

## **EIA Scoping Opinion of the Vale of White Horse District Council – Proposed Upper Thames Reservoir**

### **General**

1. It is understood that the application for development consent will only be submitted if the needs case for the Upper Thames Reservoir (UTR) is established through the Water Resources Management Plan process. Nevertheless, the Environmental Statement (ES) needs to include an outline of the main alternatives to the UTR (i.e. alternative reservoir sites and alternative options for increasing supply), and a clear explanation of the main reasons for choosing the UTR as the preferred means for increasing supply.
2. It is expected that all elements of the design and operation of the proposal will be finalised prior to the submission of the application for development consent and, consequently, all of the Design Alternatives referred to in Section 2.2 of the Scoping Report (e.g. possible conjunctive use with Farmoor Reservoir, possible inclusion of a wind turbine, and the method of temporarily diverting the A34 to construct the auxiliary drawdown channel) will be resolved. On this issue, it needs to be noted that the Council keenly supports the use of the auxiliary drawdown channel to assist flood alleviation in the River Ock floodplain.
3. The proposal to submit a “hybrid application” is noted – i.e. some elements of the proposal will be submitted in detail and some in outline. However, those elements to be submitted for consideration in detail must not be subject to “limits of deviation” – i.e. their precise location/height/width/depth need to be specified in the application and ES.
4. The ES must examine the significance of all of the environmental impacts identified in the Scoping Report (in accordance, where applicable, with criteria agreed by the Environment Agency or Natural England) and, where necessary, explain the proposed means to mitigate these impacts. In addition, the ES needs to examine the significance of the environmental impacts set out below. These additional environmental impacts are included in this Scoping Opinion either because they have not been included in the Scoping Report or because it is not clear from the Scoping Report whether they are intended to be examined in the ES.

### **Flood Risk and Drainage**

The ES needs to assess/include:

- impacts on fluvial flooding as well as surface water flooding
- flooding impacts based on the most up-to-date modelling for the area, as agreed by the EA
- cumulative surface water flooding and fluvial flooding impacts (i.e. arising from both increased surface water run-off and increased wastewater outflows) from

major planned developments in the Wantage/Grove area (i.e. upstream of the UTR site)

- data of the areas, levels and volumes of the existing floodplain, the area of flood plain lost and the new additional floodplain in a form that can be properly analysed
- capacity of the existing and proposed streams and ditches to drain surface water flows, particularly during times of heavy rainfall
- data used in the assumptions of heavy rainfall events (i.e. frequency, intensity and duration), and consequential surface water flows

## **Surface Water**

The ES needs to assess/include:

- the implications of the EU Water Framework Directive (relating to the management, protection and improvement of the whole water environment) on assessing the impacts on groundwater and surface water quality – the impacts need to be assessed in accordance with WFD objectives and, in particular, the proposal needs to attain “Good Status”, comply with its own WFD standards, and avoid impacting on the WFD compliance of the Thames (see appended summary of the representations made by the EA)
- correct data on the River Ock catchment area, the mean daily flow and other recorded flows of the River Ock, modelled estimates of the instantaneous peak flow of the River Ock, and gauged flows of the River Thames at Sutton Courtenay (see appended summary of the representations made by the EA)
- disposal of waste water from the new Visitor Centre to the mains sewerage system

## **Hydrogeology**

The ES needs to assess/include:

- the implications of the EU Water Framework Directive (relating to the management, protection and improvement of the whole water environment) on assessing the impacts on groundwater and surface water quality – the impacts need to be assessed in accordance with WFD objectives and, in particular, the proposal needs to attain “Good Status”, comply with its own WFD standards, and avoid impacting on the WFD compliance of the Thames (see appended summary of the representations made by the EA)
- impacts on groundwater flows and consequential impacts on the groundwater dependent Frilford Heaths and Ponds SSSI, Barrow Farm Fen SSSI and the Cothill Fen Special Area of Conservation, both during and post-construction, particularly relating to the precise alignment and depth of the SWOX pipeline – also the cumulative impact of the proposal to extract groundwater at Upwood Park
- impacts on groundwater flows and consequential impacts on the proposed Local Wildlife Sites at Drayton Meadow and Hulgrove Farm Meadow, both during and post-construction
- measures to effectively seal the area of porous Lower Greensand and any existing porous gravel lenses in the clay base
- impact of any leachate problems arising from fossils found in the Kimmeridge Clay forming sulphuric acid when exposed to oxygen and water

