Application by National Grid Electricity Transmission Plc for an Order granting Development Consent for the Richborough Connection Project

Planning Inspectorate Reference No: EN020017 Richborough Connection Project

Representation No. 14

Deadline 3 Submission on behalf of South East Water

SEW's response to Document 8.2, National Grid's Responses to the Examining Authority's First Round of Written Questions provided at Deadline 2

Question	Applicant's statement	SEW's response
Q 1.3.1 Page 83	To date, no application for consent or request for EIA screening/scoping has been submitted by SEW for a proposed reservoir at Broad Oak. Given the above, there is nothing to suggest at present that this scheme will be pursued or will achieve the necessary consents, funding, and approvals. Whilst SEW has a statutory duty to prepare and maintain a WRMP, such a plan is not itself a statutory planning document and, until it has achieved some formal status in the planning system, only limited weight can be afforded to it. This is particularly the case as there is currently no certainty that all projects listed in the WRMP14 will secure the necessary funding from the Water Services Regulation Authority (Ofwat) for them to be delivered.	At paragraphs 13-42 of its WR, SEW describes the role of the WRMP and the policy support for a reservoir at Broad Oak. At paragraph 55 of its WR, SEW explains that the Applicant has failed to appreciate that policy support for a reservoir would not be expected to be found in a local plan in the same way as it would be, for example, for a housing scheme. At paragraph 4.6 of Table 4.1 of the Statement of Common Ground between the Applicant and SEW, the Applicant sets out its position in relation the risk to SEW of obtaining planning permission for the Reservoir. The Applicant states that it "cannot anticipate future legislation". SEW submits that this argument is misconceived. The issue is not one of legislative change but, rather, the prospect of SEW being able to secure planning permission for the Reservoir in due course. SEW's argument is that such prospects will be significantly undermined by the presence of the RCP for reasons that are described in detail in its WR and were explained orally at the ISH held on 29 July 2016. Every five years, water companies submit a business plan to Ofwat that sets out the company's funding requirements for the next five year asset management plan (**AMP**) period. The business plan includes schemes and investigations from the WRMP, to be delivered during the relevant AMP period; the funding process never extends beyond the five year period and, accordingly, it could not be expected that funding for a reservoir at Broad Oak, planned to come forward during a future business plan period, would have been confirmed now. Funding is determined by Ofwat using several models that take into account investment priorities. The last business plan Ofwat approved relied on supply and demand deficit (expressed in million litres per day (Ml/day) as the main driver to set levels of WRMP investment. Ofwat applied a cost per Ml in its models that it considered represented what each company would spend to rectify a Ml/day of supply and demand deficit. This approach left South East Water's WRMP programme for the current AMP period (AMP6: covering period 2015 to 2010) underfunded by approximately £10 million. This is because South East Water's preferred WRMP programme attracted a higher cost per Ml than Ofwat had allowed

Question	Applicant's statement	SEW's response
		for in its models. Ofwat is reviewing the methodology to be used for business plan 2019, to cover the AMP period from 2020 to 2025 (AMP7). It is possible Ofwat will look at larger schemes such as Broad Oak separately in the future, but still assess the viability of such schemes based on the cost of similar schemes that have been delivered in the past and require efficiency savings to be made. Whichever approach is adopted by Ofwat for the 2019 business plan process, an efficiency challenge will be applied to cost. This means that any additional cost arising from the Richborough Connection Project will make securing the right level of funding for the Broad Oak Reservoir more challenging. If the threat from the Richborough Connection Project was not present, South East Water would be confident that Ofwat would fund the majority of the costs of its preferred WRMP programme supported in the relevant WRMP. The WRMP 14 confirms that for the company's East Kent region the preferred WRMP programme is currently (and is anticipated to be in the WRMP19) the reservoir at Broad Oak.
Q.1.3.1 Page 92	Paragraph 5.7 The Stage 1b study works were completed at the end of 2015. At the current date (July 2016) the report of this study has been finalised but is not agreed by National Grid. The findings of the studies were not provided in time for the full detail to be represented in National Grid's DCO submission, National Grid has however taken the draft outputs from this jointly funded work to inform the DCO submission.	The stage 1b study findings were presented in detail to the Applicant (and SEW at the same time) at a technical feedback meeting on 12 November 2015. The key findings presented remained materially unchanged between then and issue of the Draft Stage 1b study report on 15 December 2015 which was prior to submission of the Applicant's DCO application. The final Stage 1b study report was published on 5 July 2016. The final version of the report has been amended to include reference to flood risk upstream of the secondary embankment, and restructuring of the conclusions to each section so that the approach to conclusions was consistent for interactions at the 32.5m AOD and 36m AOD reservoir top water levels and impacts assessed for top water levels in between those minimum and maximum levels. The report was also amended to ensure consistent reporting of potential mitigations for SEW and the Applicant SEW and the Applicant both provided comment on the draft report and Jacobs tabulated responses. Jacobs did not accept many of the Applicant's comments which sought textual revisions to amend Jacobs' conclusions on the impacts of the interactions between the Reservoir and the RCP.

Question	Applicant's statement	SEW's response
Q 1.3.1 Page 92	Paragraph 5.8 National Grid's consultants, Mott MacDonald, assisted National Grid throughout the Stage 1b studies, to enable it to assess the results of the various studies. As a result of that assessment, it was clear to National Grid that the proposed Broad Oak Reservoir (at both the 32.5m AOD TWL and the larger 36m AOD TWL), and the proposed overhead line can co-exist. Mott MacDonald's assessment of the outputs of those various studies undertaken by SEW's consultants, Jacobs, is set out in its report which is attached at Appendix F to this response document, and takes fully into consideration the mitigation proposed by SEW, including the Sarre Penn stream diversion.	At technical feedback meetings with Jacobs and SEW during the writing of the stage 1a (5 June 2015) and 1b (12 November 2015) studies, the Applicant stated their views that they believed the findings supported a conclusion that both schemes could co-exist. Jacobs made clear in response that their independent professional view was they could not without mitigation measures, the implementation of which resulted in high and medium risks to the deliverability of the reservoir scheme. Jacobs also made clear that the risks were evaluated in isolation and did not account for the cumulative impact on achieving an acceptable scheme to meet Water Framework Directive (WFD) and other regulatory requirements. We respond to the Applicant's comment that Jacobs were SEW's consultants as follows. The stage 1a and 1b studies were commissioned by SEW under a framework agreement they hold with Jacobs. Both SEW and the Applicant funded the work and the terms of reference were agreed by SEW and the Applicant to (1) identify the interactions between the schemes, (2) attai, an in principle agreement of the concept design with Natural England and the Environment Agency and (3) to ensure both schemes can continue to be developed to each party's satisfaction. Jacobs reported back that there were medium and high risks to the reservoir being developed satisfactorily without changes to the RCP and that mitigation to the reservoir design alone would not remove the overall risk to delivery of the reservoir. Jacobs undertook further work for SEW to evaluate the cumulative risk from the interactions on the deliverability of an acceptable scheme to meet regulatory requirements. A detailed response to Mott Macdonald's report is attached to this note at **Appendix 1** and headed "*Response to Mott MacDonald Report dated 3 August 2016 - project number B14000AT "*
Q1.12.40	Page 394 At the preliminary hearing on 8 June 2016, South East Water expressed the view that, with regard to alternatives, EN-1 makes clear that alternatives are not relevant only in so far as the Applicant has considered them. EN-1 also allows for alternatives to be considered where the law makes them	SEW's response is contained in the document attached to **Appendix 2** of this note and marked SEW Response to Applicant's answer to Written question 1.12.40 (Alternatives) This issue is also dealt with in detail at paragraphs 170 – 185 and 192 -197 of South East Water's Written Representation.

Question	Applicant's statement	SEW's response
	relevant, and one of the instances where the law makes them relevant is where need is relied upon to overcome adverse impact, and this was the case here. He considered that if, during the examination, the Panel conclude that there are adverse impacts that can be avoided by alternatives that have been put before the Panel and National Grid then they will be relevant and will need to be considered in the light of what EN-1 says about alternatives.	

Document 8.5.1, Applications under section 127 and 138 of the Planning Act 2008, South East Water

Paragraph number	Applicant's comment	SEW's response
4.6	National Grid considers that there would be no serious detriment to SEWL's undertaking if it (and/or, as the case may be, UK Power Networks) were to acquire these rights and interests and that the criteria in section 127 are satisfied. This is because the rights would co-exist within the plots affected alongside those of SEWL and, for the most part, the rights would cause minimal interference to SEWL's undertaking. Other than during construction of the Proposed Development, the only interference would be maintenance or emergency works to National Grid's or UK Power Network's equipment. On such occasions, National Grid or, where appropriate, UK Power Networks would consult with SEWL in order to cause as little disruption as practicable during the maintenance or emergency works.	SEW owns the land it has acquired for the purpose of constructing the Reservoir in connection with its statutory undertaking**.** The creation of new rights will have a severe impact on SEW's ability to deliver the Reservoir whether that is a reservoir with a top water level of 32.5m AOD, 36m AOD, or a level in between those maximum and minimum levels. The impacts and the costs of mitigating them are set out in detail in SEW's Written Representation and supporting documents and were explained during the Issue Specific Hearing on 29 July 2016. Those impacts mean that the rights and interests over SEW's land that the Applicant seeks cannot be acquired without serious detriment to SEW's undertaking. In addition, SEW does not own additional land that means that the detriment can be made good.
5.3.5	The nature of the proposed works and inclusion of protective provisions in the DCO means that the Secretary of State can be satisfied that SEWL's rights, whilst potentially subject to interface (sic), will not be affected to the detriment of its ability to carry out its undertaking.	SEW seeks amendments to the protective provisions for electricity, gas, water and sewerage undertakers included at Schedule 14, Part 1 of the DCO. SEW submits that unless its amendments are included, the Secretary of State will not be able to conclude that rights relating to existing apparatus can be extinguished and such apparatus removed or repositioned without serious detriment to SEW's ability to carry out its undertaking.

Broad Oak Reservoir

SEW

Response to Mott MacDonald Report

3 August 2016

Broad Oak Reservoir

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Executive Summary

Mott MacDonald has been commissioned by National Grid to produce a report presenting the Interaction between the RCP and the proposed Broad Oak Reservoir. Mott MacDonald report on Interaction between RCP and the proposed Broad Oak Reservoir, of document EN020017-001258-8.2.1 National Grid's Responses to the Examining Authority's 1st Written Questions Appendices A to S (Deadline 2).

Jacobs have, for SEW, produced this written response to the Mott MacDonald Report.

