



Member of Parliament for Fareham and Waterlooville  
HOUSE OF COMMONS

Friday 4<sup>th</sup> April 2025

Dear Southern Water,

**Hampshire Water Transfer and Water Recycling Project Spring 2025 Consultation**

I am submitting my response to your latest round of consultation.

**Environmental Water Quality**

1. **Inadequate Risk Assessment:** The water quality assessment fails to adequately address the potential risks associated with the discharge of recycled effluent into the reservoir and downstream watercourses. It lacks the necessary detail to evaluate the reliability of the modelling process, and it downplays key contaminants that could pose significant environmental and public health risks, such as pharmaceuticals and per- and polyfluoroalkyl substances (PFAS), commonly known as "forever chemicals." These chemicals hold significant environmental and health risks.
2. **Algal Bloom Risk Acknowledgement:** For the first time, the assessment acknowledges that the discharge of recycled effluent into the reservoir will likely result in algal blooms. These blooms can degrade water quality and reduce biodiversity, which would have significant ecological impacts. However, this recognition only scratches the surface and fails to consider the broader consequences.
3. **Proposed Phosphate Removal Process:** To mitigate the risk of eutrophication caused by increased phosphorus levels from the effluent discharge, the report proposes adding a phosphate removal process. This process will need to operate daily, which will significantly increase operational costs, energy consumption, and carbon emissions. The location of this new treatment facility at the Broadmarsh Water Recycling Plant will further complicate the logistics and environmental footprint of the project.
4. **Overlooked Environmental Impacts:** The report concludes that the only potential environmental issue from storing recycled effluent in the reservoir is the shift to eutrophic conditions due to phosphorus. This is an incomplete and narrow view, as it fails to address other critical impacts such as the discharge of additional contaminants. A more comprehensive analysis is needed, as numerous contaminants from recycled effluent have not been evaluated, including pharmaceuticals, pesticides, volatile organic compounds (VOCs), and PFAS. These substances pose serious risks to water quality and aquatic ecosystems.
5. **Treated Water Contaminants:** The treated effluent from the trial at Budds Farm Sewage Works in 2023 revealed the presence of contaminants such as pharmaceuticals, PFAS, and pesticides. These substances were not considered in the current water quality report, even though they could have a detrimental effect on the reservoir's ecosystem and downstream watercourses.
6. **Risks of Treatment Chemicals and Disinfection By-products:** The report does not provide sufficient evaluation of the risks posed by chemicals used in the treatment process or by the disinfection by-products that may enter the reservoir. These chemicals could have harmful environmental consequences that need to be fully assessed and managed.



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7. **Biodiversity Loss and Geochemical Changes:** The proposal also threatens the loss of a unique biodiversity opportunity by altering the natural characteristics of the reservoir, which could have been a chalk spring-fed habitat. The changes in water chemistry, resulting from the discharge of recycled effluent, will adversely impact the flora and fauna that depend on the current water quality.
8. **Operational Costs and Carbon Footprint:** The daily phosphate removal process, along with the operation of the bubbler/aeration system in the reservoir will further contribute to rising operational costs and an increase in carbon emissions. This is necessary to address the worsening water quality that will result from the recycled effluent discharge, highlighting the long-term financial and environmental impacts of this approach.