## **Terrestrial Ecology**

The ES needs to assess/include:

- impacts on flora and fauna based on up-to-date ecological surveys of species and habitats, as agreed by Natural England, especially relating to protected species and local rarities
- details of the methodologies used in carrying out the ecological surveys, and the results of the surveys
- potential sources of disturbance and/or pollution to terrestrial wildlife and wildlife habitats – e.g. air emissions, external lighting, fuel spillage, construction traffic
- measures which, cumulatively, will ensure a net gain in biodiversity, in accordance with a key principle of PPS9

## **Aquatic Ecology**

The ES needs to assess/include:

- impacts on flora and fauna based on up-to-date ecological surveys of species and habitats, as agreed by Natural England, especially relating to protected species and local rarities
- details of the methodologies used in carrying out the ecological surveys, and the results of the surveys
- potential sources of pollution to in-stream flora and fauna and aquatic habitats – e.g. fuel spillage
- measures which, cumulatively, will ensure a net gain in biodiversity, in accordance with a key principle of PPS9
- details of changes to flow patterns of the River Thames and changes to water quality and sediment dynamics due to abstraction and discharge, and the impacts of these changes on downstream aquatic ecology, including the South West London Waterbodies SPA

## **Landscape**

The ES needs to assess/include:

- the implications of constructing a deeper reservoir with lower embankments – to reduce the impact of the embankments on the surrounding relatively flat landscape
- measures for the advance tree and replacement hedgerow planting of the reservoir's embankments to ensure the changed landscape matures as quickly as possible
- landscape impacts of the full-scale trial embankment and any temporary noise/security/safety bunds/barriers required during the 10-year construction period
- spot heights, cross-sections and accurate visual representations of the reservoir embankments
- landscape impacts of any outdoor lighting and fencing/enclosure of the control building and intake/outfall structure, given its very sensitive riverside location
- landscape impacts of any outdoor lighting on the reservoir site, both during and post-construction

## **Cultural Heritage**

The ES needs to assess/include:

- impacts on the wider historic landscape – i.e. the landscape today is the result of a significant process of progressive field enclosure of what was originally unenclosed pasture land
- the results of archaeological field evaluations undertaken on the site over the last 20 years
- reference to English Heritage’s “Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment” in any assessment of the significance of impacts on the historic environment

### **Agriculture and Land Use**

The ES needs to assess/include:

- the implications of removing the established Steventon Depot from its site on the Hanney-Steventon road – i.e. whether the site’s established use would be extinguished or relocated elsewhere and, if the latter, the impacts of any proposed relocation

### **Contaminated Land and Waste Management**

The ES needs to assess/include:

- the quantities and types of waste to be removed from the site and the destination of the waste

### **Microclimate**

The ES needs to assess/include:

- a thorough analysis of whether there would be any significant impacts

### **Visual Amenity**

The ES needs to assess/include:

- the implications of constructing a deeper reservoir with lower embankments – to reduce the visual impact of the embankments
- measures for the advance tree and replacement hedgerow planting of the reservoir’s embankments to enhance the visual amenity of the embankments as quickly as possible
- visual impact of the full-scale trial embankment and any temporary noise/security/safety bunds/barriers required during the 10-year construction period
- spot heights, cross-sections and accurate visual representations of the reservoir embankments
- visual impact of any outdoor lighting and fencing/enclosure of the control building and intake/outfall structure, given its very sensitive riverside location
- visual impact of any outdoor lighting of the reservoir site, both during and post-construction

### **Transport**

The ES needs to assess/include:

