

49. Yes. All authorities with wastewater responsibilities should be subject to regulatory responsibilities equivalent to those imposed on water companies. Without extending responsibilities to all parties managing wastewater to invest and plan for managing water in their control, our waterways will not meet the high standards the public rightfully expect. The

dumping of untreated water into the wastewater systems will only increase pressures on infrastructure out of water industry control.

*How effective is Ofwat's remit and regulation of water companies? Does it facilitate sufficient investment in improvements to water quality, including sustainable drainage systems and nature-based solutions such as constructed wetlands?*

*Is adequate investment being made in adapting water treatment systems to future climate change?*

50. It is widely recognised that the challenge placed on society from climate change needs longer term planning and investment programmes to deliver both resilience and mitigation.
51. There is a broad consensus that a long-term approach is needed to investment in infrastructure sectors to deliver benefits to the environment and society. For example, the UK Government<sup>xii</sup>, the Welsh Government<sup>xiii</sup>, the National Infrastructure Commission<sup>xiv</sup>, and the National Audit Office<sup>xv</sup> have all highlighted the need for actions to be taken in the context of a long-term approach. Ofwat's strategy<sup>xvi</sup> has a long-term orientation, and this is also seen in other nations of the UK, for example in recent decisions by the Water Industry Commission for Scotland<sup>xvii</sup>.
52. In Scotland, the water sector has faced essentially the same challenge as elsewhere in the UK of balancing the need to invest in order to deliver long-term priorities with an understandable desire to minimise the impact on customers in the short term. It is notable that there, in contrast with England and Wales, the approach<sup>xviii</sup> has been to recognise that to meet long-term priorities, charges will need to increase. The recent final decision was that over the next six years, bills will rise on average by 2% above the rate of Consumer Price Inflation (CPI), with a key driver being the need over time to reach a sustainable level of asset replacement<sup>xix</sup>.
53. The key in future will be for aligned long-term strategic intentions to flow through clearly and consistently into implementation and regulatory decisions in all parts of the UK, ensuring future price reviews are not missed opportunities.
54. Additionally, a greater flexibility in the regulatory framework is needed to allow nature-based solutions to be adopted more widely is required. For example, nature-based solutions require a flexible approach to permit levels as natural variation occurs at different times of the year. The approval and assessment process also needs reviewing to maximise the opportunities for use of nature-based solutions. The EA currently processes nature-based solutions or catchment management permits through its "innovative solutions" channel, which is longer than their standard process, and a limit on the pace of transformation and adoption of these solutions. Great use of nature-based solutions offers many co-benefits, including decreasing carbon emissions and opportunities for increasing biodiversity where implemented. Our regulatory framework should help facilitate best use of these approaches.

55. We have welcomed Ofwat starting a conversation about the long-term challenges facing the water sector, and how PR24 can be used as step in the process of addressing these. With the recent publication of the National Infrastructure Strategy (in particular the Government's commitment to adopting a long-term approach to investment), we hope there will be a change in approach to regulation to enable longer term decision-making. This should ensure the challenges of planning for climate change resilience are not made harder by regulatory hurdles.
56. Water UK is working on a 2050 Vision to help identify how different pressures and priorities will create tradeoffs to help outline potential investment trajectories for our sector. We hope our work will help in on-going dialogue with regulators as future regulatory cycles are designed.

*February 2021*

## References

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- <sup>i</sup> <https://www.water.org.uk/blog-post/routemap-2030-time-for-action-not-delegation/>
- <sup>ii</sup> Environment Bill, Report Stage Debate Tuesday 26 January  
<https://hansard.parliament.uk/commons/2021-01-26/debates/20CFA026-8E78-4D84-82E4-B4236D826AA4/EnvironmentBill>
- <sup>iii</sup> <https://www.water.org.uk/news-item/water-uk-responds-to-storm-overflows-taskforce-announcement/>
- <sup>iv</sup> More than 99% of microplastics are removed from drinking water and wastewater treatment process by company treatment processes [https://www.ukwir.org/view/\\$NvDnwfm!/](https://www.ukwir.org/view/$NvDnwfm!/)
- <sup>v</sup> Thames Water campaigning from January to March 2020 led to blockages falling to a level 10% lower than the 2017-2019 average.
- <sup>vi</sup> Fine to Flush [(WIS) 4-02-06 <https://www.water.org.uk/wp-content/uploads/2019/11/Fine-to-Flush-Issue-1.2-November-2019.pdf>
- <sup>vii</sup> <https://www.water.org.uk/news-item/andrex-washlets-join-the-fight-against-fatbergs-as-they-get-official-fine-to-flush-approval/>
- <sup>viii</sup> <https://deframedia.blog.gov.uk/2021/01/22/storm-overflows-taskforce-sets-goal-to-end-pollution-from-storm-overflows/>
- <sup>ix</sup> The Thames Tideway Tunnel, an example of the scale of infrastructure needed in complex city landscapes to relieve pressure on sewage systems and storm overflows, which are difficult to replace. The Tunnel when complete will capture around 95% of the untreated sewage currently discharged to the tidal River Thames in a typical year. The project is expected to cost £3.8bn  
<https://www.tideway.london/news/press-releases/2019/april/super-sewer-now-40-per-cent-complete-as-tideway-reports-on-year-of-progress/>
- <sup>x</sup> Surface Water Drainage Review, Defra May 2020  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/911812/surface-water-drainage-review.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/911812/surface-water-drainage-review.pdf)

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xi Demonstration projects exist including the a retrofitting scheme in the Counter’s Creek catchment by Thames Water

([https://www.susdrain.org/news/articles/plans\\_unveiled\\_ukrs\\_largest\\_sustainable\\_urban\\_drainage\\_network.html](https://www.susdrain.org/news/articles/plans_unveiled_ukrs_largest_sustainable_urban_drainage_network.html)) and Dŵr Cymru RainScape initiative in the area of Llanelli

(<https://wwtonline.co.uk/features/project-focus-rainscape-dwr-cymru-welsh-water-s-suds-solution>)  
xii <https://www.gov.uk/government/publications/strategic-policy-statement-to-ofwat-incorporating-social-and-environmental-guidance>

xiii <https://senedd.wales/laid%20documents/gen-ld11283/gen-ld11283-e.pdf>

xiv <https://nic.org.uk/studies-reports/national-infrastructure-assessment/national-infrastructure-assessment-1/analysis-costs-emergency-drought/>

xv <https://www.nao.org.uk/report/water-supply-and-demand-management/>

xvi <https://www.ofwat.gov.uk/wp-content/uploads/2019/10/Time-to-act-together-Ofwats-strategy-1.pdf>

xvii [https://www.watercommission.co.uk/view\\_Press\\_Releases\\_2020.aspx?ArticleId=273](https://www.watercommission.co.uk/view_Press_Releases_2020.aspx?ArticleId=273)

xviii <https://www.watercommission.co.uk/UserFiles/Documents/2021-27%20FDP%20Prospects%20for%20Prices.pdf>

xix

[https://www.watercommission.co.uk/UserFiles/Documents/2019%20Asset%20Replacement\\_Final.pdf](https://www.watercommission.co.uk/UserFiles/Documents/2019%20Asset%20Replacement_Final.pdf)