**Water Quality and Biodiversity Impacts on Langstone Harbour**

1. **Inadequate Assessment of Water Quality Impacts:** The water quality impacts and associated risks to Langstone Harbour have not been sufficiently evaluated in the current assessment. The conclusions drawn regarding the potential effects of effluent recycling on water quality and biodiversity are not adequately substantiated and fail to provide a comprehensive analysis of the long-term environmental implications.
2. **Reduction in Nitrate Benefit to Langstone Harbour:** The proposed effluent recycling scheme fails to account for the reduction in nitrate concentrations that would result in Langstone Harbour, thereby undermining a previously established benefit. This benefit was substantiated through water quality modelling conducted for the spring-fed reservoir in both 2011 and 2020, which demonstrated the positive impact of the reservoir in maintaining beneficial nitrate levels. The omission of this factor is a significant oversight, as it could lead to adverse consequences for the harbour's water quality and ecological balance.
3. **Neglect of Potential Water Quality Risks Beyond the Report's Scope:** Even if certain water quality risks are considered to fall outside the direct scope of the current report, these risks remain pertinent and potentially harmful to the water environment. Such risks should at the very least be acknowledged, as failure to do so may result in unforeseen negative consequences. A more comprehensive and precautionary approach is necessary to safeguard the long-term health of Langstone Harbour and its associated ecosystems.

**Solent Modelling Concerns**

1. **Insufficient Evidence to Conclude No Significant Effects:** The report concludes that there will be no likely significant effects on the Solent because of the effluent recycling plant's operations; however, the available information is inadequate to substantiate this conclusion. The reject water from the plant will contain a multitude of contaminants, some of which could pose potential risks to the Solent's marine environment. Given the presence of these contaminants, there is a substantial potential for significant adverse effects, necessitating more detailed and comprehensive marine dispersion modelling. Additional work is required to evaluate the risks associated with various operating scenarios and to ensure a thorough understanding of potential environmental impacts.



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- 2. Failure to Address New Contaminants in Reject Water:** The reject water from the effluent recycling plant will introduce new contaminants of concern, including treatment chemicals, cleaning agents, and treatment by-products. These substances must be properly assessed in terms of their potential risks to the marine environment. However, the report fails to adequately consider the implications of these additional contaminants, which could exacerbate the environmental impact and affect marine ecosystems in the Solent.
- 3. Lack of Consideration for Bioaccumulation and Sedimentation Risks:** The report neglects to evaluate the risks associated with bioaccumulation and sedimentation. Research conducted by Portsmouth University has demonstrated that contaminants found in sewage can accumulate in algae. Algae, in turn, are consumed by marine species and can settle on the seabed after they die, leading to the potential for contaminants to enter the food chain. This critical pathway has not been adequately addressed, and its potential long-term effects on marine biodiversity remain unclear.
- 4. Uncertainty Surrounding Cumulative Effects of Reject Water Discharge:** The report does not provide a clear assessment of the cumulative effects of continuous, day-to-day discharge of more concentrated reject water into the Solent. The long-term impact of this increased concentration, and how these effects are to be measured or mitigated, remains uncertain. A more rigorous evaluation is needed to understand how the continuous discharge of concentrated reject water could influence the overall health of the marine environment in the Solent.

**Design Refinements:**

**Design Refinement 10 – Forest Lane:**

- The proposed changes outlined in Design Refinement 10 will result in greater noise and vibration levels than those initially anticipated in the Preliminary Environmental Information Report, as presented during the Summer 2024 Consultation.
- These increased levels of disturbance are likely to have a negative impact on the residents in the area, necessitating further mitigation measures and a reassessment of the potential environmental impacts on the surrounding community.

**Design Refinement 13 – Wickham Park Golf Club and River Meon:**

- Despite the proposed design refinements, there remains an identified impact on vegetation and associated ecological systems. The loss of vegetation could have cascading effects on local biodiversity and the broader ecosystem.
- Additionally, while there is an option for implementing additional trenchless crossings, it is important to assess the feasibility, environmental benefits, and any potential trade-offs associated with this alternative.
- A more detailed evaluation of these options is essential to ensure that the final design minimises adverse environmental effects.



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**Design Refinement 14 – Intermediate Pumping Station G:**

- The relocation of access to Park Place Farm Nursery, is currently unacceptable due to the impact on the surrounding area. The proposed change would necessitate the removal of additional vegetation within an area that is protected by a Tree Preservation Order (TPO).
- This modification would not only undermine the ecological value of the area but also breach regulations intended to preserve important tree cover. Further consultations and alternative solutions should be explored to mitigate these impacts and ensure compliance with environmental protections.