Jacobs have undertaken studies on the interactions. The stage 1a and 1b studies were commissioned by SEW under a framework agreement they hold with Jacobs. Both SEW and NG funded the work and the terms of reference were agreed by SEW and the National Grid to identify the interactions between the schemes, attain an in principle agreement of the concept design with Natural England and the Environment Agency and ensure both schemes can continue to be developed to each party's satisfaction. Jacobs reported back that there were medium and high risks to the reservoir being developed satisfactorily without changes to the RCP and that mitigation to the reservoir design alone would not remove the overall risk to delivery of the reservoir

Jacobs's findings of this review are that there is some agreement between the earlier Jacobs studies, and the Mott MacDonald report. However there are also some deficiencies of the Mott MacDonald report that have been addressed by Jacobs during their studies.

There is agreement between the Mott MacDonald and Jacobs studies in the following areas:

- There are areas of interaction between the schemes
- These areas of interaction vary for the 32.5m and 36m AOD reservoir sizes
- The base data / survey information used for the reservoir design is at an appropriate level for the stage of the design that the reservoir is at, but further data is required as the design develops. This may lead to change in the exact locations or dimensions of some elements of the reservoir scheme.

However it is also Jacobs finding that the Mott MacDonald report is deficient in the following areas:

- The Mott MacDonald study has not considered the full reservoir design envelope, they have not considered reservoir sizes of between 32.5 and 36.0m AOD
- The Mott MacDonald study has not considered how solutions to the interactions by proposed amendment to the reservoir design comply with the Water Framework Directive
- The Mott MacDonald study has not considered the visual impacts of the schemes cumulatively or the proposed amendments to the reservoir design
- The requirements for a functioning river corridor and fish pass replacing the existing Sarre Penn river habitat have not been recognised
- The feasibility of the solutions presented has not been justified (the cost and ecological aspects are not considered)
- The combined impacts of applying the mitigations has not been considered (overall project acceptability or total project cost)
- Overall the Mott MacDonald report has focused on identifying the interactions and seeking to identify engineering solutions to the reservoir design to mitigate the interaction without taking cognisence of the wider ecological, landscape and regulatory drivers for the reservoir schemes acceptability

The risk of impediments to the creation of fish pass that allows the passage of the target fish species especially salmonids would jeopardise the rationale for the river diversion and the acceptability of the scheme as a whole and is not given sufficient consideration in the Mott MacDonald report. The Mott MacDonald study has a limited approach, considering each component pylon and section of overhead line individually, which although is a valid part of the assessment in identifying feasible engineering solutions omits consideration of the combined and cumulative effect of the RCP on the river diversion and fish pass and reservoir development. This possibly

reflects that the Environment Agency and Natural England were not involved in the assessments for the Mott Macdonald Report.

Additionally the engineered options presented to mitigate against the interactions do not consider the impact on the ecological requirements of the scheme. None of the options put forward meet both engineering and ecological requirements. In effect the study only considers engineering mitigation, many of which have already been considered, and discounted, by Jacobs during their studies.

The Mott MacDonald report presents detailed engineering solutions to components of a reservoir scheme that is in the early stages of development. Jacobs iterate that due to the reservoir size being unknown, other than it will be between 32.5m and 36m AOD top water level; therefore the relevance, size, and feasibility of the engineered mitigations that would be required to avoid the RCP cannot at this stage be known at this level of optioneering at component level. The full design envelope of the reservoir scheme has not been considered, as stated throughout the Jacobs stage 1b report the reservoir is likely to have a top water level of between 32.5m and 36m AOD. It was Jacobs finding that a reservoir level of between these, in some locations, presents the largest interaction between the two schemes. The Mott MacDonald report has not considered this and is therefore incomplete in its assessment

Jacobs conclude therefore that it is not possible, from their study, for Mott MacDonald to state that it would still be possible to construct the proposed Broad Oak Reservoir including the Sarre Penn River diversion meeting fish pass and WFD requirements.

1. Introduction

Mott MacDonald has been commissioned by National Grid to produce a report presenting the Interaction between the RCP and the proposed Broad Oak Reservoir. Mott MacDonald report on Interaction between RCP and the proposed Broad Oak Reservoir, of document EN020017-001258-8.2.1 National Grid's Responses to the Examining Authority's 1st Written Questions Appendices A to S (Deadline 2).

Jacobs have, for SEW, produced this written response to the Mott MacDonald Report.

This report was produced without consultation with either South East Water (SEW) or Jacobs, who as such had no part in validating the data or statements contained within. The document was first seen by SEW and Jacobs when it was uploaded to the Planning Inspectorates', RCP website as part of NG's Deadline 2 submission.

The history of both projects is contained within the Jacobs Reports for stage 1a and 1b studies. However previous reports may be referred to within the text of this report where relevant to a response to the Mott MacDonald report.

Where references are given in **Bold** in this report they refer directly to the section within the Mott MacDonald report. The main headings within this report follow the same order, and naming, as that used within the Mott MacDonald report where possible.

2. Mott MacDonald Introduction

2.1 Introduction

The Mott MacDonald Introduction chapter contains information regarding the study area, the objectives of the report and the limitations of the report. Jacobs comments within this section therefore are also general to comments and conclusions made my Mott MacDonald throughout their report. Although Jacobs comments regarding this section are far reaching through the report, they have not been summarised further here as the descriptions for each is fairly sort and presented in the section below.

2.2 Comments

Section 1.1 of the Mott MacDonald report states that the Broad Oak Reservoir Scheme is an aspiration. This is not the case, the reservoir is within the SEW Water Resources Plan. It is the only suitable location for a reservoir to provide the resilience that is required within such a plan.

Although the statement that RCP route lies outside of the proposed reservoir basin, it's presence within the reservoir development footprint restricts the development of the river diversion and fish pass that are required for the reservoir scheme to progress.

Jacobs generally agrees with **Section 1.2** of the Mott MacDonald report however it should be noted that discussions have taken place between UK Power Networks and SEW, and the scope and cost of undergrounding the existing UK Power Networks overhead powerline has been included within SEW's Water Resource Management Plan 2014 (WRMP14).

The structure of the report **(Section 1.4)** states that potential solutions to overcoming design conflicts and feasible and acceptable options to allow the two projects to co-exist are presented within the report. However it is important to note that the reservoir scheme is in the very early stages of design and development, to the extent that the final size of the reservoir has not yet been decided although SEW and Jacobs are confident it will have a top water level of between 32.5m and 36.0m AOD. As such any attempt at designing specific solutions to overcoming design conflicts only at the maximum and minimum reservoir sizes needs to be aware that the extent of the interaction, and therefore the extent of the solution cannot be known at this time.

Jacobs agree that Mott MacDonald are presenting alternatives for the Reservoir scheme **(Section 1.5**) as concepts only without background design and without validation via Jacobs. The concepts must be considered as having potential only, and should therefore be considered within a design envelope to allow for any change in reservoir size, final location of river diversion or fish pass etc. and are not validated in any way as being technically feasible by Jacobs. It is further important to note that no consideration has been given to whether the design solutions presented within the Mott MacDonald would meet the statutory requirements that SEW must adhere to especially the Water Framework Directive (WFD).

3. Description of the Richborough Connection Project and Proposed Broad Oak Reservoir

3.1 Introduction

This section of this report covers **Section 2** of the Mott MacDonald Report. **Section 2** covers the Richborough Connection Project, of which Jacobs are aware and have worked with National Grid throughout the production of the Stage 1a and Stage 1b Jacob's studies. There are however some mistakes made regarding the description and background of the Reservoir Project, mainly regarding to the size of the reservoir, the top water level of which is undecided due to the early design stage that the reservoir scheme is at. However it is taken by SEW and Jacobs that a feasible reservoir will have a top water level of between 32.5m and 36m AOD.

3.2 Richborough Connection Project

This section within the Mott MacDonald report (**Section 2.1**) contains a description of the Richborough Connection Project (RCP). Jacobs have no comment on this section other than to confirm that the layout of the RCP presented in Figure 2.1 of the report was given to Jacobs in the form of a 3D model and was used for the study work produced by Jacobs. This was used to generate a 3D CAD model used extensively throughout the Jacobs study. This complete model was not requested by National Grid and as such the Mott MacDonald study has not been based on Jacobs 2 dimensional CAD files.

3.3 Proposed Broad Oak Reservoir

There are numerous inaccuracies within **Section 2.2**, and specifically within **Section 2.2.2** of the Mott MacDonald report, these are the following:

The reservoir is described as a long standing aspiration, and the size is noted to having been reduced between WRMP09 and WRMP14. The reservoir is going through planned development through the WRMP process. The size of option considered at WRMP14 addressed concerns regarding impacts on SSSI ancient woodland which has now been addressed, and discussed with Natural England (NE) and the Environment Agency (EA) and as such a larger scheme up to the 36m AOD reservoir has been accepted as being feasible.

Mott MacDonald state that "The proposed reservoir does not form the subject matter of any policies in the adopted Saved Policies of the Canterbury District plan 2006 (2009) or the emerging policies of the Draft Canterbury Local Plan Amendments (November 2015) and Potential Main Modifications (April 2016)". This is addressed in the SEW Written Representations submitted at Deadline 2.

The need for and importance of the Reservoir for the sustainable supply of water for this part of South East England have been clearly established through the statutory WRMP process. The WRMP process and its importance is recognised in the Emerging Plan. The WRMP as a statutory plan has also been subject to the Strategic Environmental Assessment process and has part of meeting this process and the WRMP guidance, has fully explored alternative options and has been subject to extensive public consultation. The status of the WRMP14 is an issue that the Applicant has neither appreciated nor sufficiently addressed within its Proposed DCO and in selecting the route for the Proposed Development.

Section 2.2.3 comments that "National Grid and SEW commissioned SEW consultant Jacobs UK Limited to undertake a series of studies". This statement is incorrect. NG agreed a Terms of Reference with SEW, NG provided funding to SEW for 50% of the costs. Jacobs were commissioned by SEW under their framework agreement.

Section 2.2.3 goes on to state that "At the request of SEW, the Stage 1b study considers a range of top water levels, from 32.5mAOD (as reported in the WRMP2014) to 36.0mAOD (which appears to relate to the WRMP2009)." This again is incorrect. The Jacobs Stage 1a study considered the 36m size reservoir as being

the likely maximum and agreed in Terms of Reference for the study by NG and SEW. Natural England made it clear, following the Stage 1a Study, that the 32.5m level should also be studied as the size presented in WRMP14 that has been accepted subject to SEW considering issues raised in consultation with further study of other top water levels to address water quality (requiring a deeper reservoir) and safe-guarding of the SSSIs.

