THE PROPOSED A122 (LOWER THAMES CROSSING) DEVELOPMENT CONSENT ORDER

Comments on Applicant's submissions at Deadline 9 submitted on behalf of the Port of London Authority

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1. Introduction

1.1. This is a written submission made on behalf of the Port of London Authority (**PLA**) in respect of comments on submissions made by the Applicant at Deadline 9.

1.2. This submission refers to the following documents:

1.2.1. Land Plans Vol B Sheet 1-20 v.8.0 - REP9-011
1.2.2. Draft development consent order v11.0 – REP9-108
1.2.3. Explanatory Memorandum v 7.0 – REP9-110
1.2.4. Environmental Statement Appendix 2.2 – Code of Construction Practice including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan – Annex B – Outline Materials Handling Plan v5 – REP9-189
1.2.5. Environmental Statement Appendix 2.2 – Code of Construction Practice including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan Annex C - Preliminary Works Environmental Management Plan v4 – REP9-191; and Environmental Statement Appendix 2.2 – Code of Construction Practice including Register of Environmental Actions and Commitments (REAC), First Iteration of Environmental Management Plan v 9 – REP9-185
1.2.6. Framework Construction Travel Plan v6 - REP9-234
1.2.7. Outline Traffic Management Plan for Construction v9 - REP9-236
1.2.8. Preliminary Navigational Risk Assessment v3 - REP9-238
1.2.9. Stakeholder Actions and Commitments Register v7 - REP9-242
1.2.10. Status of Negotiations with Statutory Undertakers v5 - REP9-244
1.2.11. Applicant's Responses to Interested Parties' comments on the Draft Development Consent Order at Deadline 9 - REP9-275
1.2.12. Applicant's comments on Interested Parties' submissions at Deadline 8 - REP9-276

2. Land Plans Vol B Sheet 1-20 v.8.0 (REP9-011)

2.1. The revised Land Plans show land plots in the ownership of the PLA, the boundary of which is defined by Mean High Water (**MHW**). Some of these plots are bounded by the historic line of MHW, which is reflected in the relevant entries on the Land Registry. These plots include: tunnel plots 15-10, 15-11, 15-12, 16-42 and 16-43 (permanent acquisition of subsoil and rights); plots 16-47, 16-64, 16-67, 16-69 and 19-37 (temporary possession of land); and plot 16-68 (temporary possession of land and permanent acquisition of rights).

2.2. As raised previously by the PLA in earlier submissions (see REP4-343 and REP8-162), the matter of MHW needs to be resolved in that certain other plot boundaries follow the published Ordnance Survey (**OS**) line of MHW. The OS line is dated, being at least 20 years old, and recent survey data suggest the MHW has receded by about 15m. This also affects plot 15-13 (permanent acquisition of subsoil and rights); 16-70 (permanent acquisition of subsoil and rights and temporary possession of land at surface); 16-40 (temporary possession); 16-44 and 16-60 (temporary possession and permanent acquisition of rights) and 19-09 (permanent acquisition of land) As previously stated, the boundaries of these six plots should be changed to reflect the actual line of MHW, not the

outdated OS line. Unless this is done, the powers being sought under the dDCO powers will be incorrect on the ground: they will either extend into MHW when they should not, or will not extend into MHW when they should.

2.3. The PLA continues to await the Applicant's engagement in this matter and, in the PLA's view, the Applicant should be required to update the boundaries of these plots before the dDCO is made.

3. Draft development consent order (dDCO) v11.0 (REP9-108)

3.1. The PLA notes that its suggested amendments to the outstanding unresolved elements of Part 8 of Schedule 14 to the dDCO (**PLA's protective provisions**) have not been addressed in the dDCO submitted at Deadline 9. The remaining points at issue are:

3.1.1. Sub-paragraph 99(6) – the provision allowing referral of arbitration of a dispute between the Applicant and the PLA as to the design and construction of tunnelling works under the river Thames (**river**) to the Secretary of State, was the subject of extensive submissions by the PLA at ISH14, which are captured in its Deadline 8 submission on that hearing (REP8-162) and addressed in greater detail in its note on proposed Arbitration Rules (REP8-161). The PLA's position remains that such a provision, in addition to being unprecedented, is unacceptable in allowing the Applicant to unilaterally override the arbitration process which is ostensibly included in paragraph 99 to enable the PLA to protect the existing and future use of the river. The PLA notes that the Applicant has sought to defend its position in respect of the imposition of this provision at Deadline 9 (REP9-275), and the ExA is directed to section [12] of this submission for the PLA's response to the Applicant's submissions.

3.1.2. Paragraph 104 – The PLA has previously made submissions (REP7-225, REP8-160, REP8-162 and REP9-295) as to the fact that paragraph 104 deals with remedial works where there is a material change to the riverbed, and the PLA has raised with the Applicant the need for reference to "material" to address the fact that what is material in the context of the river may be different from what is material in the context of the project as a whole. Consequently, from the PLA's point of view, paragraph 104 should be amended to add the words in italics "or *in the PLA's reasonable opinion*, other material change to the riverbed".