- details of the quantities and types of construction materials to be imported by road – e.g. are all aggregates or just bulk aggregates intended to be imported by rail?
- impacts on the local road network in the event of rail haulage for construction aggregates not being made available by Network Rail
- traffic impacts on the A34, both during and post-construction – particularly on the Marcham Interchange but also on the Milton Interchange, and particularly relating to the temporary diversion of the A34 during construction of the auxiliary drawdown channel.
- details and traffic impacts of any temporary diversion of the B4017 Drayton Road during construction of the auxiliary drawdown channel and the transfer tunnel
- impacts on bus services during construction work, especially on the Wantage to Oxford Premium Bus Route which operates up to 4 buses per hour
- the cumulative traffic impact of the construction of the reservoir and the possible residential development of land off Drayton Road, Abingdon
- the traffic modelling work already carried out by Oxfordshire County Council's SCOTS report and for identified developments planned in the southern Oxfordshire area
- traffic impacts on local roads through adjacent villages and Abingdon, both during and post-construction
- robust methodologies for estimating trip generation and travel mode split in the after-use Travel Plan
- traffic impacts of the likely high level of informal recreational after-use of the reservoir – i.e. people visiting the site for walking, cycling and bird watching
- measures to control/limit vehicular use of the two secondary accesses off the A338 and the Hanney-Steventon road in relation to the after-uses of the reservoir, and traffic impacts in the event of such controls not proving effective

### **Air Quality**

No comments

### **Noise and Vibration**

The ES needs to assess/include:

- noise impacts on residents in Steventon due to night-time deliveries of aggregates by rail
- noise impacts from demolishing/reusing existing building/hardstanding materials on the site
- hours during which demolition, excavation and other noisy construction work will be carried on
- operational noise impacts from the use of any amplified announcements/music at events and bird strike mitigation measures (i.e. gas cannons and acoustic scarers)

### **Health**

The ES needs to assess/include:

- impacts of algal blooms in the reservoir on the health of recreational water users

## **Socio-Economics**

The ES needs to assess/include:

- reference to the economic importance of maintaining a secure water supply, specifically in terms of enabling the delivery of sustainable economic growth
- details of anticipated visitor numbers to the recreational/educational after-uses and potential visitor expenditure in the local economy

## **Recreation and Amenity**

The ES needs to assess/include:

- impacts of the likely high level of informal recreational after-use of the reservoir – i.e. people visiting the reservoir site for walking, cycling and bird watching
- a description of the physical characteristics of the existing public rights of way on the site (e.g. surfaces, vegetation, furniture, and wildlife habitats), and the visual and landscape experiences currently available for walkers, cyclists and horse riders on and near the site
- an informed assessment of the nature and levels of use of the existing public rights of way on and near the site
- details of the routes and environmental impacts of each replacement and new public right of way
- the length, quality and physical characteristics of all post-development public rights of way, and whether they would be provided as disabled accessible routes
- safety implications of locating the sailing facilities in the north-east corner of the reservoir – i.e. launching boats in strong prevailing winds
- the nature and extent of the existing use of part of the site by the North Berks Radio Model Aircraft Society
- impacts of changes to flow patterns of the River Thames due to abstraction and discharge on recreational uses further down the river (e.g. rowing at Wallingford)
- details of the alignment and ground structure of the new route of the Wilts & Berks Canal and towpath which is to be provided through the site
- impacts of the new access road off the A415 and the flood compensation area beside the A415 on the use and amenity of the adjacent allotments

## **Bird Strike Risk**

The ES needs to assess/include:

- Dalton Barracks in the sites listed in paragraph 22.1 that may be at increased risk of bird strike
- details of the number, location, noise output and likely frequency of use of any gas cannon or acoustic scarer mitigation measures in the bird strike management plan for Dalton Barracks

## **Sustainability Statement**

No comments

## **Energy Statement**

No comments

## **Environmental Management Plan**

The Environmental Management Plan needs to include:

- measures to ensure the long-term management and after-care of all green spaces and water bodies, including Management Plan heads of terms
- the means of securing the costs of implementing, monitoring and reviewing the measures of the Management Plan (e.g. a commuted sum secured through a Section 106 Agreement)
- details of the parties responsible for implementing the measures of the Management Plan
- details of the standards to which all of the watercourses/flood compensation areas will be maintained
- details of its geographical area – i.e. it needs to include all of the ancillary works, especially the SWOX pipeline and the auxiliary drawdown channel

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