

From: RAPID
Subject: FW: Ofwat consultation on Accelerated Gate 2 Draft Decision for Water Recycling - Response

From: [redacted]
Sent: 11 April 2022 23:16
To: RAPID <RAPID@ofwat.gov.uk>

Subject: Ofwat consultation on Accelerated Gate 2 Draft Decision for Water Recycling - Response

Dear sir / madam,
Please find below my response to the Ofwat consultation on Accelerated Gate 2 Draft Decision for Water Recycling.

Earlier this evening at 17.12 I sent a response to the Ofwat consultation on Accelerated Gate 2 Draft Decision for Havant Thicket Reservoir Raw Water Transfer, I did not receive an automated response acknowledging receipt of my response.

I would be grateful if you could confirm receipt of both responses.
Kind regards,

[redacted]

Overview on effluent recycling as a selected solution

I do not believe that effluent recycling is an acceptable nor appropriate solution to the regions water supply needs. The energy costs, chemicals used and carbon impact make it an unsustainable technology. This is not a best value solution for the customer nor the environment. Specific concerns related to the effluent recycling proposal include:

- The energy, chemical and carbon costs associated with the daily treatment, and pumping of water more than 15km + 35km over a period of more than 70 years make this an extremely environmentally unfriendly and unsustainable solution, which does not provide best value for the customer, nor the environment, especially given spiralling energy costs. This solution uses the same energy, chemical and carbon hungry technology as desalination, it still produces a concentrated liquid effluent which must be discharged into our sensitive coastal waters, and the treated water must be pumped a long way to where the water is needed in the Southampton area. Desalination is now rejected by the company as being too environmentally unfriendly and an option of last resort, so should effluent recycling.
- Given that the water will taste different there is a significant risk that consumers will reject the water, knowing where it comes from, and turn to bottled water instead. This has wider economic and societal impacts, but also brings into question the issue of whether the water will be considered wholesome.
- Water is very heavy and requires a lot of energy to pump. Energy costs are rising rapidly, making the transfer of water over 15km + 35km and running a number of new pumping stations, a very expensive solution.
- Pumping the water over 35km for more than 70 years will generate an enormous carbon footprint. This carbon will shortly have to be off-set and customers will have to pay for that too, increasing the costs further. Has this been included in the cost schedule provided to Ofwat?
- The government has committed to zero carbon by 2050 and water companies to zero 'operational' carbon by 2030. Pumping water more than 15km + 35km on a daily basis for 70 years plus via a pipeline to Otterbourne is completely at odds with the stated national and water company objectives at a time of climate emergency.
- There has been a lack of stakeholder, community and customer consultation on this proposal.

If effluent recycling is to be selected as a solution supported by the regulator's then Option B5 should be preferred to Option B4 for the following reasons.

- Option B2 and B5 involve creating a new Environmental Buffer Lake nearer to Otterbourne. As the water in that bespoke lake can be fully contained and is for the specific purpose of effluent recycling, with no need for discharges to existing stream/ rivers, nor the coast, it would be a better environmental solution than Havant Thicket Reservoir, with less risk to the environment.
- Southern Water specifically flag in their Gate 2 Annex 5, Page 140 that there are potential benefits to the sensitive coastal waters of Option B5 rather than Option B4: "There are potential benefits on the water environment associated with B.5 as some flows would be diverted from the Peel Common WTW LSO which is a less well mixed environment than the Eastney LSO". Note: *The Eastney Long Sea Outfall is the Budds Farm LSO*".
- Peel Common WTW is closer to where the water is needed in Southampton. As a result the length of pipeline can be significantly reduced (compared to that shown in Figure 1), by providing a pipeline from Peel Common WTW to Otterbourne, with the Waste Water Recycling Plant constructed at an appropriate location along the route, at a location where it will have least impact. This reduces the construction footprint, impacts and costs for the pipeline, reducing the number of complex road, rail and river crossings needed, and the financial / environmental risks associated with such crossings.
- It will also reduce the ongoing operating costs and the carbon footprint of the solution over the next 70+ years, making it a more cost effective and sustainable solution.
- The trial plant for effluent recycling is already located at Peel Common WTW, so data is already available to develop this option.

Note 1: I would challenge why the effluent recycling plant is proposed in Havant for Option B5 when the raw sewage can just be pumped north from Peel Common Fareham, why bring it another 10-15km east, then have to pump the water back west, it does not make any sense.

Note 2: The volume of effluent available from Peel Common WTW can meet the immediate and medium term needs, giving time for a more sustainable solutions to be developed. If no more sustainable solution is forthcoming, if necessary, at a later date a pipeline can be proposed for construction from Budds Farm WTW to the then existing Water Recycling Plant and the capacity of the plant can be increased in modules as required.

Note 2: I do not support the proposal for effluent recycling using from Havant Thicket Reservoir as an Environmental Buffer Lake, with a pipeline 35km from the reservoir to Otterbourne (Southern Water Option B4). It was not a part of the original plan for the reservoir which received planning consent and will have an adverse impact;

- On the reservoir, downstream water courses and Langstone Harbour (SPA, SAC, RAMSAR),
- The wider benefits ecological and wider benefits the reservoir was to provide.

My objections and concerns are set out in my separate response to the Ofwat consultation on the Havant Thicket Raw Water Transfer (Option B4 and D2).

Funding Support for the Water Recycling Option B5

I am very concerned that the Ofwat consultation document on pages 10, 12 & 27 refers to approving Gate 3 funding, but **reducing the funding for Option B5 as it is only a back up/ alternative option to B4** (Havant Thicket Reservoir).

Reducing the funding for developing Option B5 is not appropriate. Option B4 is a very high risk option. The options appraisal which selected it as a preferred option is not robust. The Habitats Regulation Assessment Screening is flawed and the impacts on the reservoir environment, water quality and downstream Langstone Harbour have not been adequately assessed. The potential for showstoppers still remain and there is significant public objection to the proposal. As a result it is essential that Option B5 remains fully funded and that alternatives to Option B4 are fully investigated and developed in parallel. In fact Option B5 should be developed as the preferred option if effluent recycling is to remain selected as part of the way forward for the reasons described above.

It is essential that if effluent recycling is to continue to be investigated as a preferred solution that Southern Water need to actively progress the actions set out on page 11 of their Gate 2 Summary Report where it stated; "The following actions will be carried out to develop the Back-up Option B5 beyond Gate 2:

- Investigate potential for storage at Otterbourne WSW via a new environmental buffer lake.
- Investigate potential alternative routes from the Water Recycling Plant to the Otterbourne environmental buffer lake; and
- Investigate whether additional storage capabilities would provide benefits in a 1-in-500 drought".

In addition, Southern Water should be required to look at alternative options for siting the Water Recycling Plant to reduce the length of pipelines needed, which in turn will reduce the construction and operational costs, environmental impacts and carbon footprint of the scheme.

An options appraisal also needs to be undertaken to assess alternatives for the location of the Environmental Buffer Lake, which needs to be a bespoke contained system.

11 April 2022

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