3.1.3. Paragraph 97, definition of "specified work" – the PLA had raised its concerns at ISH14 (see REP8-162) as to whether or not dredging would form part of the authorised development and, if it were to do so, whether the approval of such activity would fall under the remit of the PLA's protective provisions. The Applicant and the PLA have agreed amended drafting to paragraph 97, to read:

> *"specified work" means any part of the authorised development (which for this purpose includes the removal of any part of the authorised development), which—*
>
> *(a) is, may be, or takes place in, on, under or over the surface of land below the level of mean high water forming part of the river Thames; or*
>
> *(b) may affect the river Thames or any function of the PLA,*
>
> *including any projection over the river Thames by any authorised work or any plant or machinery or any dredging (as defined in the 1968 Act) [Port of London Act 1968] in the river Thames;*

Subject to this revised wording being included in the dDCO to be submitted to the examination at Deadline 10, the PLA is content that this element of the PLA's protective provisions has been satisfactorily resolved.

3.2. In addition to unresolved points on the PLA's protective provisions, the PLA notes an amendment to Article 15 of Schedule 15 (Deemed Marine Licence) in relation to licensable marine activities which involve piling. New Article 15(3) makes piling in areas submerged or partially covered by water subject to three conditions as to that piling at (a)-(c) of Article 15(3). However, works subject to new Article 15(3) are only those relating to the drainage pipeline and outfall. In the PLA's view, all works which involve piling in the marine environment should be governed by the conditions at Article 15(3)(a) to (c) and not just those specified.

4. Explanatory Memorandum (EM) v 7.0 (REP9-110)

4.1. Paragraph 6.10.2 of the EM provides additional justification as to why the Applicant has resisted the points raised by the PLA in previous submissions (REP1-269, REP2-091, REP4-345, REP7-225, REP8-162 and REP9-295), and by other interested parties (**IPs**) in respect of the inherent uncertainty as to the operation and coexistence of "commence" and "begin" in the dDCO. As currently drafted, Requirement 2 at Part 1 of Schedule 2 to the dDCO requires that development must "begin" (as defined in Article 2) not less than five years after the DCO comes into force; there is no similar requirement that the dDCO scheme must "commence" (as defined in Schedule 2) within that same five-year period. The PLA and other IPs have suggested an amendment to Requirement 2 in Schedule 2 to address this uncertainty created by the fact that development must "begin" within a certain time period, but with no indication as to when it might be "commenced".

4.2. The interested parties have sought confirmation from the Applicant that preliminary works will not discharge the requirement to begin the development. The additional explanation offered by the Applicant at paragraph 6.10.2 of the EM does not provide this clarification because it contradicts itself. The Applicant states that the wording of Requirement 2:

- "<u>does not mean that preliminary works are enough to discharge the requirement</u>", and
- "requires that any material operations – including those which may be <u>preliminary works</u> – <u>is sufficient to discharge this requirement</u>". (Underlining added for emphasis.)

The PLA can only read this as concluding that preliminary works <u>may</u> in themselves be enough to discharge Requirement 2, but it remains unclear whether that is the case or not. This evidences the PLA's (and other IPs') previous submissions that the putative operation of Requirement 2 is unclear and creates uncertainty.

5. Environmental Statement Appendix 2.2 – Code of Construction Practice including Register of Environmental Actions and Commitments, First iteration of Environmental Management Plan – Annex B – Outline Materials Handling Plan v5 (oMHP) – REP9-189

5.1. The PLA made submissions at ISH12 as to the Applicant's approach to river use for transport of materials, waste plant and equipment (see REP8-162), specifically in respect of the commitments set out at paragraph 8.3.3 of the oMHP, which was also addressed in the PLA's note on materials transport (REP9-294). This followed numerous submissions made earlier in the examination by the PLA more generally in respect of river use (REP3-217, REP3-218, REP4-343, REP4-344, REP4-345, REP5-111, REP6-158, REP6-159, REP6-160, REP7-225, REP8-160, REP8-162 and REP8-163).

5.2. The PLA has made representations on the fact that paragraph 8.3.3 of the oMHP previously committed the Applicant to river use only where it was an "environmentally better" option. At Deadline 9, the Applicant added the wording (underlined here) to paragraph 8.3.3 so that the Applicant commits to use of rail or rail facilities only where such use is "proven to be an environmentally equivalent or better option which allows the delivery of a competitive, value for money Project, and that does not cause proportionate delay to the programme". The introduction of a commitment to an environmentally equivalent, as well as an environmentally better, river use option does not address the PLA's concerns in respect of the overall weakness of this commitment, given its continuing qualifications in terms of value for money and disproportionate delay.

5.3. For the reasons set out at length in ISH12 (as captured in REP8-162 and also in REP9-294), the qualification of this commitment in terms of value for money renders it potentially meaningless, as river transport will almost always be more expensive than by road. There is also no balancing of potential impacts and benefits, such as the environmental and safety benefits arising from the removal of HGVs from the road network and certainty for "just in time" delivery. To render the commitment to river use at paragraph 8.3.3 meaningful and to make clear the division between the two parts of the commitment as raised by the PLA at ISH14, the PLA would suggest that paragraph 8.3.3 be split out into two separate paragraphs and the wording in italics added, as follows:

> "8.3.3 The Project recognises the benefit of reducing impacts from vehicle movements by using rail and/or river facilities as part of a multimodal approach to transport materials. As such, the Project commits to seek to maximise the use of rail and/or river facilities as part of the multimodal transport of bulk aggregates to the whole scheme."
>
> 8.3.4 Where the use of a rail and/or river facility is proven to be an environmentally equivalent or better option which *provides no significantly worse value (taking into account safety, carbon emissions, and effects on air quality as part of a broader cost-benefit analysis)*, and that does not cause disproportionate delay to the programme, then the Project commits to the use of that facility to transport the material."