NE met with SEW on 17 May 2016, and at this meeting designs for the Reservoir were reviewed with a maximum size being 36mAOD. NE confirmed that the 36mAOD size could be agreed in principle and although it previously objected to a reservoir of a size larger than 32.5m AOD it stated "In 2014 the initial outline proposal for the Sarre Penn diversion also resulted in a very small area of ancient woodland loss. The loss of ancient woodland has been prevented in the 2016 design. The design principles are good and improving with each iteration of the design concept I have seen. In particular the reduced size of secondary embankments (compared with those discussed in 2014) and movement of the embankments away from the woodland greatly reduces (though does not remove) the likelihood of adjacency impacts on the SSSI woodland" and "I am satisfied that up to 36m AOD the mitigation is of a size and type to be suitable as mitigation of the likely impacts on the SSSI"

4. Identification of Design Criteria and Limitations

4.1 Introduction

Section 3 of the Mott MacDonald report covers the design criteria and limitations of the report. Comments from Jacobs regarding this section and the subsequent section are therefore more specific to particular aspects of the reservoir scheme.

Section 3 of the Mott MacDonald report highlights the limitations of the data that has been used by Jacobs throughout the Stage 1a and Stage 1b reports. Jacobs have undertaken surveys and investigations and obtained survey information to create design criteria that is suitable for use for initial design that the reservoir scheme is at however Jacobs generally agrees with the uncertainty highlighted in the report (except where highlighted below). Uncertainty in base data results in uncertainty in the initial design work conducted to date, flexibility therefore needs to be allowed for to allow for refinement of the reservoir scheme design as the data is confirmed or corrected and the reservoir scheme is taken through subsequent design stages. The Jacobs designs presented in the Stage 1a and Stage 1b studies have not included an additional buffer zone, an area outside of the assumed river scheme outline, to allow for uncertainty in the data used.

As this section has several points to which Jacobs disagree, the findings have been tabulated with reference given to the specific section within the report.

4.2 Jacobs Responses to Specific Issues

Table 4.1 below presents Jacobs responses to specific comments within Section 3 of the Mott MacDonald report.

Table 4.1 : Jacobs response to Section 3 of the Mott MacDonald Report

Reference	Mott MacDonald Comment	Jacobs Response
3.2.1	Topographic Data: Mott MacDonald make the point that there is some inconsistency between the available LiDAR data at the Reservoir Site, and an SEW topographical Survey	The topographical survey was adopted for use for the Jacobs studies and initial designs as the LiDAR data is limited and covers only a small proportion of the site. Jacobs in report Stage 1b confirm the potential error of position resulting from conflicting topographical data as 4.4m in plan location – this is insignificant on the scale of this scheme, and shows that the information used is appropriate for the level of initial design that the reservoir scheme is currently at.
3.2.2	Geotechnical Data: Mott MacDonald note the extent of the existing ground investigations and comment that ground conditions can be a risk to any project and also comment on potential considerations	Jacobs acknowledge in stage 1b report the limits on data and have undertaken feasibility slope design calculations for the dam and river diversion cutting on this basis. Jacobs agree that the detail noted is required to finalise the river diversion design. Mott MacDonald note that lining is possible if necessary, we agree and believe we will have sufficient won clay from the excavations. Initial assessment of the river diversion route and depth of clay found to exist in the hill side shows that it is likely that the river will be within the clay

Reference	Mott MacDonald Comment	Jacobs Response
		and not require lining. The Mott MacDonald list of potential considerations further highlights the requirement to allow for flexibility to develop the design for the reservoir scheme, for example should the river embankments need to be made shallower, leading to an increased interaction with the RCP.
3.2.3	Utility Services: Mott MacDonald states that there has been no non-intrusive utility services search for the proposed Broad Oak Reservoir.	The statement made by Mott MacDonald is not true. Jacobs undertook buried service investigations for their GI surveys but these are not published. There are no additional major buried services affecting the development. Previous studies used for WRMP09 identified major services impacted and accounted for these in the base design and costing.
3.2.4	Hydrological Data: Mott MacDonald State that: A complete understanding of the low flows of the Sarre Penn is very important for the hydraulic design of the channel diversion and the fish pass. Low flow data is also required for habitat design (both geomorphological and aquatic). Finally, an understanding of the flood flows is required to ensure the channel does not increase flood risk elsewhere, or present an opportunity for scouring of the embankment or appurtenant structures which may compromise dam safety. Any changes to these figures could alter the line and level of the proposed Sarre Penn diversion.	Jacobs agree that there is uncertainty over the hydrological data, especially for low flows and note this in the risks presented in the Stage 1a and 1b studies. Jacobs therefore undertook additional monitoring, in the limited time frame available, to calibrate/validate the previous recordings. Further monitoring is required to confirm flows for later design stages. Jacobs have designed a channel that has space to be able to adapt to a detailed design to suit the validated low flows. A tick shaped channel profile has been identified as suitable for this in discussions with the EA. The river diversion, downsteam of the secondary dam, will only pass flood flows up to 1:10 year events (flows above this it will overflow into the reservoir). Flood risk downstream is therefore reduced and upstream is no greater than the existing situation. If the fish pass is required for use in low flow periods, and the flows are lower than currently expected, this could result in a fish pass with a shallower gradient being required, increasing the land required and therefore the interaction with the RCP.
3.2.5	Statutory consultees: Mott MacDonald state that ''Constraints posed by statutory consultees and stakeholders can be varied in nature. Examples of statutory consultees and stakeholder constraints may be linked to environmental mitigation measures, interaction with existing utilities and negotiations with landowners. These constraints may cause a design conflict for either or both the RCP and the proposed	Jacobs agree these are important and have engaged with key statutory consultees and the proposed design and mitigation aims to address their concerns. However part of Jacobs concern is potential for the statutory consultees and others' requirements to develop as consultation and design proceeds and flexibility within the design envelope is therefore required.

Reference	Mott MacDonald Comment	Jacobs Response
	Broad Oak Reservoir''.	
3.3	General Environmental Constraints Mott MacDonald list key environmental constraints	Jacobs agree with the list of constraints. It is however noted that Mott MacDonald do not appear to have considered these in development of the solutions to the interactions between the two schemes. Jacobs agree that any change required to the gradient of the river channel diversion may result in an increase in the interaction with the RCP.
3.4.1.1 and 3.4.1.2	Pylon Type and Size and General Design Criteria	Jacobs note these design criteria, which have been used throughout the Stage 1a and 1b study. However Jacobs were informed by NG during their studies that the requirement for a 50m x 50m area around the pylons for maintenance did not exclude excavation provided the foundation was designed for this and were not aware of the 8m construction exclusion near water, which further increases the interaction between the two schemes.
3.4.1.3	Limits of Deviation: Deviation of pylons may impact the available land to construct the Sarre Penn River diversion and fish pass. Deviation of pylons and overhead lines may change the nature of the riparian planting of the proposed Broad Oak Reservoir.	Jacobs agree with the comments noted by Mott MacDonald highlighting the possibility of further increase in the interaction between the two schemes.
3.4.2.1	Sarre Penn River Diversion Design: Mott MacDonald state that "It is noted that a change in base data (topographic, geotechnical and hydrological) may have an impact on these design constraints, which in turn will impact on the plan location of the diversion channel. However, as a conservative approach has been applied to the base line Broad Oak Reservoir studies, changes are likely to reduce the interaction between the schemes."	Jacobs do not agree with this comment. The uncertainties that have been noted in the base data could also increase the level of interaction between the two schemes.
3.4.2.2	Dam Design: Mott MacDonald state that "The dam design is in its initial stages and appears to adopt conservative assumptions. This should be taken in to account when assessing the impact of the RCP on the proposed Broad Oak Reservoir as the footprint of the dam and reservoir place a physical constraint on the location of the diversion channel."	Using the Geotechnical Investigation data attained within the studies, Jacobs have undertaken initial slope stability calculations. Having considered initial slope stability calculations it is confirmed that average slopes at 1:6 and above 10m at 1:8 were found to be viable. It is essential to design at concept for a reasonable case which may be improved upon through outline and detailed design phases. This is common engineering process to ensure concept designs do not place constraints upon schemes if parameters are later changed resulting in an increase in land required. Jacobs

Reference	Mott MacDonald Comment	Jacobs Response
		confirm the dam design is pragmatically feasible rather than conservative. The top water level of the reservoir does have a constraint as to the location of the river diversion; however the size (footprint) of the dam provides only a minor constraint as to the location of the river diversion.
3.4.2.3	Fish Pass Design: Mott MacDonald state that "There is currently a lack of knowledge of the fish species in the watercourse. The study suggests that all species of fish should be considered, which may overdesign the structure. The uncertainty in the TWL may lead to a longer fish pass channel being presented than actually required. Length of channel may become critical due to other physical constraints. Further uncertainly in the fish pass design has led to a 10m corridor allowance, greater than the diversion channel design.	Fish pass design addresses the target species brown trout and bull head and eel based on survey information from the EA - these represent a range of requirements salmonids and coarse fish. An average of a 1:50 gradient is not a conservative design requirement but a maximum average likely to be acceptable for fish passage over the length of the fish pass. The 10 m corridor is required to achieve the within channel meandering required for the nature like fish pass which is described in the Stage 1b report including an illustration of a tick type channel which was noted as being an expected requirement by the EA, and helps to create sufficient flow depth for low flows. The fish pass design for minimum and maximum reservoir levels generates an envelope within which it is feasible to deliver a fish pass to meet the EA requirements.
3.4.2.5	Access Requirements: Mott MacDonald state that: The bridleway adjacent to the diversion channel increases the required corridor for this component of the works. The requirement for vehicles to access the crest from the south increases the size of the bridge. The requirement for the bridge to allow access to the crest from the south in all flow events means the bridge spans the low and high flow channel, and therefore increases the size of the structure. The proposed construction technique of installing precast units places restriction on plant size around the RCP.	It is agreed that the bridleway does increase the width of the diversion channel, however this width increase is the same regardless of where the bridleway is along the river diversion. Vehicle access is required for maintenance. The bridge span is shown to cover the full width of the river diversion to avoid steep access slopes to the bridge, or further widening of the river diversion to fit an access road along it, or to avoid a large cutting to allow for an acceptable access gradient to the bridge. A mitigation of launching a bridge is presented within the Stage 1b report. Precast is the current assumed preferred method of construction due to the location of the bridge and speed/ease of construction on site.
3.4.2.6	Construction risk: Mott MacDonald state that: "The type and size of plant may need to be reduced when working under overhead lines. The	Jacobs agree that consideration should be given to plant requirements during the appropriate design stage, as should consideration as to excavation close to pylons and pylon foundations.

