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South East Strategic Reservoir Option (SESRO) Public Consultation 2024

WildFish is an environmental charity dedicated to protecting the waterways of the UK and the fish and other species which they support.

We are here responding to the public consultation on the south-east strategic reservoir option public consultation 2024

WildFish is supportive in principle for the long-term measures which include provision for long-term supply of water which reduces the reliance on abstraction from over-abstracted rivers including chalk streams and aquifers in the south and south-east.

We have considered the pre-application documents but note that they are at a high-level and lacking in detail particularly around Environmental Impact Assessment. There are still questions to be raised over the impact of the construction and operation of the development directly on water bodies near to where the reservoir would be sited and also the proposed connectivity with the Thames; how the hydrodynamics would change as a result of the building of the reservoir and how this would impact on the catchment.

Nevertheless, we have attempted to comment generally on the features of the proposal as articulated in the available documents, with particular attention to questions 9 and 10 (Option B as intake/outfall structure; emergency discharge option C, respectively).

The project

We note that, in brief, the project is a proposal for the building of a raw water storage reservoir near Abingdon; a pumping station; infrastructure including a tunnel transfer flow to and from the Thames; infrastructure to link the reservoir to the Thames to facilitate drawdown in an emergency; local stream channel diversion to the east and west of the reservoir and the construction of a compensatory floodplain.

We note that the reservoir will be used to store water from the Thames and potentially from other sources when the project has been finished. Water would be used to augment flows for water supply abstraction downstream.

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The proposed reservoir site is on land now occupied by other waterbodies which will need to be diverted. The reservoir will be *"constrained by the River Ock and its floodplain to the north"*. It is not clear what the impact would be on the River Ock.

The technical report includes this: "*Within the main replacement flood storage area would be the diverted Cow Common Brook and Portobello Ditch, which would flow alongside a realigned East Hanney Ditch. To meet Water Framework Directive (WFD) and Biodiversity Net Gain (BNG) requirements, both watercourses would be improved as they are diverted."* Additionally, the option B connectivity with the Thames will result in loss of 1.1 km of watercourse, some of which sits within the Oday Ditch catchment, which forms part of the Thames (Evenlode to Thame) WFD waterbody. Option B will also result in damage to riparian habitat at the entry point to the Thames.

The techncial note indicates that there will need to be WFD compensatory measures and net gain assessments, although these have not yet been calculated.

We believe that at the earliest possible stage, Thames Water should undertake detailed surveys and assessments of the waterbodies that will be affected by the development. It should not be assumed that existing data from the Environment Agency regarding WFD monitoring etc will be sufficient as such evidence is often highly porous. Baseline data will be necessary to ensure that there is an objective basis for a comparison of existing with potential future changes and compensatory or mitigation measures to ensure that there is a betterment or improvement.

We often find that biodiversity net gain calculations, despite the use of the formula, when dealing with compensation for damage caused to the environment, are unpredictable in their assignment of weighting etc for the compensation of loss with an unknown, uncertain and sometimes unrelated net gain proposal. That can be avoided by ensuring that there is an objective basis for assessing waterbody status.

The impacts on riparian habitat will also need to be assessed and factored into any compensatory or mitigation measures.

During the construction phase, there are likely to be sedimentation and hydrological impacts on the Thames and other waterbodies. Sediment from the excavation is

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likely to be mobilised in times of rainfall, and the redirection of streams is also likely to result in sediment pollution both downstream in the existing waterbodies and in the Thames. All of this will need to be carefully assessed as part of the EIA process before works are commenced.

Our main concern is at the hydrodynamic relationship with the Thames during the operational phase including the abstraction of water from the Thames in times of water availability and the use of the water in the reservoir as a compensatory measure in times of low flow. Very careful analysis of the proper baselines for flow in the Thames will be necessary with clear parameters considered as part of the EIA process. Even basic issues such as how and where water level would be measured and trigger points for release or abstraction and what licensing would be required would need careful consideration. A re-consultation, not only with statutory consultees such as the EA, but also interest groups such as WildFish, will be needed.

Q 9 "We are proposing Option B as our preferred option for our intake/outfall structure. Do you have any comments on these plans?"

The Options Appraisal report for the Connectivity with the Thames, describes generally that "there are few absolute constraints on the intake/outfall location, excepting that the structure needs to be located adjacent to the River Thames to facilitate abstraction and discharge, ensuring water quality. Further design work is required to consider the type of intake screens, and therefore whether these would be on the riverbank or in the river channel".

We think that entrainment or other harm to fish is a very real threat, in addition to the effect of changes to the river hydrology.

We note with Option B that "*disruption is likely to be significant because there will be interface with the River Thames to construct the outlet/inlet* "(5.3.3)

Powerful discharges could lead to severe erosion and sedimentation. Option B is located at a "*crossover between two bends of the Thames*" and "*there may be some deposition in the margins, but it will be less concentrated than on the inside of a*

bend. This has potential to cause some sedimentation around the structure that may impact operation." This would also be likely to have environmental and ecological impacts.

Option B will also result in the removal of approximately 38m of riparian habitat; the note concludes optimistically that "*the impact is expected to be localised and not affect WFD compliance at a water body level."* There appears to be no justification for that conclusion at present. It is also suggested that, "*for Option B, construction of the intake/outfall could require the removal of some potentially grade A or B grade trees along the River Thames. Some localised vegetation clearance may be required for the access road and the extension of the STW outfall, which may provide habitat for protected and notable species*" (5.3.20). Again, there will need to be full consideration given to the impact of the development on riparian habitat at an early stage.

Overall, we understand that whatever option is chosen, the reservoir will need to link with the Thames. We agree that environmental disruption and damage can be limited by combining the outlet and input pipelines. However, we believe that matters of hydrology, geomorphology, impacts on aquatic and riparian habitat and pollution risk during construction (as well as sedimentation at the operational stage) will need to be considered fully in an Environmental Impact Assessment, with care taken to establish objective baselines before compensatory and mitigation measures can be proposed.

10. We have considered several options for the Emergency Discharge and Option C is our preferred option. Do you have any comments on these plans?

As with the outfall in Option B above, the exit point into the Thames will have significant environmental impacts on hydrology including the possibiltity of sedimentation and possible pollution at the construction phase.

It is also important that damage to riparian habitat in the construction of the emergency outfall is carefully considered, using proper baseline assessments.

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We understand the importance of such an outfall, but full assessments of impact must be carried out at an early stage, not least because both statutory and non-statutory consultees are not able to fully comment until the detail is available.

Lastly, there should be further clarity provided as to how and when this emergency outfall would be used, given that high volumes of water reaching the Thames could cause significant damage to habitat.

Overall, WildFish is supportive of the scheme. However, that support is conditional upon a full environmental assessment of impact, and that the assessment should be carried out as soon as possible and all steps are taken to mitigate damage to the rivers and streams impacted by the project – not just the Thames.

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