5.4. Taking into account safety, carbon emissions and air quality effects is consistent with government current policy. HM Treasury's Green Book (the **Green Book**)[1] deals at paragraphs 6.36 to 6.42 with the need to value risks to life and health when taking decisions on policies and projects. Compared to river transport, road transport poses significantly higher risk to life (from vehicle accidents) and risks to health (from air pollution). This is why for the Thames Tideway project authorised by the Thames Water Utilities Limited (Thames Tideway Tunnel) Order 2014, the promoter of that project was committed to river use.

5.5. Paragraphs 6.43 and 6.44 of the Green Book state that "The creation of GHGs has a social cost based on its contribution to climate change. […] To estimate the social cost of an intervention it is necessary to include the costs of emitting GHGs". Paragraph A1.50 of the Green Book refers the reader to Department for Business, Energy and Industrial Strategy for "more extensive guidance". BEIS guidance includes the *Valuation of*

[1] Relevant extract **attached** as Appendix 1.

greenhouse gas emissions for policy appraisal and evaluation (2021) policy paper, which demonstrates that taking into account greenhouse gas emissions is consistent with current government policy:[2]

> "Carbon values are used in the framework of broader cost-benefit analysis to assess whether, taking into account all relevant costs and benefits (including impacts on climate change and the environment), a particular policy may be expected to improve or reduce the overall welfare of society […] a robust approach to valuing emissions is vital to ensure that government takes full account of climate change impacts in appraising and evaluating public policies and projects".

5.6. It is therefore entirely appropriate for the Applicant to be required to consider these factors when making a decision as to transport modes, The PLA believes the alternative wording it has suggested here would achieve a level of assessment that is compatible with government guidance.

5.7. The PLA has further points on the oMHP, in addition to the wording of the commitment to river use at paragraph 8,3.3 and further changes to the drafting of specific elements of the oMHP are requested by the PLA, and these are set out in full in the PLA's note on commitments for multi-modal transport for the transportation of materials (REP9-294).

6. **Environmental Statement Appendix 2.2 – Code of Construction Practice including Register of Environmental Actions and Commitments, First iteration of Environmental Management Plan Annex C - Preliminary Works Environmental Management Plan (Preliminary Works EMP) v4 (REP9-191)**; and **Environmental Statement Appendix 2.2 – Code of Construction Practice including Register of Environmental Actions and Commitments, First Iteration of Environmental Management Plan (EMP1) v9 (REP9-185)**

6.1. The PLA's points on the Preliminary Works EMP and EMP1 are similar, as its concerns in respect of undertaking preliminary works and the works themselves are generally the same.

6.2. The PLA identified in its Written Representation (REP1-269) the need for a comprehensive lighting plan in the vicinity of the river for both environmental and navigational reasons, and has made subsequent submissions on the subject of lighting (see REP1-269, REP3-217, REP3-218, REP5-111, REP6-159, REP8-162 and REP9-295). A number of the PLA's specific submissions have been in respect of a River Safety Lighting Management Plan (**RSLMP**). As currently drafted, paragraph 1.13.5 of the Preliminary Works EMP and paragraph 6.8.5 of the EMP1 requires preparation (at EMP2) of a RSLMP but only insofar as that lighting is reasonably expected to adversely affect any vessels using the river, and further, the decision as to whether a RSLMP is required at all rests with the contractor. The PLA has made extensive submissions (including at ISH12 – see REP8-162) justifying the requirement that a RSLMP is required without the caveat set out above, and that the PLA should be consulted on its preparation. However, no changes have been made in either Preliminary Works EMP and EMP1 to amend the arrangements for site lighting near the river.

[2] Relevant extract **attached** as Appendix 2.

6.3. In addition, and contrary to the PLA's submissions at ISH12 (and as captured in REP8-162), the Applicant has not included the PLA as a specified body at paragraph 6.10.3 of the EMP1 with whom it must engage in terms of environmental incident control, nor at the equivalent paragraph 1.15.3 of the Preliminary Works EMP. It remains imperative that the PLA is included in the stakeholders with whom the Applicant must engage in order to produce emergency procedures insofar as the incidents which they are intended to manage affect the river. The PLA has made previous submissions in respect of the need for its involvement in the preparation of emergency procedures at REP1-269, REP4-343, REP4-345, REP5-111, REP6-159, REP8-162 and REP9-295).

6.4. In terms of EMP1 only, the PLA notes that no amendment has been made to paragraph 6.1.6 which addresses the umbrella commitment of the Applicant to investigate the use of multi-modal transport of materials. The PLA addressed this issue in detail in its note on commitments for multi-modal transport for the transportation of materials (REP9-294).