Reference	Mott MacDonald Comment	Jacobs Response
	clearance to the overhead lines is unlikely to impact construction vehicle access. Consideration should be given to plant requirements during the appropriate design stage."	However reducing size of plant used increases the cost of construction.
3.4.2.7	Environmental Mitigation: Mott MacDonald state that: "Riparian planting is an aspiration to satisfy both ecological, landscape and visual constraints. However, the interaction between the RCP and Broad Oak Reservoir is a small component of the wider Broad Oak scheme, particularly in the context of visual impact. Indeed, by the time construction commences around 2033 the RCP may have been present for 15 years."	The 'riparian planting' presented by Jacobs is not an 'aspiration' but it is a requirement of the WFD and habitat replacement as clarified by the EA in their email and relates to the nature and function of the riparian corridor currently present along the Sarre Penn. It is noted that the diversion involves replacing the approximate 1:200 gradient Sarre Penn with a 1:400 gradient diversion which would maintain the geomorphological function of the river and allow silt to be moved cleaning gravels which will be important for maintaining brown trout habitat. However with the challenge of creating a perched river and significant length of fish pass, it is vital that all elements that contribute to this corridor functioning ecologically including appropriate riparian corridor tree species providing shading to avoid thermal barriers and reduce dissolved oxygen, are optimised. . This is key component of the scheme and failure to demonstrate that the interaction with the RCP would not impede meeting the WFD requirements explained by the EA could affect the acceptability of the whole scheme. The length of time the RCP is present before the reservoir is constructed does not change the nature of the issue for the design of the river diversion and fish pass. The Reservoir may be required to be constructed and delivering water before 2033 depending on the outcome of the next WRMP. The aim for the reservoir is to provide a river and fish pass design which will function over the long term with relatively low management requirements.
3.4.2.8	Landscape and Visual Impact: Mott MacDonald state that "National Grid will provide landscape solutions to minimise the landscape and visual impact of RCP. The Broad Oak Reservoir project should consider these solutions when proposing landscape designs, so that the two schemes complement each other once complete. The Stage 1a and Stage 1b studies proposed tree planting to enhance the visual appearance of Broad Oak Reservoir."	Jacobs tried to investigate these but were informed that these would be determined after the Jacobs tried to investigate potential for landscape and planting mitigation but were informed that these would be determined after the DCO process in negotiation with landowners as this involves land outside the order limits. It is important to note that the tree planting is not proposed for visual enhancement purposes, the objective is to

Reference	Mott MacDonald Comment	Jacobs Response
		1) establish woodland connecting existing woodland blocks and mitigating for the fragmentation of woodland in the landscape due to the reservoir inundation area and dam footprint. The planting proposed would be part of creating a woodland, meadow and wetland setting for the reservoir. 2) Provision of specific features such as the riparian corridor providing shading and other ecological interaction (source of wood debris, invertebrates and root interaction over time) for the river diversion and fish pass. The woodland will also be important for the landscape setting of the reservoir within the valley and provide a visual screening function for structures such as the dam embankment and water treatment works.

5. Identification of Design Conflicts

5.1 Introduction

Section 4 of the Mott MacDonald report presents the design conflicts found through their study. This has been broken down to conflicts for two reservoir sizes, 32.5m and 36m AOD, and presented as conflicts at each pylon, or the overhead line between them. No consideration is given within this section regarding reservoirs sizes that fall between these limits. Jacobs Stage 1b study findings were that the interaction between the river diversion and pylon PC9 were greater for a reservoir between these limits. Considering interactions at each pylon and then the overhead lines between them is a different approach to that considered by Jacobs. The Jacobs studies have considered each design element of the reservoir scheme and then presented where these interactions occur along the RCP. This Mott MacDonald approach does find many of the same interactions as the Jacobs approach however misses some of the project wide interactions, such as visual impacts, amenity users and ability to meet WFD requirements.

Jacobs broadly agrees with the interactions found by Mott MacDonald and these are presented in Jacobs Stage 1a and Stage 1b reports.

To fully identify the interactions the full range of reservoir sizes needs to be investigated as is presented in the Jacobs Stage 1b study report which gives an indication of the interaction for the smaller, larger and intermediate reservoir sizes.

Jacobs detailed findings in the following sections.

5.2 Jacobs Responses to Specific Issues

Cross sections through the river diversion and RCP are presented throughout **section 4.2** and **4.3**. These are nicely presented, and serve well to present the interactions between the two schemes. However there are some issues that need to be highlighted.

The tree planting shown on the sections is misleading. The cross sections show mature planting, which in the case of high canopy woodland would require at least 30 years, and more likely 50 years for maturity. Therefore the scenarios presented in the Mott MacDonald report are illustrative of scenarios in around 45 to 60 years after the construction of the RCP (the reservoir will follow up to 15 years after the RCP). Typically for a Landscape and Visual Impacts Assessment (LVIA) year 15 is taken as the design year, by which time planting would be typically 8 to 10m high. This would therefore be 30 years after the construction of the RCP, and as such the RCP would not benefit from screening for several decades.

The report fails to address any of the concerns of the lack of backgrounding for the pylons on medium and long views from within The Blean SLA and reservoir site. This would be illustrated by the sections if the mitigation planting had been shown correctly, and again would be several decades before it is achieved planting proposed for the Broad Oak Reservoir.

Potential interactions are listed out within **section 4.2** and **4.3**. Jacobs generally agree on these impacts however no mention is made of the potential impacts on:

- amenity for users of the reservoir bridle path/cycleway
- visual impact on the reservoir and wider landscape with the reservoir
- ability to meet WFD and fish pass requirements
- impact on woodland connectivity as proposed in the Broad Oak environmental illustrative master plan taking into account practicality and impact of managing the corridors beneath the overhead lines.
- ‘landscaping’ – should be landscape design

These sections concentrate solely on 32.5m AOD and 36m AOD. There is no mention of a scheme between these sizes which leads to different levels of interaction.

6. Potential Solutions to Design Conflicts

6.1 Introduction

Section 5 of the Mott MacDonald report presents potential solutions to the conflicts between the two schemes. . The section is presenting solutions to an initial reservoir scheme design, which although based as far as possible on sound base data, is still in the very initial design stages. This is highlighted by the fact that the reservoir top water level has not yet been decided, and although some confidence has been gained in river diversion gradient, and format of the fish pass, no agreement has been obtained with the Environment Agency. Therefore it is not possible to present detailed potential solutions without a full understanding of the extent of the interaction.

As per the Section 4 of the report, it presents solutions on an individual pylon, or length of overhead line between them. However this approach does not consider the consequences of the mitigations, and does not consider whether mitigation may lead on to another issue, or if it results in the reservoir scheme not being deliverable due to other requirements. These are discussed in more detail in the following sub sections.

The section assumes that any engineered solution is feasible, regardless of cost, or environmental issues. Therefore this section should not be taken to imply that the presented solutions are deliverable.

The solutions are based on interactions found with the 32.5m and 36m AOD reservoir, therefore interactions between these sizes, and therefore potential solutions have not been considered.

The solution of moving the RCP outside of the footprint of the reservoir scheme has not been presented as a potential solution. This mitigation would eliminate all the interactions presented, and should have been included to form a complete study.

6.2 Jacobs Responses to Detailed Solutions

A number of the solutions listed put forward, such as culverting the river diversion, or reducing the gradient of it, go against the design principles for the river diversion and will reduce the ability to provide an acceptable functional replacement for the Sarre Penn. The Jacobs Stage 1b study has found that it is required to have an average gradient of 1:400 and to allow cleansing velocities and channel movement within the corridor. Culverts are also not likely to be considered acceptable for meeting WFD aims for the Sarre Penn realignment, also due to the depth of cutting required these would need to be significant structures with long wing walls to enable them to carry a road at the height of the dam crest and negate the requirement for the bridge.

The Mott MacDonald report does not consider the extent of mitigation required which will vary depending on the final reservoir top water level, for pylon PC9 a size midway between 32.5m and 36m AOD requires the largest extent of mitigation to avoid the pylon as pylon would be located in the centre of the river diversion cutting. The comment that National Grid could design a suitable foundation for PC9 is therefore not relevant.

Figure 5.3 in the report shows a retaining wall as a mitigation to pass the river diversion past PC9, this retaining wall as shown is approximately 10m high, which would not be neither visually desirable, lead to additional cost to the reservoir scheme and would potentially be hard to construct. A retaining wall of this height would require tie bars behind the wall which would pass under the foundation of the pylon. There are likely to be additional implications for providing the riparian corridor continuity and function with structures for the retaining walls in place.

The Jacobs Stage 1b study found that there is a significant interaction between the fish pass and pylon PC10 for the 36m AOD reservoir. Mott MacDonald have presented that: *"a bioengineered fish pass structure may reduce the footprint of the structure. Examples include vertical slot fish pass, Larinier and rock ramp. A bioengineered structure would require acceptance by the Environment Agency, however can be designed for the target species and there is precedent of such structure at UK dams. Additional structures may be required*

for invertebrates and eels. It should be noted that an engineered structure may be more advantageous to SEW as it is located next to the right abutment of the dam and no erosion risk should be present."

The natural low gradient channel is the design indicated by the EA as the approach they expect to see to meet fish passage and WFD requirements. A fish pass of the size required and designed to meet WFD requirements is unprecedented and represents a considerable challenge within the constraints of the area available.

Riparian vegetation along the fish pass and diversion channel are considered to be an integral part of the design to provide sufficient shading to avoid creating a thermal barrier for fish and also to interact with the scheme. A 'bioengineered' channel structure of the types indicated by Mott MacDonald go against the design principles directed by the EA and would therefore not achieve acceptability and therefore deliverability of the reservoir scheme. Additionally the mitigated options presented may not provide appropriate passage for all fish species under consideration. The fish pass, once constructed, will need to be monitored to show if it is working as intended, and there is an expectation that there could be a need for further modification to the fish pass after it is constructed. Therefore it is required that flexibility is maintained, and constraints such as those imposed by the RCP are avoided.

Other mitigations are discussed in Section 7 of this report which covers feasible solutions.

Section 5 of this report does not adequately present the case for reservoir levels of between 32.5m and 36m AOD. The Mott MacDonald report states that: *"Should a reservoir TWL between 32.5mAOD and 36.0mAOD be proposed by SEW, the interaction with the RCP will have minor variations with those identified for the two TWLs previously discussed in this section.*

It would be unreasonable to provide design concepts for the full range of proposed TWLs. By focusing on the 32.5mAOD and 36.0mAOD TWL an analysis of the lowest and highest potential levels has been conducted and as such provides confidence that levels in between can also be mitigated for."

Jacobs Stage 1b study has shown that reservoirs with a top water level between 32.5m and 36m AOD will result in higher levels of interaction for some sections of the RCP, notably pylon PC9 where the river diversion passes it to the north for the lower reservoir and to the south for the higher reservoir. Therefore it is not a true statement that the interaction with the RCP will have minor variations. The Jacobs Stage 1b study found that the full design corridor for the river diversion would need to be considered to fully understand the interaction between the schemes. The stage 1b study report has done this and the findings are presented at the end of each section of the report, and summarised within the executive summary of the Stage 1b report.

The Mott MacDonald report has not investigated and therefore not understood the interaction for reservoirs within the range, and therefore underestimates risks to the reservoir scheme and levels of mitigation required.

