

# Lower Thames Crossing

## 9.152 Responses to the Examining Authority's ExQ2 Appendix A – 1, 2, 3

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# Lower Thames Crossing

## 9.152 Responses to the Examining Authority's ExQ2

### Appendix A – 1, 2, 3

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# 1 Introduction

## 1.1 Introduction

- 1.1.1 This document has been prepared by the Applicant to set out its responses to the ExQ2 - Examining Authority's (ExA's) written questions and requests for information (ExQ2) [[PD-040](#)].
- 1.1.2 These can be found in Tables set out under the following headings:
- a. Climate Change and carbon emissions (Found in Appendix A)
  - b. Traffic and transportation (Found in Appendix B)
  - c. Air quality (Found in Appendix C)
  - d. Geology and soils (Found in Appendix D)
  - e. Tunnelling considerations (Found in Appendix D)
  - f. Waste and materials (Found in Appendix D)
  - g. Noise and vibration (Found in Appendix E)
  - h. Road Drainage, water environment and flooding (Found in Appendix F)
  - i. Biodiversity (Found in Appendix G)
  - j. Physical effects of development and operation (Found in Appendix H)
  - k. Social, economic and land-use considerations (Found in Appendix I)
  - l. The acquisition and temporary possession of land and rights (Found in Appendix J)
  - m. General overarching questions (Found in Appendix J)

## 2 Responses to the Examining Authority's ExQ2 1

No questions submitted by the Examining Authority for this topic.

### 3 Responses to the Examining Authority's ExQ2 2

PINS ID	Question to	Question / Response
ExQ2_Q2.1.1	Applicant	<p><b>PAS 2080 updates</b></p> <p>Paragraph 15.3.1 of Chapter 15 of the ES [<a href="#">APP-153</a>] makes reference to PAS 2080: 2016: Carbon Management in Infrastructure. This standard has recently been revised. Please explain whether and if so how the revisions would affect your assessment methodology. Please identify whether any assessment changes would have any consequent climate impact.</p> <p><b>Response:</b></p> <p>The carbon approach presented in the Carbon and Energy Management Plan [<a href="#">APP-552</a>], Environmental Statement (ES) Chapter 15 [<a href="#">APP-153</a>] and the Planning Statement [<a href="#">APP-495</a>], was aligned to the PAS 2080:2016 specification<sup>1</sup>, which remains a robust framework for understanding an infrastructure project's carbon emissions and continues to be used on many other projects.</p> <p>PAS 2080 is a specification for “Carbon management in buildings and infrastructure” and the principal changes between the 2016 and 2023 versions relate to management rather than quantification of carbon. These changes are identified on page iv of the revised specification and are summarised below:</p> <ul style="list-style-type: none"> <li>• Expansion of the scope to include buildings</li> <li>• Clarifications to the role of value chain members</li> <li>• Increased emphasis on whole life carbon</li> <li>• Inclusion of requirements specific to procurement</li> <li>• Consideration of other demands and co-benefits when managing carbon, such as climate adaptation and biodiversity net gain</li> <li>• More emphasis on the importance of leadership, governance and collaboration across the value chain and beyond</li> <li>• Features to encourage consistent approaches across the built environment industry to collectively manage whole life carbon.</li> </ul>

<sup>1</sup> British Standards Institution (2016). PAS 2080:2016: Carbon management in infrastructure. <https://knowledge.bsigroup.com/products/carbon-management-in-infrastructure?version=standard>

PINS ID	Question to	Question / Response
		<p>The Applicant’s corporate carbon management system and Project specific carbon management system were both independently verified as meeting the requirements of PAS 2080:2016 in 2022.</p> <p>The Applicant is confident that its approach also meets the requirements of PAS 2080:2023 and both its corporate carbon management system and Project specific carbon management system are being independently audited against PAS 2080:23 in November 2023.</p> <p>The Applicant has identified that Table A.1 of the revised PAS2080 specification includes further guidance on the allocation of land use change. The revised PAS2080 suggests that the sequestration associated with land use change should preferably be allocated to the project phase in which the uptake occurs, rather than when the land use change takes place. Making this change would not alter the assessment of the Project’s total GHG emissions, only the timing of emissions. This is acknowledged within the notes of Table 15.14 of ES Chapter 15 [APP-153], which states, “<i>The net emissions from land use change have been included in the construction stage as all the works to create the landscaping occur during this phase. Allocating the sequestration benefit to the operational phase would not materially change the conclusions of the assessment of significance.</i>”</p> <p>The changes to the specification do not affect the assessment methodology, make no difference to the overall outcome of the assessment of the significance of the effects of the Project’s GHG emissions on climate, and do not affect the commitments made in the Carbon and Energy Management Plan [APP-552].</p>
ExQ2_Q2.1.2	Applicant	<p><b>Delay to proposed ban on the sale of new petrol and diesel cars</b></p> <p>Is the <a href="#">UK Government's recent announcement</a> of a delay to the ban on the sale of new petrol and diesel cars from 2030 to 2035 a matter that will affect the carbon and climate assessments in Chapter 15 of the ES [APP-153], and if so, will any changes to design, mitigation or monitoring be required?</p> <p><b>Response:</b></p> <p><b>Scenarios used in the Environmental Impact Assessment</b></p> <p>The Applicant presents a range of forecast road user greenhouse gas (GHG) emissions associated with the Project. The three scenarios forming the range are presented within Table 15.16 of Environmental Statement (ES) Chapter 15 [APP-153]. These scenarios are:</p> <ol style="list-style-type: none"> <li><b>TAG GHG Workbook / EFT v11</b> – representing the current Transport Analysis Guidance (TAG) method on forecasting road user GHG emissions for environmental assessments. This provides an estimate of GHG emissions using forecasts of the future vehicle fleet mix in the Emissions Factors Toolkit Version 11 (EFTv11),</li> </ol>