6.5. Also in terms of EMP1 only, paragraph 2.3.10 distinguishes between plans to be included in EMP2, and thereby subject to consultation and approval, and those to be produced by the contractor following approval of EMP2. The PLA notes that an example of the latter is Construction Logistics Plans (**CLPs**). The PLA has expressed its concerns in previous submissions (see REP8-162) about the lack of review of these CLPs by IPs, including local authorities, and the inability to comment upon them. The PLA had, in its previous submission, contended that each of these CLPs should be subject to consultation with the PLA and other IPs, insofar as relevant to the IP's interest. However, the PLA notes that no such change has been made to the list of documents to be subject to approval as part of EMP2, meaning that the PLA has no ability to comment these CLPs insofar as they concern the river, and local authorities have no ability to comment so far as their local authority area is concerned.

7. Framework Construction Travel Plan v6 (FCTP) (REP9-234)

7.1. The PLA notes that it has not been included as a consultee on Site Specific Travel Plans (**SSTPs**) at Table 2.1 of the FCTP. The PLA has previously made representations on this (REP5-111 and REP8-162), and maintains its position that it ought to have a role in the formulation of those SSTPs which might interface with the river, in terms of what river use may be possible.

8. Outline Traffic Management Plan for Construction v9 (oTMPfC) (REP9-236)

8.1. The PLA has made previous submissions as to the inadequacy of the scope of monitoring committed to in the oTMPfC (see REP6-160, REP8-162 and REP9-295). As drafted, paragraph 2.4.22.f of the oTMPfC (previously 2.4.21.f) commits to monitoring of aggregates transported to the northern portal; the PLA maintains its position that monitoring should address all materials, waste, plant and equipment and all locations to which river transport is occurring, and not merely those being transported to the northern portal. However, no change has been made to the oTMPfC to give effect to this.

8.2. In addition, paragraph E6.10.c refers to disputes arising relating to the development of a traffic management plan and notes that a "representation of disagreements" will be prepared. As noted by the PLA in an earlier submission (REP9-295), there is no clarity as to who will author such a representation and the PLA maintains its position that the drafting should be amended, as set out in its earlier submission, to make clear that such a representation will be prepared by the Applicant and any parties with whom there is disagreement.

9. Preliminary Navigational Risk Assessment v3 (pNRA) (REP9-238)

9.1. The document submitted at Deadline 9 is the third iteration of the pNRA, as noted in the revision history table at numbered page 1. However, paragraph 1.1.4 of the pNRA states erroneously that this revision of the pNRA is version 2.0. This is not merely a misnumbering point, but has, potentially, a genuine impact. Paragraph 98(3) of the PLA's protective provisions states that a final navigational risk assessment must be in all material respects in accordance with the pNRA. If there is confusion within the document, therefore, as to the final version of the pNRA, then there will be uncertainty and potential error in production of the final version. Paragraph 1.1.4 of the pNRA should be updated to refer to version 3.0 of the pNRA.

10. Stakeholder Actions and Commitments Register v7 (SACR) (REP9-242)

10.1. The PLA notes that it has not been added to the list of beneficiaries of the Tunnel Design and Safety Consultation Group (**TDSCG**), as shown in the table at Appendix A of the SACR at numbered page 16. This has been raised by the PLA in previous submissions (REP7-225 and REP8-162) on the basis of its stake in tunnelling design and safety, and that certain issues that are being deferred to detailed design stage and such issues are likely to be of relevance to the river and river users.

11. Status of Negotiations with Statutory Undertakers v5 (REP9-244)

11.1. Row 16 on numbered page 8 of the Applicant's document recording the status of negotiations with statutory undertakers deals with the PLA; the final column (headed "Status of Negotiations at Deadline 9") of this row has been amended to read: "*The Applicant is confident that agreement with regard to Protective Provisions will be reached prior to 20 December 2023 (end of Examination)".*

11.2. That statement does not accurately represent the status of negotiations between the PLA and the Applicant with regard to the Protective Provisions: there has been a failure to reach agreement on several outstanding issues on the drafting of the PLA's protective provisions and the Applicant itself has made it clear in ISH14, its written submissions (including the updated Statement of Common Ground which we understand will be filed by the Applicant at this Deadline 9A) and in discussions with the PLA that it will leave certain matters as 'not agreed' for the Secretary of State to determine.

11.3. As far as the PLA is aware, the Applicant's position remains that no change is needed. To the extent that the PLA's view is that change is needed, and the Applicant's view remains that it is not, it is difficult to see on what basis the Applicant is confident that agreement on these matters will be reached by the end of the Examination. The outstanding issues are detailed at section 3 of this submission and include, in particular, the question of referral of arbitration to the Secretary of State under paragraph 99(6) of the PLA's protective provisions.

11.4. Notwithstanding the stated position of the Applicant in respect of the Secretary State's adjudication on matters it is unwilling to agree with the PLA, including in relation to potential use of the arbitration rules (see section 12 below), the PLA notes that it has no meetings arranged with the Applicant to discuss these matters in the period between this submission and the close of examination on 20 December 2023, even were the Applicant minded to revise the position it has taken. The PLA cannot, therefore, share the Applicant's confidence, as asserted in its Status of Negotiations document, that agreement with regard to the PLA's protective provisions will be reached by the close of examination.