7. Feasible Solutions

7.1 Introduction

Section 6 of the Mott MacDonald report presents "feasible and acceptable solutions that allow the two projects to co-exist". This has again been done for the 32.5m and 36m AOD reservoir schemes, and the options presented use the potential solutions presented in **Section 5** of the report.

There is no description given as to what consists of a feasible or acceptable solution. There has been no discussion of these options with SEW, the EA or NE as regarding acceptability, additionally there has been no attempt to cost the mitigations and therefore investigate whether these options are either feasible or deliverable. The Jacobs Impact Evaluation report considers the combined effect of mitigations on the acceptability of the reservoir scheme, and presents costs for both mitigated and un-mitigated reservoir schemes which have been calculated using the pricing model used for WRMP14.

Table 6.1 and **6.2** in the Mott MacDonald report rates the level of impact for each of the interactions, however no method is presented as to how these impacts are rated. Additionally the cumulative impact of these interactions has not been considered. Jacobs have presented within their Stage 1b report an assessment of interactions and given a rating of risk to deliverability to the reservoir scheme for each individual interaction with an explanation given as to the methodology. This has been discussed with both National Grid and South East Water in a meeting where both parties and the author of the Mott's report were present. These individual risks and required mitigations have then been assessed as combined risks in terms of risk to reservoir deliverability and cost impact in the Jacob's Impact Evaluation Report as discussed above.

7.2 Feasible and Acceptable Solutions that Allow the two projects to co-exist for 32.5mAOD reservoir.

Specific responses from Jacobs are presented in the table below.

Table 7.1 : Responses to solutions for 32.5m AOD reservoir

Mott MacDonald Comment	Jacobs Response
SEW has indicated they will be looking to plant high canopy woodland. The powerlines will affect a corridor directly under the overhead lines where planting will be limited to smaller tree species and scrub. This will create a structurally diverse woodland and will result in greater reliant faunal and floral diversity, helping to meet the national planning policy framework aims in respect of diversification and net gain, as well as ensuring connectivity requirements	The high level canopy woodland in the corridor along the south side of the reservoir is considered important as part of the wider woodland connectivity provision included in the reservoir mitigation proposals. For context it should be noted that the mitigation proposals would provide approximate 200ha of new woodland and meadow habitat replacing intensively farmed arable land The proposals have identified particular scope for providing more open structurally diverse woodland including establishing glades and coppice woodland over time in some of the woodland areas adjacent to existing woodland to the north and east of the reservoir (and discussed with NE). Also provision of woodland edge habitat along many of the footpaths and rides and around meadows and reservoir features. On the south side of the reservoir we have specifically allowed for open areas creating structural diversity along the river diversion and bridle path (close to the continuous riparian corridor) and along the southern

Mott MacDonald Comment	Jacobs Response
	edge of the woodland facing Broad Oak village where we expect more open woodland areas and space for creating local amenity, where lower height woodland and coppice and open areas would be suitable. Our plan aims in addition to keep a continuous corridor of high canopy woodland along this south side in addition to the more open areas and this will contribute to the biodiversity of the proposals. The full height riparian corridor along the river diversion and fish pass serves a specific function for the Sarre Penn realignment aquatic habitat in terms of shading preventing creation of thermal barriers and low dissolved oxygen which would affect the fish pass use, and ecological interaction (invertebrates and wood debris and tree roots). This is all part of meeting WFD requirements. The riparian corridor along the fish pass is proposed to be contiguous with adjacent high canopy woodland providing seclusion and keeping visitor pressure down in this area. The practicalities of managing vegetation height below the overhead lines to meet the connectivity and shading and ecological requirements, and also in terms of access, frequency, and disturbance are not addressed.
In the location of PC9 the Sarre Penn diversion channel can be relocated further to the north as presented in Figure 6.1. In addition, slope stability techniques would be utilised to minimise the excavation requirements.	Bank terracing could be used to steepen the bank sides; however this would increase the construction cost due to the earth stabilisation/retaining structures required and change the landscape in this location, creating an engineered rather than more natural looking solution. It is also likely to open up the area and prevent the creation of a functional riparian corridor.
There remains a number of options to construct the bridge under the overhead lines; one option would be to construct in-situ prior to excavating the ground, and this would remove the need for cranes which could not operate under the overhead lines. The channel would be excavated at a later date.	Jacobs accept that there are different construction methods available for the bridge. Construction as suggested by Mott MacDonald still requires construction of foundations which are likely to require piling, and will still require lifting operations of precast units, reinforcement bars, or steel sections which would require cranes to be used under the RCP which clearly does not eliminate the risk but reduces it partially. This is therefore not considered a mitigation that achieves elimination and differing methods would be considered at detail design should the risk be present.
SEW has indicated they will be looking to plant high canopy woodland between PC9 and PC10. The powerlines will affect a corridor directly under the overhead lines where planting will be limited to smaller tree species and scrub. This will create structurally diverse woodland and will result in greater reliant faunal and floral diversity, helping to meet the national planning policy framework aims in	There is scope to create sufficient structurally diverse woodland areas within the overall scheme and especially edge habitat along the southern edge of the woodland facing Broad Oak village and along the bridle path and other rides and glades within the wider planting blocks which will be in keeping with these areas and not affect connectivity. Provision for creating structurally diverse woodland is already part of the

Mott MacDonald Comment	Jacobs Response
respect of diversification and net gain, as well as ensuring connectivity requirements.	proposals. However along the river diversion/fish pass corridor the aim is to create a functional habitat as close as possible to the Sarre Penn and as directed by the EA this needs to include a continuous riparian corridor with trees interacting with the river within the corridor providing a source of woody material and most importantly shading function. PC9-10 along the fish pass the shading from the riparian corridor is particularly important to creating a thermal barrier which could reduce the function of the fish pass for temperature sensitive species such as brown trout.

7.3 Feasible and Acceptable Solutions that Allow the two projects to co-exist for 36.0 mAOD reservoir.

Some of the comments presented above for the 32.5m AOD reservoir are also relevant to the 36.0m AOD reservoir, they are not repeated here. Table 7.2 below presents the Jacobs responses are the specific to the 36.0m AOD reservoir.

Table 7.2 : Responses to solutions for 36.0 m AOD reservoir

Mott MacDonald Comment	Jacobs Response
Moving the channel closer to the reservoir may create concerns over leakage paths between the two, the figure presented maintains the 10m spacing advised, however if this was consider a concern cut off piles could be installed as a precautionary measure.	Moving the river diversion closer to the reservoir was also mentioned for the 32.5m AOD reservoir, however here, for the 36m AOD reservoir it is shown that to avoid PC8 there is essentially no gap between the reservoir and the river diversion cutting (**figure 6.2**). It is Jacobs experience that cut off piles, in the form of sheet piles, leak between the clutch connections between each pile and would not consider this a suitable mitigation.
In the location of PC10 the fish pass alignment can be adjusted as presented in Figure 6.2. This alignment will remove a conflict between the two schemes whilst maintaining all the design requirements of both schemes. The new alignment may not be optimal for the existing ground contour levels, however, the overall cut and fill requirements will be minimal considering the large earth moving equipment available for the construction of the new earth dam. The proposed channel in Figure 6.2 is the same length and gradient as that proposed in Stage 1b.	A suggested fish pass alignment is shown on Figure 6.2. This appears to show the Jacobs dam alignment for the 36.0m AOD dam and we assume that this has been shown with no modifications. However the drawing only includes the above ground section of the dam, it does not show the dam foundations which extend beyond the toe of the dam, and depending on ground conditions this area could be significant. The fish pass as shown in **Figure 6.2** would encroach upon the foundations for the dam and is therefore not appropriate. Additionally Jacobs findings were that if the fish pass dropped down into the valley further upstream, as shown by the Mott MacDonald alignment in **figure 6.2**, then the fish pass will become above ground downstream and will require significant bunding. This is prevented by increasing the length of the fish pass at the top of the valley before dropping

Mott MacDonald Comment	Jacobs Response
	down into it. This bunding, that will be required, will also encroach over any drainage along the toe of the dam and would be a landscape and visual issue as well as potentially making provision of a suitable riparian corridor difficult to achieve. Due to the additional sinuosity of the Mott MacDonald design over the Jacobs design, it may also not be possible to introduce this bunding without also incorporating steep banks or retaining structures. These would also have visual and riparian corridor implications.
In the location of PC9 it is recommended to promote both schemes as per their current proposals. As the pylon would effectively end up on an island between the Sarre Penn River diversion and the reservoir existing easements would be affected and will need to be reviewed	No indication is given as to how this pylon would be accessed for maintenance or how the easements would be revised. The access required may also further open up this area an affect the riparian corridor.

8. Conclusions

8.1 Introduction

The Mott MacDonald ends with a summary and conclusion of the findings from the previous sections. Much of the comments that Jacobs have regarding the findings are already discussed above, however the chapter of this report is used to summarise those comments.

Table 8.1 : Mott MacDonald Conclusions and Jacobs Responses

Mott MacDonald Comment	Jacobs Response
The report presents feasible and acceptable options to allow the two projects to co-exist	Jacobs do not agree that the options shown are feasible or acceptable. There are various engineering issues as to their feasibility (such as tie bars extending under the foundations of the pylon, the fish pass encroaching on the dam foundations). The acceptability relies on agreement with the statutory regulators and stakeholders. This includes the river diversion and fish pass being in accordance with WFD and sufficient planting being achievable. The Mott MacDonald report has not considered the combined effects of the mitigations that would be required, and has not considered the cost of implementing these to SEW. This increased cost impacts on the deliverability of the scheme.
This study has identified the topographic, geotechnical and hydrological information as limiting factors to the production of a robust design. In light of this, the dam, channel and fish pass proposals are considered conservative designs. Considering the proposed reservoir construction date around 2033, the level of base information and a conservative design approach is appropriate	Jacobs agree that the current level of information is limiting and that the level of information used is appropriate for this stage in design. However Jacobs do not agree that the design is conservative. Jacobs have through the course of the study optimised the design to within realistic expectations of the final design (for example by adopting a 1:400 gradient for the river diversion rather than a conservative value of 1:200. The reservoir scheme, which should be looked at as existing between 32.5m AOD and 36m AOD has not included any additional land take to give the design conservatism. Ideally this should be shown with an additional offset as per the National Grid order limits. Additionally the pylons in the Jacobs report considered the 32m square exclusion zone around the pylons, but have not considered the larger 50m area required for maintenance. This further increases the level of interaction shown in the Jacobs reports, and therefore increases the level of interaction previously anticipated.
This study has identified alternative design options. Using engineered solutions, such as retaining walls and culverts, a reduced footprint of the proposed Broad Oak Reservoir structures can be achieved and therefore minimise the interactions between the RCP and the proposed Broad Oak Reservoir. These alternative options are subject to general and project	We do not agree that mitigations, such as retaining walls in the order of 10m high, or the use of culverts which will not provide WFD requirements, are acceptable alternatives. Therefore the do not fit within general and project specific constraints.