PINS ID	Question to	Question / Response
		<p>with London adjustment, released in November 2021<sup>2</sup> by Defra. This version of the toolkit remains the current version issued by Defra.</p> <ol style="list-style-type: none"> <li data-bbox="573 320 2078 384">2. <b>Transport Decarbonisation Plan upper bound</b> – an estimate of GHG emissions aligned to the upper bound of the decarbonisation trajectory to net zero set out in the Transport Decarbonisation Plan (TDP)<sup>3</sup>.</li> <li data-bbox="573 395 2078 459">3. <b>Transport Decarbonisation Plan lower bound</b> – an estimate aligned to the lower bound of the decarbonisation trajectory to net zero set out in the TDP.</li> </ol> <p>The 'TAG GHG Workbook / EFT v11' scenario represents a scenario with limited decarbonisation of the vehicle fleet over the entire 60-year appraisal period for operational use. The Applicant has presented the two TDP scenarios as sensitivity tests of road user GHG emissions. They represent net zero compliant scenarios but are not attributable to specific policies or actions.</p> <p><b>Estimating road user GHG emissions</b></p> <p>The method for estimating road user GHG emissions is described in Table 15.3 of ES Chapter 15: Climate [APP-153]. The TAG GHG Workbook / EFT v11 estimate is calculated by applying Defra's tool to the output from the traffic model. The fleet mix assumptions within EFTv11 are based on the Department for Transport's TAG Data Book sheet A1.3.9 version 1.17. The data series for the fleet mix in both the TAG Data Book and EFTv11 ends in 2050. The remaining 40 years of the 60-year appraisal period are modelled assuming that the vehicle mix remains constant. Every year from 2050 to 2089 therefore uses the 2050 fleet mix.</p> <p>Table 1 below summarises the fleet mix assumptions for 2030 and 2050 taken from version 1.17 of sheet A1.3.9. The full series can be found via the national archives<sup>4</sup>.</p>

<sup>2</sup> Department for Environment, Food & Rural Affairs (Defra) (2021). Emissions Factors Toolkit version 11.

<sup>3</sup> Department for Transport (2021). Decarbonising Transport: A Better, Greener Britain.

<sup>4</sup> Department for Transport (2021). TAG data book (version 1.17)

[https://webarchive.nationalarchives.gov.uk/ukgwa/20220506212708mp\\_/https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1049194/tag-data-book.xlsx](https://webarchive.nationalarchives.gov.uk/ukgwa/20220506212708mp_/https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1049194/tag-data-book.xlsx)

**Table 1 Extract from TAG Data Book (sheet A.1.3.9, v1.17)**

Year	Cars		Light Goods Vehicles (LGVs)		Heavy Goods Vehicles (HGVs)		Public Service Vehicles (PSVs)	
	Diesel / Petrol	Electric	Diesel / Petrol	Electric	Diesel / Petrol	Electric	Diesel / Petrol	Electric
2030	84%	16%	97%	3%	100%	0%	100%	0%
2050 (and beyond)	56%	44%	79%	21%	100%	0%	100%	0%

*Note: some values may not sum to 100% due to rounding*

The two TDP scenarios represent possible net zero compliant trajectories. They are not derived directly from any specific fleet mix assumptions. They are calculated by multiplying the GHG emissions from each year of the EFT scenario by a factor to align them to the curves shown in Figure 2 of the TDP.

**Change in policy on phase out dates**

The TAG Data Book sheet A1.3.9 and EFTv11 did not take account of the government’s previous policy of ending the sale of petrol and diesel cars by 2030 and the EFT scenario is therefore not impacted by the recent policy change to delay the phase out date to 2035.

The TDP scenario calculation methodology is not linked to specific fleet mix assumptions (see above) and these are therefore not impacted by the recent policy change either.

The Applicant also notes the Climate Change Commission’s recent assessment of the real-world impact of the policy change and has concluded that it is very unlikely that this will fall outside the range presented in Table 15.16 of the ES Chapter 15 [APP-153].

*‘Delaying the fossil car phase-out date to 2035 is expected to have only a small direct impact on future emissions, due to the now-confirmed ZEV Mandate, which will ensure that 80% of new cars sold by 2030 will be zero-emission. However, there may be other indirect consequences, through the uncertainty that has been introduced by changing near-term consumer targets. The risk is that the public and automotive companies perceive a weakening of government commitment to the electric vehicle transition, which could undermine consumer confidence and/or jeopardise some inward investment relating to EV manufacturing.’<sup>15</sup>*

**Mitigation**

No changes to the proposed design or mitigation measures are required as a result of the change in phase out dates.



PINS ID	Question to	Question / Response
		The Applicant notes that the ExA has asked questions on a similar topic to this within ExQ2 Q5.1.1, Q.5.2.1 and Q15.1.1 and the Applicant has provided responses to those questions there.

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<sup>5</sup> Climate Change Committee (2023). CCC assessment of recent announcements and developments on Net Zero.

## 4 Responses to the Examining Authority's ExQ2 3

No questions addressed to the Applicant for this topic.

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