12. Applicant's Responses to Interested Parties' comments on the Draft Development Consent Order at Deadline 8 (REP9-275)

12.1. The Applicant incorrectly states in its Deadline 9 submission (REP9-275) that the PLA's only objection is to the part of paragraph 99(5) that it highlights in its paragraph 10.1.3. The PLA sets out in paragraphs 1.3 and 1.4 of REP8-161 that its objection concerns the effect that sub-paragraph 99 (6) has on both sub-paragraphs 99(4) and 99(5); the PLA's proposed alternative therefore concerns both sub-paragraphs 99(5) and 99(6).

12.2. The Applicant notes that "it is necessary to ensure that the project can be commenced in circumstances where the arbitration becomes protracted or is delayed". The PLA agrees that the project as a whole should not be unduly delayed by disputes. But the possibility of protracted or delayed *arbitration* is one of the Applicant's own creation. If the Applicant wanted to avoid a lengthy arbitration process it could include the Arbitration Rules schedule (the **Arbitration Rules**) – which is commonly included in DCOs, and a balanced draft of which the PLA provided for this dDCO at Appendix 2 of its Deadline 8 submission (REP8-161) – which sets out a fixed arbitration timeline.

12.3. The Applicant also states at paragraph 10.1.4 that arbitration could result in "a delay involving significant time and cost at public expense". The solution of using the Arbitration Rules would resolve the risk of a delay causing significant time and cost by having the standard fixed periods for determination of a dispute, and avoiding the need for optional involvement from the Secretary of State. By contrast, the Applicant's solution does not address the stated risk. Instead, by providing for an optional referral to the Secretary of State, the Applicant's solution would waste public money by incurring abortive costs on the arbitration. The Applicant's solution would also give the Applicant the ability to place the time and cost burden of resolving the dispute on to the Secretary of State and their officials, which may be one reason why this approach is without precedent. Using the Arbitration Rules has no such disadvantage. Nor would the Arbitration Rules prejudice any other party subject to arbitration under the dDCO: and, as raised by the Examining Authority and by the Port of Tilbury London Limited at ISH14 it is a common solution to provide clarity to all concerned as to timings. If there is any suggestion that any other party would be prejudiced by the application of the Arbitration Rules, then article 64 (*arbitration*) could apply the Arbitration Rules only to arbitration with the PLA, but we see no reason why that would be necessary.

12.4. In paragraph 10.1.5(a) the Applicant states that "this level of fixity [on timings] and prescription on the form of documents is not appropriate for all disputes". The PLA agrees with that, which is no doubt why the Arbitration Rules allow for exemptions and shorter periods to be agreed between the parties or determined by an Arbitrator. The process in the Arbitration Rules – of fixed timelines which can be shortened – will undoubtedly be faster than the various arbitration processes set out in the dDCO and which, in the PLA's case, is lengthened by the addition of an optional separate review of the dispute by the Secretary of State which is not subject to any timings or deadlines.

12.5. The Applicant is correct in stating in paragraph 10.1.5(b) that it has not previously included the Arbitration Rules in any DCO it has applied for. It objects to using the Arbitration Rules on the basis it needs to address "a specific concern that that arbitration may become protracted in relation to an integral and critical part of the Project". The PLA has demonstrated in paragraph 12.3 and 12.4 above how the Arbitration Rules are better suited to avoiding a protracted arbitration process as well as, in the PLA's case, the additional time needed for consideration and determination of the dispute by the

Secretary of State. The Arbitration Rules are therefore better suited to meeting the Applicant's stated concern.

12.6. The Applicant asserts in paragraph 10.1.5(b) that it is more appropriate for private arbitration to be used within the commercial context of energy DCOs. The implication seems to be that private arbitration is therefore not appropriate for National Highways as an executive non-departmental public body. That argument does not hold together, given that private arbitration is the process envisaged in article 64and used as a method to resolve disputes with other parties both throughout the dDCO and throughout other DCOs promoted by the Applicant.

12.7. The Applicant takes objection to the PLA's assertion that this approach is unprecedented, stating at paragraph 10.1.5(d) that the PLA's comment about the Applicant's approach is "misconceived", on the basis that the Applicant's dDCO goes "above and beyond". It is notable, however, that although the Applicant asserts the approach is not unprecedented, it does not provide any precedent DCO or other order which would support this assertion. And while it is true that this dDCO differs from other DCOs, the PLA cannot agree that it goes "above and beyond"; all DCOs differ from each other and not all tunnels under the river raise exactly the same issues. The PLA has had to seek more protection in this dDCO due to the level of available information from the Applicant on matters such as construction methods and design information, and due to lessons learned from other projects and because of the location of the tunnel in the largest port in the Country. As set out in the PLA's Written Representation (REP1-269) 79% of vessel arrives to the Thames in 2022 were to berths upstream of the dDCO scheme.

12.8. At paragraph 10.5.1(e), the Applicant suggests that a referral of dispute with the PLA to the Secretary of State will be part of the "effective, fair and expeditious process" set out in paragraph 6.3 of the Explanatory Memorandum (REP8-008). But that paragraph explains that the Secretary of State will act as the appropriate discharging authority for the Requirements in Schedule 2 of the dDCO; it does not cover referrals to the Secretary of State of arbitrated disputes. The Applicant is confusing two entirely separate functions. One is discharging the Requirements; the other is resolving a dispute in relation to protective provisions which would usually be subject to arbitration. Just because the Secretary of State will perform the former does not mean that they have accepted to perform the latter, or that it would be appropriate for them to do so.