Mott MacDonald Comment	Jacobs Response
specific constraints.	
Outstanding risks to both projects have been identified. However, these risks can be addressed as the design of Broad Oak Reservoir progresses and are not considered significant enough to prevent the reservoir from being built.	Jacobs agree that project risks have been identified. However Jacobs view is that the significance of these risks is not adequately reflected. The Mott MacDonald report has not demonstrated that their revised designs are constructible, acceptable to statutory regulators, or desirable solutions. It does not demonstrate that the risks are not significant as the cost of the mitigations and the acceptability of the mitigations are not addressed and therefore the report does not consider the implications for the deliverability of the reservoir scheme.
Comments regarding 32.5 and 36m AOD	The Mott MacDonald report has looked at interactions for the 32.5m and 36.0m AOD reservoir. The final reservoir will be within the range bounded by these two limits. Therefore this range needs to be considered. In doing this Jacobs findings were that a reservoir between these levels is likely to have the largest interaction with the RCP, especially for pylon PC9, and be the hardest and most costly to mitigate against.
Adequate riparian planting (in the form of a suitable range of tree and scrub species woodland) can be provided to meet the intentions of the reservoir scheme in relation to habitat connectivity, providing net gain, whilst minimising landscape and visual impacts (see Appendix D). Furthermore, planting a structurally diverse range of species, and maintaining a variety of heights in limited locations i.e. beneath and adjacent to the overhead lines, would in fact increase the range of dependant faunal and floral species that would develop. It would not alter the effectiveness of habitat connectivity as those species present use both tree and scrub species to commute, and thus is not a design conflict which presents the two schemes from coexistence.	In terms of general woodland diversity, it should be noted that the mitigation proposals would provide approximate 200ha of new woodland and meadow and wetland habitat (not including the open water area) replacing intensively farmed arable land. The proposals have identified particular scope for providing more open structurally diverse woodland including establishing coppice woodland over time particularly in some of the areas adjacent to existing woodland to the north and east of the reservoir (and discussed with NE). The proposals include provision of woodland edge habitat along many of the footpaths and rides and around meadows and reservoir features. The current reservoir mitigation proposals provide for significant net gain and biodiversity enhancement. On the south side of the reservoir we have specifically allowed for open areas creating structural diversity along the river diversion and bridle path (close to the continuous riparian corridor) and along the southern edge of the woodland facing Broad Oak village where we expect more open woodland areas and space for creating local amenity, where lower height woodland and coppice and open areas would be suitable. Our mitigation plan aims to also keep a continuous corridor of high canopy woodland along this south side in addition to the more open areas as part of the biodiversity and connectivity aims. The full height riparian corridor along the river diversion and fish pass serves a specific function for the Sarre Penn realignment aquatic habitat in terms of shading preventing creation of thermal barriers and low dissolved oxygen which would affect the fish pass use, and ecological interaction (invertebrates and wood

Mott MacDonald Comment	Jacobs Response
	debris and tree roots). Alder Oak and Ash are important species in the current Sarre Penn riparian corridor and it is important that Oak and Alder are also key species in the rive diversion/fish pass riparian corridor species. The species list proposed in the Motts Macdonald Report does not include these tree species and the species proposed is not particularly suitable for the riparian corridor for the Sarre Penn. The practicalities of managing vegetation height below the overhead lines to meet the connectivity and shading and ecological requirements, and also in terms of access, frequency, disturbance are not addressed.
Both reservoir top water levels cause an interaction between a SEW proposed access bridge onto the dam crest and the overhead line between PC9 and PC10. Suitable construction techniques should be applied to minimise any impact. Options to construct the bridge prior to ground excavation may be an appropriate solution.	Jacobs agree that there is an interaction between the access bridge and the overhead line between PC9 and PC10. However the Mott MacDonald proposed construction method still requires materials to be delivered to site and unloaded, which will require lifting equipment (cranes) to be used under the RCP and is therefore not an appropriate solution.
.	Jacobs agree that with significant increase to safety of construction workers and significant increase in cost to the reservoir scheme that it may be technically feasible to construct a heavily modified and hard engineered Reservoir around the proposed RCP However we do not agree that it is possible to deliver the reservoir scheme and deliver the requirements of the statutory regulators or stakeholders or to deliver the scheme within an acceptable budget. None of these issues have been addressed within the Mott's report.

8.2 Jacobs Conclusion

The Mott MacDonald report ends with the statement that *"It is our conclusion that should the RCP be constructed along it proposed route, it would still be possible to construct the proposed Broad Oak Reservoir including the Sarre Penn River diversion".* However, Jacobs do not agree there is justification for this conclusion to be made. The work in the Mott MacDonald report does not consider the deliverability of the reservoir scheme in terms of acceptance by the regulatory bodies, or the economic deliverability due to cost of the mitigated scheme.

Jacobs acknowledge that if significant increase to the safety of the construction workers were achieved, and it were feasible to accept the significant increase to the cost of the reservoir scheme that it may be technically feasible to construct a heavily modified and hard engineered Reservoir around the proposed RCP.

However, delivery of the reservoir scheme is not about hard engineering alone. Jacobs do not agree that it is possible to deliver the reservoir scheme with these proposed mitigations and meet the requirements of the statutory regulators. The Mott MacDonald report has not considered either the requirements of the regulators or the cost implications of the engineering mitigations being considered. These have been considered within the extensive work conducted by Jacobs, commissioned by SEW with joint funding from National Grid working to a mutually accepted scope of work in study stages 1a and 1b and considered from a cumulative perspective in work undertaken by Jacobs for SEW in the Impacts report submitted as part of the SEW Written Representation at Deadline 2.

Application by National Grid Electricity Transmission Plc for an Order granting Development Consent for the Richborough Connection Project

Planning Inspectorate Reference No: EN020017

Representation No. 14

Deadline 3 Submission on behalf of South East Water, Appendix 2

SEW Response to Applicant's answer to Written question 1.12.40 (Alternatives)

1. South East Water's (**SEW**) approach to the law and policy on alternatives in this case is set out in its Written Representation (**WR**) at paragraphs 170-185 and 192-197.

2. In its response to the Examining Authority's (**ExA**) Written Question 1.12.40, National Grid (**NG**) has sought to rely on the decision of Mr Justice Ouseley in an application for permission to apply for judicial review in the case of *R (Thames Blue Green Economy Ltd.) v. Secretary of State for Communities and Local Government* [2015] EWHC 727 (Admin) see **Appendix A.**

3. As the courts have made clear, the authorities on alternatives need to be approach with a degree of caution because they are so fact-sensitive (see SEW WR at paragraph 177).

4. NG's answer to the ExA's question does not explain the issue that the court was dealing with in that case, and thus does not provide the ExA with the context that is needed to understand what (if any) significance it has for the purposes of examining the current application. Once that factual context is understood, it is clear that the case provides little if any assistance in resolving the issues that arise in this examination.

   <u>The issue in the *Thames Blue Green Economy* case</u>

5. The *Thames Blue Green Economy* case was a challenge to the decision to grant development consent for the Thames Tideway Tunnel. It was concerned with a decision by the ExA not to accept the Claimant's request that it consider strategic alternatives to the type of infrastructure endorsed by the relevant National Policy Statement (**NPS**) (i.e. a tunnel), in circumstances where the process of preparing the Wastewater NPS had itself considered such strategic alternatives and had clearly and explicitly directed that they were not to be considered by the ExA in examining an application for development consent for the Thames Tideway Tunnel (see paragraphs 4 to 9 of the Transcript of the Judgment).

6. It was the ExA's decision not to go against the explicit direction in the NPS in relation to such strategic alternatives that was the subject of challenge (see paragraphs 17 to 21 of the Transcript).

7. That was the context for the comments that NG have extracted from the judgment in its response to the ExA's question. In particular, the Court was responding to an argument that:

   > "... weighing adverse impact of a proposed development against the benefits of the proposed development permit evidence of alternative possibilities, <u>including those which do not accord with the NPS such as a non-tunnel solution</u> to show that there is an equal or better in-the-balance scheme." (emphasis added) (paragraph 35).

8. That is to be contrasted with what the ExA had said in its report to the Secretaries of State (**SoS**) in the Thames Tideway Tunnel case about the relevance of alternatives that were in accordance with the NPS, and which were advanced by Interested Parties as alternatives to work sites and/or drive strategies where particularly harmful impacts were predicted to occur (see extracts from the Thames Tunnel ExA's Report at pp. 38-39 paragraphs 3.14-3.17 and p. 299 paragraph 17.2) see **Appendix B**.

9. These alternatives were treated as highly material by the ExA in that case in accordance with the fact that the NPS had said that it would be for the applicant to justify in its application the specific design and route of the project that it was proposing, including any other options it has considered and ruled out.

10. Hence the terms of the NPS, and the extent to which alternatives (and consideration of alternatives) would or would not be in accordance with the NPS were crucial both for the ExA and the Court in the case of the Thames Tideway Tunnel. Mr Justice Ouseley was not asked to consider, and did not address, the relevance and role in the decision-making process of alternatives for elements of a scheme which are in accordance with the NPS.

Application to the facts here

11. SEW's WR has approached the issue of alternatives entirely consistently with the approach to section 104(3) and (7) of the Planning Act 2008 (**PA 2008**) set out by the court in the *Thames Blue Green Economy* case. SEW's case is that both the relevant NPS and the Government's policy on the use of powers of Compulsory Acquisition make the alternatives that it is promoting relevant in this case (see SEW WR paragraphs 158, 170-174, 183 and 195-197 (dealing with NPS EN-5 at paragraphs 2.8.4 and 2.8.7-2.8.9 which make consideration of underground lines as an alternative material in the circumstances described).

12. SEW has been careful to ensure that the alternatives that it is promoting are in accordance with the NPS, and a decision to grant development consent for a scheme including one of those three alternatives would therefore reflect s.104(3) of the PA 2008.

13. For the reasons set out in SEW's WRs, a decision to refuse development consent in this case, taking account of SEW's alternatives, would also be in accordance with the relevant NPS and thus section 104(3) (see SEW WR at paragraphs 10 and 135).

14. Furthermore, SEW's case in relation to section 104(7) does not rely on the ExA and/or Secretary of State taking account of alternatives in order to conclude that the adverse effects outweigh the benefits. SEW's position is simply that the adverse effects outweigh the benefits and thus section 104(7) is engaged (see SEW's WR at paragraphs 10 and 136). Hence the point relied upon by NG takes matters no further forward at all for present purposes.

