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Sent: Monday, January 13, 2014 10:54 AM
To: Thames Tunnel
Subject: Thames Tideway Tunnel WW01001 - EA submissions ref 10018171

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F.A.O. Mark Wilson

Thames Tideway Tunnel DCO application (ref.WW01001) – Environment Agency submission

On behalf of the Environment Agency please find attached the following documents:

- EA11 – second written questions. These are the Environment Agency responses to second written questions.

We would be extremely grateful if you could send all correspondence to the following by email:

Simon Hughes, London Executive, Environment Agency, Ergon House, Horseferry Rd, London SW1P 3JR. Telephone number 07771976383. Email: Simon.Hughes@environment-agency.gov.uk

Isobel Bain, Project Manager, Environment Agency, Ergon House, Horseferry Rd, London SW1P 3JR. Telephone number 07765221928. Email: Isobel.Bain@environment-agency.gov.uk

I hope that this is all clear though should you have any questions, please do not hesitate to contact me. I would be grateful if you could confirm receipt of this email and attachments.

Kind regards
Isobel Bain

Thames Tideway Tunnel Case Team
The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Our Unique Ref: 10018171 (EA11)
EA Ref: TTT_SWQ_130114
Your Ref: WW010001

Date: 13th January 2014

Dear Sir or Madam,

**Ref: Second Written Questions – Thames Tideway Tunnel Planning Inspectorate
Reference: WW010001**

The Environment Agency has considered the second round of written questions and herewith provides responses to those questions addressed either directly to us, or to all relevant parties.

We understand that following submission of answers to these questions on 13th January, the Examining Authority will invite comment on other parties' responses. We will participate in that process as required.

If you have any questions please get in touch with me, or Isobel Bain, Project Manager, Environment Agency, Ergon House, Horseferry Road, London, SW1P 2AL
Telephone: 07765221928. Email: Isobel.Bain@environment-agency.gov.uk.

Yours sincerely



Simon Hughes
London Executive

Contact details:

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**Responses to second written questions to Examining Authority
On behalf of the Environment Agency (EA11)**

Question Number	Context	Question
21. Biodiversity, Biological Environment and Ecology		
Q21.1	<p>There are obligations on the decision maker and the Applicant under the Habitats Directive (92/43/EEC) (Habitats Directive), the Conservation of Habitats and Species Regulations 2010 (as amended) (the 2010 Habitats Regulations) and the Directive on the Conservation of Wild Birds (2009/147/EC). Under Article 6.3 of the Habitats Directive an Appropriate Assessment is required where a plan or project is likely to have a significant effect upon a European site either alone or in combination with others.</p> <p>The Applicant has submitted a <i>Habitats Regulations Assessment: No Significant Effects Report</i> (Doc 6.3). The ExA understands that no Party has disagreed with the conclusions of that report. Accordingly, although the examination timetable includes a deadline for the publication of any <i>Report on the Implications for European Sites</i> (RIES) by the ExA, such a report may be unnecessary.</p>	<p>Does any Party consider that a Report on the Implications for European Sites (RIES) ought to be published in this case? Any Party who considers that a RIES ought to be published should explain why it is thought to be necessary.</p> <p>EA Response: The Environment Agency is satisfied with the “No Significant Effects” report submitted by TWUL with regards to the Habitat Regulations. We have no further position on the topic of the RIES.</p>
Q21.3	The Applicant’s responses to the ExA’s Q2.7 to Q2.10 describe the	Can the EA and GLA comment on their ability and/or willingness to be a party to such an agreement?

	<p>Biodiversity Compensation Working Group that has been established to consider potential compensation measures for the permanent loss of estuarine habitat. The recommendations of the group are intended to be concluded over the next 12 months. The responses state that the mechanism for securing the compensation measures is likely to be a legal agreement either with the EA or the Greater London Authority (GLA).</p>	<p>EA Response: The Environment Agency, together with Thames Water Utilities Limited (TWUL), the GLA and other stakeholders, has a seat on the Biodiversity Compensation Working Group. TWUL has agreed in principle to deliver the compensation schemes for the permanent loss of estuarine habitat identified by the Biodiversity Compensation Working Group. The Environment Agency has in written submissions requested for there to be an appropriate method for securing an appropriate body to “step-in” in the event that TWUL fails to deliver identified projects and for this body to be funded appropriately. The Environment Agency does not believe it has the powers to “step-in” and do this and in any event this would also fall outside of the Environment Agency’s remit in respect of the Thames Tunnel Project. The Environment Agency (in November 2013) advised TWUL that it would be unable to enter into any contractual arrangements in relation to the delivery of the estuarine compensation habitat.</p>
<p>Q21.4</p>		<p>Given that the mitigation measures may not have been identified at the time the Secretaries of State consider the application for Development Consent, how can the delivery of the measures be secured?</p> <p>EA Response: We understand that the Biodiversity Compensation Working Group is working hard to try and identify appropriate schemes as quickly as possible. This is so that TWUL can enter into negotiations to secure the delivery of these schemes promptly and in any event prior to the completion of the examination period.</p> <p>We understand that TWUL has also, independently of the Biodiversity Compensation Working Group, entered into negotiations with certain local authorities in respect of delivery of certain potential estuarine compensation projects. These have not, as yet, been submitted to the Biodiversity Compensation Working Group for approval. We understand that Local Authorities may be able to assist in the securing of schemes through their general powers of competence as provided in the Localism Act 2011.</p>
<p>Q21.5</p>	<p>The Applicant’s response to the ExA’s Q3.8 states that dredging would be avoided during periods which are important for aquatic species except where agreed by the Employer.</p>	<p>Would this approach provide adequate protection to aquatic ecology or, alternatively, should approval be required from an appropriate public body?</p> <p>EA Response: The Environment Agency agrees to the principle to work outside key periods of the year which are important to aquatic species. To support this we have requested approval of dredging methodologies through conditions within the Deemed Marine Licence (DML). This is subject to discussions with the Marine Management Organisation.</p> <p>Should the contractor/employer wish to dredge outside the agreed time periods (stated within the</p>