12.9. Finally, the Applicant makes the point in paragraph 10.1.5(e) that the PLA should have no issue with the Applicant having the ability to refer an ongoing arbitration to the Secretary of State because there are provisions under the Port of London Authority Act 1968 which confer on the Secretary of State an approval function in relation to dredging and the authority to determine appeals in relation to river works licences. The Applicant is conflating a very wide range of functions performed by the Secretary of State's, and the provisions within the 1968 Act are not concerned with disputes of a nature which would arise under the dDCO. Furthermore, the recent DCO precedents cited by the PLA post-date the Act 1968 by some way and represent current DCO practice.

13. Applicant's comments on Interested Parties' submissions at Deadline 8 (Comments on IPs D8) (REP9-276)

13.1. In relation to the Applicant's comments on the PLA's responses to ExQ3 Q17.1.1 (see REP8-163), at section 11, numbered page 54 of its Comments on IPs D8 document, the PLA has the following comments.

13.2. *QR1: Can the PLA comment on the Applicant's updated response on survey data provided at Deadline 5 and confirm what specific limitations (if any) it considers this imposes on the conclusions of its HRA Report?*

13.2.1. The PLA responded to QR1 at Deadline 8 (REP8-163) and the Applicant responded to that at Deadline 9 (REP9-276).

13.2.2. The PLA now states that whilst recognising that it is appropriate to update survey data at the detailed design stage for large-scale, multi-phase projects such as the Lower Thames Crossing, it should be acknowledged that the survey data used across the Environmental Statement (**ES**) (APP-138-486) was out-of-date several years before the examination process began. The PLA's concern was not limited to the baseline data used in the HRA, as that is not as old as other data used in the ES, e.g. in relation to marine mammals.

13.2.3. In addition, the PLA notes that Natural England has stated (REP9-154: response to QR2) that it accepts the limitations of the data in the HRA and that updating the survey data at the detailed design stage is appropriate and will ensure that mitigation is reflective of the likely impact pathway. However, the PLA remains of the opinion that the limitations of the data used should be made clear in the ES.

13.3. *QR4: To NE and PLA: In relation to the potential for LSE on bird feeding behaviour, to which qualifying features do you consider this relates, and is this addressed in the Applicant's assessment?*

13.3.1. The PLA responded to QR4 at Deadline 8 (REP8-163) and the Applicant responded to that at Deadline 9 (REP9-276).

13.3.2. Natural England's response to QR4 (REP8-154) included that:

- It considers that there is a potential for a likely significant effect (**LSE**) on the non-breeding waterbird assemblages of the Thames Estuary and Marshes SPA and Ramsar site because of underwater noise and impacts to bird feeding behaviour; and
- It does not believe that this is addressed within the Applicant's assessment, however, it should be noted that there remains a disagreement as to whether there is a LSE on the features of the SPA and Ramsar site from this impact pathway or not. (This is also reflected in the SoCG between NE and National Highways (REP8-013), item no 289).

13.3.3. In light of Natural England's comments, the assessment of the potential effects of underwater noise and vibration on the non-breeding waterbird assemblage of the Thames Estuary and Marshes SPA and Ramsar site should be included in the HRA, and the PLA's previous response to QR4 (see REP8-163) still stands.

Appendix 1

Relevant extracts from HM Treasury's Green Book

HM Treasury

THE GREEN BOOK

CENTRAL GOVERNMENT GUIDANCE ON APPRAISAL AND EVALUATION

2022

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THE GREEN BOOK

CENTRAL GOVERNMENT GUIDANCE ON APPRAISAL AND EVALUATION

This version first published 2020.

This edition with minor updates published in 2022, see page vii for details.

2022

6.35 Infrastructure, long term planning and high interdependence levels need to be taken into account at the longlisting stage and when selecting the optimum shortlist (Chapter 4). It is vital that this is supported by sufficient good quality research and evidence, for example on previous similar interventions.

Valuing risks to life and health

6.36 Changes in risks to life or health as a result of government interventions should be valued as part of appraisal and will usually require non-market valuation techniques. The choice of technique will depend on the nature of the specific intervention being appraised.

6.37 The Value of a Prevented Fatality (VPF) measures the social value of changes in risk to life. It is used to value small changes in fatality risks, where levels of human safety vary between options. This is not the value of a life, it is the value of a small change in the risk or probability of losing a statistical life. Not to value this in appraisal would effectively value human safety at zero.

6.38 In cases where alternative levels of fatality risk are involved in option design, VPF allows this to be taken into account. The value concerned is known as the value of the risk of "a statistically prevented fatality." It has been widely used for many years, particularly in transport. The current value and how it may be applied is discussed in Annex 1.

6.39 Valuation can also involve estimating the impact of risks to the length of life, measured using Statistical Life Years (SLYs), and risks to health related quality of life (QoL) measured using Quality-Adjusted Life Years (QALYs). In practice, particularly in the health sector, QoL can be thought of as different dimensions of health (e.g. the capacities for mobility, self-care, usual activities, pain or discomfort and anxiety or depression).[19] Observations used will be based on self-reported health and provide equal weight to whatever full health means to each respondent.

6.40 The value of a SLY is derived from the social value of a small change in the probability (the risk) of losing or gaining a year of life expectancy. This value can be of use when appraising options that involve different changes to life expectancy. These risks may involve regulation or provision of goods and services that affect or directly relate to human life and health.