15. If the ExA and/or the Secretary of State consider that the harms outweigh the benefits, the fact that those benefits can be delivered by making a small adjustment to the scheme that would itself accord with the NPS would be important and relevant in deciding whether or not to grant development consent (see SEW WR at paragraph 137, which is consistent with and reflects that staged approach). NG does not appear to suggest otherwise.

16. Finally, it should be noted that judgments on applications for permission to apply for judicial review are generally not regarded as authoritative.

Appendix A

The Queen on the Application of Thames Blue Green Economy Limited v The Secretary of State for Communities and Local Government

The Queen on the Application of Blue Green London Plan v The Secretary of State for Environment, Food and Rural Affairs

C1/2015/0225/0340

Court of Appeal (Civil Division)

24 June 2015

[2015] EWCA Civ 876

2015 WL 4578574

Before: Lord Justice Sales

Wednesday, 24 June 2015

On Appeal from the High Court Queen's Bench Division, Planning Court

(Mr Justice Ouseley)

Representation

Mr R McCracken QC and Mr A Parkinson (instructed by Environmental Law Foundation) appeared on behalf of the First Claimant.

The Second Claimant, Mr Stevens, appeared in person.

Mr R Harwood (instructed by The Government Law Department) appeared on behalf of the Defendant.

Judgment

Lord Justice Sales:

1 This is a renewed oral application for permission to appeal in relation to a decision of Ouseley J — [2015] EWHC 727 (Admin) — in which the judge refused to give permission to apply for judicial review in relation to the grant by the Secretary of State of a development consent order in relation to the major Thames Tideway Tunnel infrastructure project.

2 The background, put very shortly, is that the project was the subject of examination at a strategic level through the formation of a National Policy Statement under Part 2 of the Planning Act 2008 . National Policy Statements developed under that Part are subject to obligations of publicity and consultation, including under section 7 , and there is a power to mount legal challenges in relation to them: see section 13 .

3 The structure of the Act is that national policy should be decided subject to those processes and formulated in a National Policy Statement which will then inform individual planning decisions which are brought forward in respect of it. In this case, an application was made to the Secretary of State for a development consent order and that was subject to examination by an Examining Authority in accordance with Chapter 4 of the Act.

4 Section 87(3) provides as follows:

> "The Examining authority may in examining the application disregard representations if the Examining authority considers that the representations—
>
> …
>
> (b) relate to the merits of policy set out in a national policy statement.
>
> …"

5 In this case, the Examining Authority took a decision that it would not entertain representations designed to open up examination of strategic alternatives to the Thames Tideway Tunnel which the present claimant now wishes to advance, but which had not been advanced at the time of the development of the National Policy Statement.

6 Under the scheme of the Act, decisions on individual applications are made by the Secretary of State (see section 103), having regard to the report and recommendations made to him by the Examining Authority. Section 104 of the Act governs in relation to decisions in cases where a National Policy Statement has effect. Under section 104(3) , the Secretary of State must decide the application in accordance with any relevant National Policy Statement, except to the extent that one or more of subsections (4) to (8) applies. Subsection (7) provides:

> "This subsection applies if the Secretary of State is satisfied that the adverse impact of the proposed development would outweigh its benefits."

7 The argument for the claimant is that section 104(7) is of such width that the Examining Authority and the Secretary of State were obliged in substance in this case to consider the new arguments regarding whether there was need for a Thames Tideway Tunnel at the strategic level or whether problems in relation to effluent in London could be dealt with satisfactorily by some other form of scheme.

8 The judge decided that section 104(7) did not bear the interpretation which the claimant sought to place upon it, which was to the effect that it authorised the Examining Authority and the Secretary of State to open up at the second stage of considering whether an individual development consent order should be made the prior question decided at the determination of the National Policy Statement stage, namely whether there was indeed a strategic need for having a Thames Tideway Tunnel at all (see paragraphs [32] and following of the judge's judgment).

9 The judge was examining the question whether permission should be granted for judicial review according to the relevant arguability threshold. He considered that the point of construction put forward by the claimant was not an arguable one in the context of the Act and therefore refused permission.

10 An application was made to this court for permission to appeal on two grounds: the first in relation to the interpretation of section 104(7) of the 2008 Act; the second in relation to the effect of the EIA Directive and whether under that Directive again the Examining Authority and Secretary of State were obliged at the second, development consent order stage to reopen and examine the strategic merits of having the Thames Tideway Tunnel at all. The judge had dismissed those arguments as well.

11 On the application for permission to appeal, Sullivan LJ refused the application on the papers. So far as the first ground in relation to section 104(7) is concerned, he said this:

> "Even though this application is still at the arguability stage the appeal does not have a real prospect of success. The two stage process was introduced by the 2008 Act in order to avoid precisely the outcome which this appeal seeks to achieve: the reopening at the second (examination by the panel) stage of the process, of alternatives to the option (in this case the tunnel) which has been adopted by the Government in the first (NPS) stage of the process. The provisions of the 2008 Act must be interpreted with the underlying objective of having a two-stage process for NSIPs in mind. Although the Claimant focuses upon the terminology of the final sentence of paragraph 16.25 of the

> panel's report (paragraphs 24 and 25 of the judgment), there was, in reality, no other way in which the panel could reasonably have exercised its discretion under section 87(3) given the statutory objective — to settle strategic alternatives at the first stage — and the flagrant conflict between the 'no alternatives to the tunnel' policy set out in the NPS (paragraphs 8 and 9 of the judgment) and the 'alternatives to the tunnel' put forward by the Claimant."

12 I agree with the reasoning of the judge and the reasons of Sullivan LJ. I do not consider that the argument based on section 104(7) and section 87(3) of the Act has any real prospect of success.

13 Today, Mr McCracken QC has contended that there are two reasons why the point is in fact an arguable one. First, he says that if new material comes forward regarding the strategic merits of a project such as the tunnel, it must be at the section 104(7) stage that those new arguments and possible changes of circumstances would need to be taken into account.

14 I do not agree. I do not consider that this gives rise to any arguable point unidentified by Sullivan LJ and Ouseley J. In my view, in a genuine case where new circumstances arise it would be open to a person to approach the Secretary of State to invite him to revisit the National Policy Statement. That would be the proper way in which such matters should be taken into account, since in revisiting the strategic need for a project the procedural protections which apply in relation to formation of a National Policy Statement would then again apply to ensure that proper consideration was given to the alleged change of circumstances and the impact they might have upon the National Policy Statement in question. There is no need to distort the interpretation of section 104(7) to take account of such a possibility: the statutory scheme allows for changes in circumstances to be catered for in a different and more appropriate way, as I have set out.

15 Secondly, Mr McCracken submitted that section 104(7) was in substance otiose on the interpretation given to it by Ouseley J since (as I understood the argument) any Secretary of State would simply have his hands tied by the determination of national need reflected in the National Policy Statement and so could never be satisfied that the adverse impact of the proposed development would outweigh its benefits. Accordingly, Mr McCracken submits that section 104(7) has to be given the wider interpretation for which he contends, or at least it is arguable that it must be.

16 Again, I do not agree. Section 104(7) allows the Secretary of State to bring into consideration the statement of national need, which appears from a National Policy Statement, as against particular detriments which may be identified in the process of examining the application for a specific development consent order in specific circumstances and to weigh them against each other: it allows for the possibility that the local and particular detriments may be so great as to outweigh in the particular circumstances of a specific application a national need reflected in the National Policy Statement. Indeed, what happened on the examination in this case illustrates the possibility of that happening, since (as Mr McCracken emphasised) the Examining Authority in this case said that the issues were finely balanced and it plainly gave serious consideration to the possibility of recommending refusal of an order for development consent.

17 Also on this ground, Mr McCracken referred also to section 104(2)(d) , which states that:

> "In deciding the application the Secretary of State must have regard to–
>
> …
>
> (d) any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision."

18 Mr McCracken submitted that this showed the width of the discretion which the Secretary of State would enjoy at the section 104 stage and hence to which the Examining Authority ought to have regard in conducting its examination.

19 In my view, however, this argument goes nowhere because of the terms of section 104(3) , which requires the Secretary of State to decide the application in accordance with any relevant

National Policy Statement unless one of the exceptions in subsections (4) to (8) applies. This simply takes us back to the argument on subsection (7) which I have already addressed.

20 Finally on this ground, Mr McCracken submits that the point is an important one and therefore even if there is no realistic prospect of success, this is a case in which permission ought to be granted. I do not agree with that. In my view, the legal provisions are clear, there is not an arguable case in favour of the claimant's interpretation of the 2008 Act and I do not consider that there is any other compelling reason why permission to appeal should be granted on that ground.

21 I turn then to the second ground urged before me: that in relation to the effect of the EIA Directive. Here, again, I consider that permission to appeal should be refused, essentially for the same reasons given by Sullivan LJ when refusing permission on the papers. Sullivan LJ said this:

> "The second ground of appeal ignores the role of the Strategic Environmental Impact Assessment Directive. The 'options' that are still open at the EIA stage may well have been narrowed by the consideration and rejection of alternatives to the project under an SEA. Ground 2 effectively argues that alternatives which have been rejected at the SEA stage must be reconsidered at the EIA stage because 'all options' must be left open. Construing those words in the EIA Directive in isolation and in a literal manner is not a sensible interpretation of the EIA Directive in a context which includes the SEA Directive. The two Directives are intended to compliment, not duplicate, each other."

22 The argument for the claimant on this issue essentially replicates the substance of the argument presented in the context of the domestic legislation by reference to the 2008 Act. The SEA Directive allows for a full assessment in terms of environmental acceptability of options at the strategic level. The EIA Directive allows for consideration of environmental impacts in relation to the application for particular planning consents taking as read the strategic options which have *ex hypothesi* already been subject to examination under the SEA Directive. There is no requirement that the EIA Directive should be given the expansive interpretation for which Mr McCracken contends and to do so would be contrary to the overall structure of European law in this area.

23 Again, therefore, I do not consider that the appeal has a real prospect of success on ground 2. Nor do I consider that there is any other compelling reason why permission to appeal should be granted. Accordingly, I refuse this application.

(Further submissions on the application by Mr Stevens for permission to appeal)

LORD JUSTICE SALES:

24 This is an application by Mr Stevens as a litigant in person seeking permission to appeal in relation to a decision of Ouseley J refusing Mr Stevens permission to apply for judicial review in respect of a development consent order granted by the relevant Secretaries of State in relation to the *Thames Tideway Tunnel ([2015] EWHC 295 (Admin))* . The basis on which Ouseley J refused permission was that he determined that Mr Stevens failed to satisfy the requirements of section 118 of the Planning Act 2008 , which provides:

> "(1) A court may entertain proceedings for questioning an order granting development consent only if—
>
> (a) the proceedings are brought by a claim for judicial review, and
>
> (b) the claim form is filed during the period of 6 weeks beginning with—
>
> (i) the day on which the order is published."