**Dismissal of Risks to Water Quality:**

- The report dismisses the potential risks to water quality in the reservoir, Langstone Harbour, and The Solent without adequately considering all associated risks. This oversight leads to an incomplete and unconvincing analysis, which undermines the credibility of the project's environmental assessments.

As a result, I cannot support the Hampshire effluent recycling project in its current form.

**Inadequate Consideration of Alternative Options:**

- Southern Water has, to date, not sufficiently explored all possible alternatives to the proposed effluent recycling scheme. More sustainable options, such as relocating river abstractions, enhancing the collection and storage of free winter rainwater through new or expanded reservoirs, or utilising underground aquifers, have not been fully considered. These alternatives could provide a more environmentally responsible and cost-effective solution, without the risks associated with effluent recycling.

**Disregard for Constituent Representations:**

- It is deeply disappointing that Southern Water has failed to adequately consider or incorporate the concerns of my constituents in the compilation of responses for the 2024 consultation. This disregard for public input has led to the publication of inaccurate and misleading information, demonstrating a lack of respect for both customers and the efforts of those who took the time to respond to the consultation.

**Unacceptable Approach to Reservoir Water Levels:**

- The proposal to keep the reservoir topped up to near winter levels, as indicated in Southern Water's Ofwat Gate 3 report on the effluent recycling project, is unacceptable. Seasonal fluctuations in water levels are essential to the ecological health of the reservoir, as they mimic a more natural environment and optimise biodiversity benefits. The original plan for a spring-fed reservoir was designed with these fluctuations in mind and maintaining a static water level would undermine the biodiversity potential of the reservoir.

**Potential Negative Impact on Biodiversity:**

- Portsmouth Water has publicly committed to ensuring no loss of biodiversity benefit when compared to the original spring-fed reservoir proposal, should effluent recycling proceed. However, the changes in geochemistry, including increased salinity, temperature, and the introduction of additional contaminants into the reservoir, will likely have detrimental effects on the biodiversity potential of the reservoir. Given these risks, Portsmouth Water should not permit the discharge of recycled effluent into the reservoir.





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**Inadequate Engagement on the Acceptability of Recycling Effluent:**

- I strongly believe that there has been inadequate engagement with customers regarding the acceptability of recycling final effluent from sewage works to produce drinking water. The community must have a more thorough and meaningful discussion on this issue, and the project should not proceed until all concerns have been properly addressed.

**Call for More Sustainable Solutions:**

- I urge Southern Water to reconsider its approach and engage more effectively with the community. The project must not proceed until all obstacles, including environmental, social, and technical concerns, have been thoroughly addressed. We require a solution that prioritises sustainability and protects both the environment and customers. More sustainable and cost-effective alternatives should be pursued, rather than relying on the potentially harmful and high-risk effluent recycling scheme.

**Inadequate Engagement with Customers:**

- I firmly believe that there has been insufficient engagement with customers regarding the acceptability of recycling final effluent from sewage works to produce drinking water. This critical issue has not been thoroughly discussed with the community, and the lack of meaningful consultation undermines the legitimacy of the project.

**Call for Southern Water to Address Community Concerns:**

- I strongly urge Southern Water to actively listen to the community and consider the substantial concerns raised. It is imperative that this project does not proceed until all obstacles have been properly addressed. A more transparent and inclusive approach is needed to ensure that all stakeholders, particularly customers, have a genuine opportunity to provide input.

**Prioritisation of Sustainable and Cost-Effective Solutions:**

- My constituents require a solution that not only protects the environment but also safeguards the interests of customers. It is crucial that Southern Water prioritises more sustainable, cost-effective alternatives to the proposed effluent recycling project, ensuring that both environmental and financial considerations are considered in the decision-making process.

Yours sincerely,

A handwritten signature in blue ink that reads "Suella Braverman".

**Rt Hon Suella Braverman KC MP**  
**Member of Parliament for Fareham & Waterlooville**