6.41 The gain or loss of a QALY can represent the social value of an improvement in life expectancy and QoL in a way that is comparable to the gain or loss of a SLY. The QALY is two dimensional, combining both longevity and level of health in a single measure. This is useful when appraising options that result in different effects on both longevity and QoL. The current values of a SLY and a QALY, how they can be applied, and background information is contained in Annex 1.

6.42 On grounds of equity in appraisal, the VPF, QALY and SLY values are based on average values from representative samples of the population. For the avoidance of doubt VPF, QALYs and SLYs are used when analysing and planning the provision of assets, goods and services at a population or sub-population level. They are not designed for contexts such as situations of emergency or rescue.

Greenhouse gas emissions and energy efficiency values

6.43 Greenhouse gas (GHG) emissions occur as a result of many decisions to create assets or provide public services, particularly where direct energy consumption is required. They may also result from the energy required to produce basic input materials used in construction. The creation of GHGs has a social cost based on its contribution to climate change.

[19] These are dimensions of health as measured using the EQ-5D instrument. This is a tool that individuals complete to show changes in self-reported health over time or before/after receiving health care treatment.

6.44 To estimate the social cost of an intervention it is necessary to include the costs of emitting GHGs. Energy efficiency has a direct social value, in addition to the value of a reduction in GHGs, as the energy saved itself has a direct benefit to society (similarly, activities that create extra demand for energy have a direct energy cost). The approach and values to quantify GHGs and energy efficiency can be found in Annex 1.

Assessing and valuing effects on the natural environment

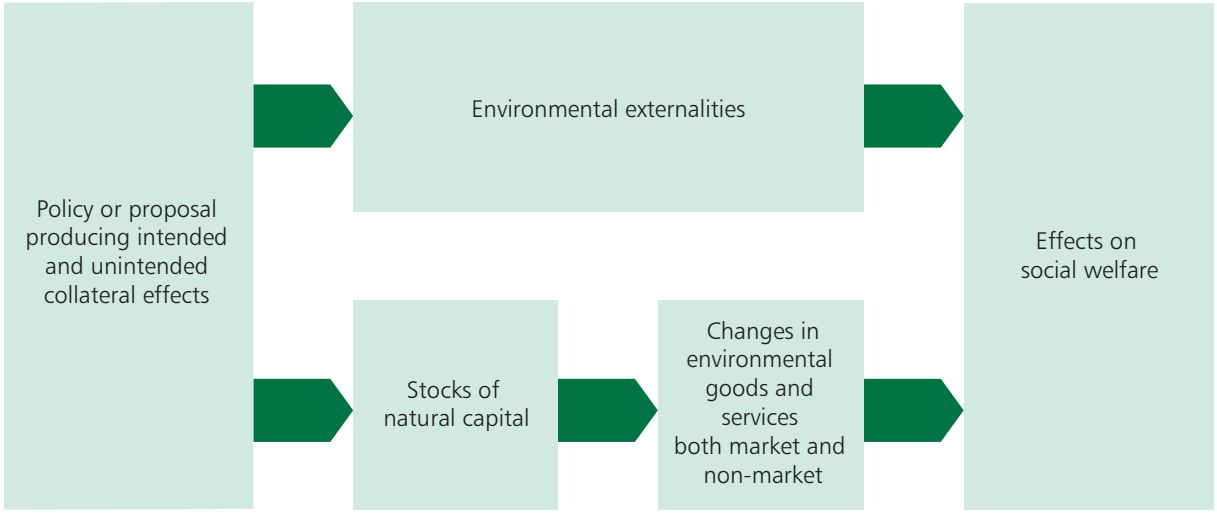
6.45 Natural capital includes certain stocks of the elements of nature that have value to society, such as forests, fisheries, rivers, biodiversity, land and minerals. Natural capital includes both the living and non-living aspects of ecosystems.

6.46 Stocks of natural capital provide flows of environmental or 'ecosystem' services over time. These services, often in combination with other forms of capital (human, produced and social) produce a wide range of benefits. These include use values that involve interaction with the resource and which can have a market value (e.g. minerals, timber, fresh water) or non-market value (e.g. outdoor recreation, landscape amenity). They also include non-use values, such as the value people place on the existence of particular habitats or species. Where service flows are not marketed, or market prices do not include their full value to society, non-market values may be estimated using the range of non-market valuation techniques or tools.

6.47 Understanding natural capital provides a framework for improved appraisal of a range of environmental effects alongside potentially harmful externalities such as air pollution, noise, waste and GHGs.

6.48 Natural capital stock levels should be systematically measured and monitored for the social costs and benefits of their use to be understood and controlled (see report to the Natural Capital Committee). A focus solely on the marginal valuation of a loss in services may overlook the potential for large reductions in stocks. This could then lead to dramatic reductions in present or future services. Similarly, the cumulative effects of multiple decisions on natural capital stocks need to be considered. Where appropriate therefore, and particularly for major impacts, assessments should consider whether affected natural assets are being used sustainably.

Figure 9. The Natural Capital Framework



6.49 Figure 9 shows the natural capital framework. This does not replace existing approaches to appraising and valuing environmental effects. Rather, by providing a more comprehensive framework within which to develop and appraise policy, it suggests additional options to meet policy goals and enables all options to be assessed more accurately for potential improvements and/or damage to the environment.