		DML), they will need to apply for a new permission in each instance. Any periods of dredging which are requested outside of the current permissions will therefore be subject to assessment by the relevant regulator/s i.e. the EA, the MMO and/or the PLA.
<i>26. Flood Risk & Climate Change</i>		
Q26.1	The Applicant submitted the Flood Defence Asset Interpretive Report (FDAIR) (Doc9.17) on 23 rd Sept 2013.	<p>Can the EA comment on the adequacy of the FDAIR and identify any outstanding matters?</p> <p>EA Response: The Environment Agency reviewed the FDAIR and submitted comments to the ExA on 4th November. The FDAIR was produced by TWUL in response to the concerns we raised in our Relevant Representations of 24th May, Issue 5.1. We are satisfied that the FDAIR adequately addresses those concerns, and in combination with the Environmental Statement provides sufficient information on flood risk to enable an informed decision by the Examining Authority.</p> <p>The level of detail provided by the FDAIR and ES must be supplemented and secured by an appropriate mechanism within the DCO. This mechanism needs to secure adequate detail and protection through the detailed design of the development and construction period. In the Statement of Common Ground between ourselves and TWUL dated 4th November, TWUL agreed in principle to secure all aspects of concern for us, relating to flood risk, subject to securing mechanism. We have included these points within the latest draft of our Protective Provisions, as preferred by TWUL. We continue to discuss the wording and detail of these with TWUL.</p>
<i>36. Water Quality & Resources</i>		
Q36.2	The proposed scheme has been designed to meet the Urban Waste Water Treatment Directive (UWWTD) and improve the quality of the River Thames. The Applicant has stated that the tunnel would be out of service every 10 years for maintenance (answer to ExA's Q5.5g and 5.5h).	<p>Can the EA advise what would be the likely effect on river ecology and habitats if CSOs discharge to the Thames and Channelsea River during extended tunnel maintenance? What mitigation would be necessary to minimise any impacts? What period of time would it take for the ecology, habitats and river quality to return to compliance after the tunnel is put back into service?</p> <p>EA Response: Storm sewage would be discharged to the Thames and Tidal River Lee only if the maintenance period coincided with significant rainfall. The effect on river ecology and habitats will be dependant upon the scale and impacts of the event. The worst case scenario would be hypoxic conditions (low Dissolved Oxygen levels) with corresponding detrimental impacts, which could include fish avoidance behaviour or mortalities. Recovery periods would be dependent on the scale of the incident and the species of fish and other ecology affected.</p> <p>The risk of such discharges occurring can be minimised by ensuring that maintenance is undertaken as quickly as possible. This would be achieved through prior agreement with the EA under the relevant permit (see response to question 36.3). Impacts on aesthetics within the tidal Lee will to some extent be mitigated by retention of the screening arrangements presently in use at</p>

		Abbey Mills Pumping Station. Impacts on fish populations will be reduced by scheduling maintenance works during the winter months. Maintenance of Water Company assets is a routine activity and should not impact compliance with the UWWTD.
Q36.3		<p>What controls should the EA have with regard to the seasonal timing of the planned 10 yearly maintenance operation and any other operation which requires that the tunnel be taken out of service? How would these controls be secured?</p> <p>EA Response As noted above impacts would be reduced by scheduling maintenance works during the winter months. The EA will ensure adequate controls over maintenance including seasonal timing though the issue and enforcement of relevant Environmental Permitting Regulations permits. These are currently being drafted with the aim to issue the first permit by April 2014.</p> <p>10 yearly maintenance programmes will need to be agreed with the EA prior to commencement of the planned work.</p>
Q36.4	At Shad Thames Pumping Station, the proposal is to reduce the base case overflow from 100,000m ³ per year to 72,000m ³ per year. In the answer to the ExA's Q18.3, the overall assessment of the environmental impact of Shad Thames Pumping Station CSO is given as being an adverse impact on aesthetics with no adverse impact on health risk or dissolved oxygen (APP18, Table 3.1). At the OF hearings residents of Downings Roads Moorings spoke of having screenings on their mooring lines after a storm event. It is noted that in APP31.05 (paragraph 3.39) the Applicant states that it considers that the tunnel system will capture the first flush of litter.	<p>Can the EA and the Applicant explain how the reduction in flows of 28% at Shad Thames CSO would affect aesthetics, and what would be the fall back proposal in the event of the problems continuing?</p> <p>EA Response The proposals at Shad Thames Pumping Stations will result in reduced overflow frequency, with four events in a typical year. The frequency of the appearance of sewage debris (screenings) should reduce in line with the frequency in reduction of events.</p> <p>The reduction in spill frequency does not guarantee that the problem of sewage debris (screenings) on the moorings is eliminated entirely. However the aim of the scheme itself is to achieve compliance with the UWWTD Directive to reduce the discharge of storm sewage to an acceptable level. In our view the volume of storm sewage collected by the Thames Tunnel fulfils this aim.</p>