25 The judge held that applying that statutory provision the last day for filing the claim was 23 October 2014. Mr Stevens filed his claim 1 day out of time, on the judge's interpretation, on 24 October 2014.

26 On the present application, I am prepared to extend the time required for Mr Stevens to put in his notice of appeal in relation to Ouseley J's judgment — should an extension of time be required for that — and I turn directly to consider the merits of the argument which Mr Stevens wishes to present.

27 So far as the judge's interpretation of section 118 is concerned (by which the judge determined that the 6-week period had to, as the statute says, be treated as commencing on the day on which the order was published, namely 12 September 2014), I do not consider that Mr Stevens has any real prospect of success on appeal. In my view, as a matter of interpretation of the statute, the judge was plainly right in the interpretation that he gave to the Act.

28 Mr Stevens says, however, that he, arguably at least, ought to be granted permission to appeal and permission to apply for judicial review because the Secretary of State wrote a letter which referred to the 6 weeks as a period being from the date of the relevant order, which suggested that the last day for filing would indeed be 24 October.

29 Although it is undoubtedly regrettable that the Secretary of State wrote in those imprecise terms, I agree with the reasoning of Ouseley J, that this is not a matter which is capable of being brought into account so as to create jurisdiction for the court which, by reason of the provision of the relevant Act of Parliament, namely section 118 of the 2008 Act, it does not have. Nothing that the Secretary of State said or did was, in terms of law, capable of altering the operation of the statutory provision.

30 Mr Stevens also submits that the court, arguably at least, should have granted him permission to apply for judicial review by reference to principles of European law, in particular as demonstrated in the case of C-406/08 Uniplex (UK) Ltd at paragraphs 39 and 40, specifically the principles of legal certainty and effectiveness in European law.

31 However, in my view, this again gives rise to no arguable ground of appeal since it cannot be contended on the facts of this case that the 6-week period identified in section 118 is in conflict with the principle of effectiveness or with the requirements of legal certainty identified in paragraph 39 of that judgment. The law contained in the relevant provision of the Act of Parliament is clear and is clearly to the effect that Ouseley J found it to be.

32 For these reasons, I consider that permission to appeal should be refused in Mr Stevens' case as well. There is no other compelling reason why permission should be granted.

Appendix B

Order) referred to above (chapter 2) in adding to the categories of NSIP under s14(1) PA 2008.

3.7 The Panel therefore finds that the proposal falls within the terms of s14(1)(o) PA 2008 in that it consists of the construction of infrastructure for the transfer or storage of waste water. It also falls within s29(1A) PA 2008 as the works are proposed to be carried out wholly within England, the main purpose of the project is for the transfer of waste water for treatment and it has a proposed storage capacity of more than 350,000m^3. Furthermore, a national policy statement has effect in relation to this application, therefore s104 PA 2008 applies with regard to what the decision maker must have regard to in making his decision.

3.8 S104(2) PA 2008 sets out the matters to which the Secretaries of State, who are the decision makers, must have regard in deciding an application submitted in accordance with PA 2008. In summary, the matters set out in s104(2) are any relevant National Policy Statement, any appropriate marine policy documents, any Local Impact Report (LIR) and any other matters that the Secretaries of State think are both important and relevant to the decision.

3.9 S104(3) of PA 2008 requires that the Secretaries of State decide the application in accordance with any relevant National Policy Statement, except to the extent that the Secretaries of State are satisfied that one or more of a number of provisions apply as set out in s104(4)-(8). In summary, these exceptions apply when complying with the National Policy Statement would:

- lead to the United Kingdom being in breach of any of its international obligations (s104(4))
- lead to the Secretaries of State being in breach of any duty imposed on them by or under any enactment (s104(5))
- be unlawful by virtue of any enactment (s104(6))
- lead to the adverse impacts of the proposed development outweighing its benefits (s104(7))
- meet a prescribed condition for deciding the application otherwise than in accordance with the National Policy Statement (s104(8)).

3.10 This report sets out the Panel's findings, conclusions and recommendations taking these matters fully into account and applying the approach set out in s104 PA 2008.

NATIONAL POLICY STATEMENT

3.11 The National Policy Statement for Waste Water: A framework document for planning decisions on nationally significant waste water infrastructure, March 2012 (NPS), sets out Government policy for provision of major waste water infrastructure as defined in section 1.2 of the NPS and is the only NPS relevant to the Secretaries of States' decision in respect of this application.

3.12 The NPS at paragraph 1.1.1 states that it is to *'be used by the decision maker as the primary basis for deciding development consent applications for waste water developments that fall within the definition of Nationally Significant Infrastructure Projects (NSIP) as defined in the Planning Act 2008. In making decisions on waste water NSIPs, the decision maker must also have regard to any local impact report submitted by a relevant local authority, any relevant matters prescribed in regulations, any Marine Policy Statement (MPS) and marine plans and any other matters which it considers are both important and relevant to its decision.*'

3.13 Part 2 of the NPS sets out the Government's policy in respect of the need for waste water infrastructure. In particular it states that the Examining authority (ExA) and the decision maker should start its consideration of any applications submitted to it relating to the new sewage treatment works at Deephams and Thames Tunnel '*on the basis that the strategic need for these two improvements at Deephams and the combined sewer overflows into the Thames has been demonstrated*'.

3.14 This is echoed in para 2.6.34 which states:

'*The examining authority and the decision maker should undertake any assessment of an application for the development of the Thames Tunnel on the basis that the national need for this infrastructure has been demonstrated. The appropriate strategic alternatives to a tunnel have been considered and it has been concluded that it is the only option to address the problem of discharging unacceptable levels of untreated sewage into the River Thames within a reasonable time at a reasonable cost. It would be for Thames Water to justify in its application the specific design and route of the project that it is proposing, including any other options it has considered and ruled out*.'

3.15 This statement, and in particular the need to consider and examine whether the Applicant has justified the choices it made with regard to design and specific sites it ultimately chose for the project, proved to be one of the more contentious aspects of the examination. This is explored in depth in chapter 17, which addresses the rationale for the selection of work sites and drive strategies.

3.16 For the purposes of this section of the report the Panel considers that the NPS is clear. It requires the Applicant to justify the specific design and route in its application. Moreover, as further set out in the NPS Annex A1.3 at paragraph A1.3.9, *'the key issue for consideration of this scheme by the examining authority and the decision maker is where several shafts from the surface connecting to the tunnel are located and also the location of construction compounds'*. Therefore, the Panel and the Secretaries of State need to be able to examine and decide whether the Applicant has provided adequate justification. This necessarily

meant exploring the site selection process and what formed the basis for the Applicant deciding one site was preferable to another. In order to understand that, comparisons had to be made between sites and that necessarily included comparing likely adverse impacts as well as the advantages of particular sites.

3.17 The Applicant was concerned (APP32.02[75]) that this exercise would turn into what it termed a 'beauty parade' and that the examination would not be able to make proper and fair comparisons between the project, as shown in detail in the application, and a different project which utilised other sites. Other Interested Parties also raised concerns about alternatives that were not part of the application[76]. The ExA noted those concerns. We were clear in the conduct of the examination that we were considering the application before us[77] and in this context sought to understand why the Applicant had made the choices it did, in the context of the NPS tests as a whole and in relation to the rationale for site selection and work sites (NPS paragraph 2.6.34 and A1.3.10).

3.18 Part 3 of the NPS '*sets out certain general policies in accordance with which applications relating to waste water infrastructure are to be decided that do not relate only to the need for new infrastructure (covered in part 2)*'.

3.19 Part 4 of the NPS sets out the generic policy approach to likely impacts from the physical impacts of the construction or operation of a waste water NSIP. In particular guidance is provided as to the requisite approach to a range of subjects and these are also dealt with in the chapters of this report set out below.

3.20 These general policies and further aspects of the NPS are referred to as relevant throughout this report and are considered under the relevant chapters in the context of the examination.

MARINE AND COASTAL ACCESS ACT 2009

3.21 The Marine and Coastal Access Act 2009 (MCA) introduced the production of marine plans and designation of Marine Conservation Zones (MCZ) in United Kingdom (UK) waters as well as establishing the Marine Management Organisation (MMO). The UK Marine Policy Statement (MPS) and marine planning are dealt with below. Under the MCA the Secretary of State for Environment, Food and Rural Affairs designated, on 21 November 2013, 27 MCZs around the English coast to form part of a network of Marine

[75]Extract from APP32.02 *'the examination is not some sort of competitive exercise to identify the 'best option'; it is not, to adopt the expression sometimes used in these circumstances, some sort of beauty parade of different alternatives'*

[76] Examples of such representations include LB Newham representation on alternatives REP446 (LIR 3 March – oppose change in drive direction) – and Barn Elms related alternatives representation REP321 (3 Feb – Stop the Shaft – oppose change to Barn Elms)

[77] This was stated by the Panel at the Issue Specific rationale hearings

17 RATIONALE FOR THE SELECTION OF WORK SITES AND DRIVE STRATEGIES

INTRODUCTION

17.1 The National Policy Statement for Waste Water: A framework document for planning decisions on nationally significant waste water infrastructure, March 2012 (NPS) specifically requires the decision maker to consider the impact of noise and vibration on health and quality of life and to consider the location of the tunnel shafts and construction compounds. At the first Issue Specific (IS) hearing[284] we drew the Applicant's attention to the third sentence of NPS paragraph 2.6.34, which reads *'It would be for Thames Water to justify in its application the specific design and route of the project that it is proposing, including any other options it has considered and ruled out*.' The Applicant noted this in its written submission after the hearing and also noted that *'Clearly, the specific design and route of the scheme will also have to be justified against the various criteria in Chapter 4 of the NPS*' (APP32.02).

17.2 The Applicant's design and route selection process was challenged by Interested Parties in relation to the effects on specific sites, and therefore the examination focused on these. During the examination we considered the tunnel route and the design of all of the work sites, but we report on the challenged sites in particular. Our consideration of alternatives outside the application is solely within the context of testing whether the specific design and route and therefore the location and use of the selected work sites was justified by the Applicant, and if not, whether in the light of possible alternatives the application overall might fail the s104(7) test.

17.3 A number of the surface work sites would be located within densely populated residential areas. As stated in chapter 1, there were over 1,200 relevant representations, many of which referred to potential impacts on homes and businesses. Some of the relevant representations also questioned why particular sites had been selected over the alternatives and challenged the selection process itself. Four sites dominated the issues and questions raised: Carnwath Road Riverside, Chambers Wharf, Deptford Church Street and King Edward Memorial Park Foreshore.

17.4 Three of these sites have issues with regard to noise and whether the significant impacts predicted could be avoided. Noise is considered in chapter 12, but the issue of whether significant impacts from noise could be avoided[285] by a different site selection or by changing the proposed nature of the works that a site would

[284] IS hearing: 11 to 15 November 2013
[285] NPS para 4.9.9