A1.49 Land value data is derived from market data which is dependent on individuals' and firms' valuation of a specific piece of land. Where local land value data is available, this information can be used to appraise the net impact of a development. However, where this data is not readily available, illustrative land value data from the Valuation Office Agency (VOA) is available. This is included in the DLUHC's Appraisal Guide and the DLUHC publication Land value estimates for policy appraisal. It provides estimates for the average prices of residential, greenfield and brownfield land in England from 2014, with residential land split by local authority. Further guidance on the appraisal of transport dependent land developments can be found in WebTAG Unit A2.3.

Energy efficiency and Greenhouse Gas (GHG) values

A1.50 This is a high-level guide to valuing Greenhouse Gas (GHG) emissions and energy use for appraisal purposes. BEIS publish more extensive guidance, background, rationale and relevant data tables that should be used.

A1.51 The steps given below are based on a change in fuel or energy use. Most interventions will have other objectives and will involve energy use as part of a wider effect. In both cases, total energy use and total GHG emissions should be quantified and costed, using the data tables referred to above and included with other costs.

A1.52 Multiplying the fuel use in each year by the Long Run Variable Cost (LRVC) for that fuel will give the societal value in fuel usage for that period (excluding GHG emissions, which are calculated separately):

Social cost of energy = fuel consumption x *Long Run Variable Cost (LRVC)*

- **Step 1 – quantify energy use or efficiency**. Identify the fuel or electricity consumption for each year, distinguished by type of fuel and the sector in which the changes are incurred (e.g. residential, commercial, industry). Changes should be measured in megawatt hours (MWh).[31]

- **Step 2 – value energy or fuel use.** The LRVC reflects the production and supply costs of energy which vary according to the amount of energy supplied. They will vary according to the type of fuel, sector being supplied and prevailing fuel prices. Low, central and high LRVC assumptions for different fuels and sectors are published on the BEIS webpages in data tables.

- **Step 3 – convert energy use into GHG emissions.** The formula below shows how to quantify GHG emissions for a given energy use. This uses the energy changes estimated in 'Step 1', converted into a GHG measure. An emission factor is used to estimate the amount of GHG emissions from burning a unit of fuel. These vary by fuel type and reflect the mix of fuels required for electricity. The global warming potential of GHG emissions is measured as the equivalent amount of carbon dioxide (CO_2) that would give this warming. The standard unit of account is equivalent tonnes (tCO_2e) or kilograms ($kgCO_2e$) of carbon dioxide. Various emission factors can be found in the data tables. For electricity, the consumption-based long-run marginal emission factor should be used for changes in energy demand. The generation-based emission factors are only used for energy production rather than energy demand. Energy production is generally greater than energy demand to account for losses during the transport of energy to final consumers.

[31] Conversion factors for converting between calorific units of measurement (i.e. tonnes of oil equivalent, calories, therms, joules, or watt hours) are available in the BEIS guidance. Conversion factors for converting volume-based or weight-based measurements into calorific units of measurement (which will vary according to the fuel) can be found in Table A1, Annex A, of the Digest of UK Energy Statistics.

Appendix 2

Relevant extracts from BEIS guidance *Valuation of greenhouse gas emissions for policy appraisal and evaluation* (2021) policy paper

GOV.UK

Department for Business, Energy & Industrial Strategy

Department for Energy Security & Net Zero

Policy paper

Valuation of greenhouse gas emissions: for policy appraisal and evaluation

Published 2 September 2021

Contents

This publication is available at https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal/valuation-of-greenhouse-gas-emissions-for-policy-appraisal-and-evaluation

Introduction

This document sets out a revised approach to valuing greenhouse gas (GHG) emissions in policy appraisal, following a cross-government review during 2020 and 2021. It replaces the previous guidance on carbon valuation (https://www.gov.uk/government/publications/carbon-valuation-in-uk-policy-appraisal-a-revised-approach).

What are carbon values?

Greenhouse gas emissions values ("carbon values") are used across government for valuing impacts on GHG emissions resulting from policy interventions. They represent a monetary value that society places on one tonne of carbon dioxide equivalent (£/tCO2e). They differ from carbon prices, which represent the observed price of carbon in a relevant market (such as the UK Emissions Trading Scheme).

The government uses these values to estimate a monetary value of the greenhouse gas impact of policy proposals during policy design, and also after delivery.

Why value GHG emissions in policy appraisal?

The fundamental purpose of assigning a value to the GHG emissions impacts that arise from potential government policies is to allow for an objective, consistent and evidence-based approach to determining whether such policies should be implemented. Carbon values are used in the framework of broader cost-benefit analysis to assess whether, taking into account all relevant costs and benefits (including impacts on climate change and the environment), a particular policy may be expected to improve or reduce the overall welfare of society.

To reach net zero in 2050 and meet our 5-yearly carbon budgets (https://www.gov.uk/government/publications/carbon-valuation-in-uk-policy-appraisal-a-revised-approach), a robust approach to valuing emissions is vital to ensure that government takes full account of climate change impacts in appraising and evaluating public policies and projects, whether those policies are intended to reduce emissions or are likely to have the effect of increasing emissions. Such policy decisions often involve making choices between competing policy objectives.