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The Cambourne to Cambridge Order

Cambridgeshire County Council

Transport and Works Act 1992

Transport and Works (Inquiries Procedure) Rules 2004

Inquiry into:

THE CAMBOURNE TO CAMBRIDGE ORDER

REBUTTAL IN RELATION TO CARBON CALCULATIONS

of

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of WSP

On behalf of Cambridgeshire County Council

9th September 2025

Planning Inspectorate Reference: DPI/E0535/25/1

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1. INTRODUCTION

1.1.1 This rebuttal has been prepared in response to the Proof of Evidence of Louise Hirst **[CD26-10-W5-1]** in relation to the carbon calculations carried out for the Cambourne to Cambridge Order.

1.1.2 My name is Andy Saunders. I am a Technical Director in the Environment Team at WSP. Details of my qualifications, professional career and key project experience are contained in my Proof of Evidence **[CD26-01-APP-W3-1]**.

2. SCOPE OF REBUTTAL

2.1.1 The scope of my rebuttal is specifically in response to matters raised in the Proof of Evidence of Louise Hirst **[CD26-10-W5-1]** entitled *Proof of Evidence on Claimed Carbon Benefits for CtoC Scheme - Prof. Louise Hirst, Professor of Materials Physics, University of Cambridge On behalf of Cambridge Past, Present & Future and Coton Parish Council*. Louise Hirst's Proof of Evidence questions the accuracy of the carbon calculations undertaken for the Scheme and presented in the Environmental Statement **[CD1-10.01 being the Main Report]** and in Technical Report TR6: Greenhouse Gases **[CD1-11.06]**.

2.1.2 The fact that I do not respond to a particular point should not be taken as a concession in any respect. I have sought to focus my rebuttal evidence on the matters that I consider most likely to assist the Inspectors and Secretary of State by being addressed in writing.

3. REBUTTAL

3.1 Introduction

3.1.1 Within the Proof of Evidence of Louise Hirst **[CD26-10-W5-1, pdf page 6, paragraphs 5.2, 5.2.1 and 5.2.2]** it is stated:

*"5.2 The CO_2 emission calculations presented in the Environmental Statement **[CD1-10.01]** have two critical issues, which lead to an inaccurate forecast of proportion of car kilometres by fuel type (electric vs petrol or diesel) and corresponding artificially inflated calculations of carbon savings. These issues are summarised below.*

5.2.1 Post-2050 assumption: The use of constant proportion of car kilometres by fuel type (electric vs petrol or diesel) post 2050.

5.2.2 Outdated forecast: The use of outdated forecasts of proportion of car kilometres by fuel type (electric vs petrol or diesel)."

3.1.2 The relevant findings in relation to carbon calculations undertaken as part of the Environmental Impact Assessment (EIA) for the Scheme are reported in the Environmental Statement **[CD1-10.01 being the Main Report]** and in Technical Report TR6: Greenhouse Gases **[CD1-11.06]**. Both were published in November 2024.

3.1.3 My Proof of Evidence **[CD26-01-APP-W3-1, pdf pages 56 to 59, Section 7.7, paragraphs 7.7.1 to 7.7.23]** directly responded to the representation made by Louise Hirst **[CD2-OBJ-279]** and also provided Appendices which included at Appendix C a Carbon Assessment Update (August 2025) **[CD-26-01-APP-W3-2, pdf pages 17 to 24]** which provided an update to the results and assessment reported in the November 2024 Environmental Statement (ES) and TR6. In addition to addressing the specific points made in Louise Hirst's Proof of Evidence **[CD26-10-W5-1]** in relation to post 2050 assumptions and outdated forecasts my Proof of Evidence also addressed other matters raised in Louise Hirst's objection **[CD2-OBJ-279]** including carbon sequestration and decommissioning.

3.1.4 My rebuttal focusses on demonstrating that the assessment has been carried out in accordance with the Department for Transport's (DfT) Transport Analysis Guidance (TAG) which is the industry standard and therefore represents best practice and that despite updates to the TAG Data Book since publication of the November 2024 ES updated calculations presented in the Carbon Assessment Update (August 2025) in my Proof of Evidence **[CD-26-01-APP-W3-2, pdf pages 17 to 24]** demonstrate that the conclusions of the Environmental Statement **[CD1-10.01]** are unchanged in relation to Greenhouse Gases (i.e. a minor beneficial effect under the standard scenario).

3.2 Rebuttal in Relation to Post 2050 Assumptions.

3.2.1 The following presents my rebuttal in relation to paragraph 5.2.1 of Louise Hirst's Proof of Evidence **[CD26-10-W5-1, pdf page 6, paragraph 5.2 and 5.2.1]** where it is stated that:

*"5.2 The CO_2 emission calculations presented in the Environmental Statement **[CD1-10.01]** have two critical issues, which lead to an inaccurate forecast of proportion of car kilometres by fuel type (electric vs petrol or diesel) and corresponding artificially inflated calculations of carbon savings. These issues are summarised below.*

5.2.1 Post-2050 assumption: The use of constant proportion of car kilometres by fuel type (electric vs petrol or diesel) post 2050.

3.2.2 Section 6 of Louise Hirst's Proof of Evidence **[CD26-10-W5-1, paragraphs 6.1 to 6.3, pdf pages 6 and 7]** provides further details to support the assertion that the post 2050 assumption contained in the Environmental Statement and Technical Report 6 Greenhouse Gases is inaccurate including at paragraph 6.1:

*"Technical Report 6 Greenhouse Gases **[CD1-11.06, para 3.2.13]** specifies that end-user vehicle emissions were quantified for the Environmental Statement **[CD1-10.01]** using TAG data from the Department for Transport accessed 03/11/2022, which corresponds to TAG data May 2022 v1.18."*

3.2.3 My Proof of Evidence **[CD26-01-APP-W3-1, pdf pages 56 and 57, paragraphs 7.7.4 and 7.7.5]** includes the following in relation to the greenhouse gas assessment:

"The assessment has been carried out in accordance with the Department for Transport's Transport Analysis Guidance (TAG) which is the industry standard and therefore represents best practice……..

While it is accepted that newer vehicles (2020-2024) would be more efficient, not all vehicles on the network are modern and the TAG Data Book accounts for this. With reference to the linear carbon recovery, the Data Book fleet assumptions only go up to 2050, therefore the 2050 figures are continued beyond that date and are therefore linear. With regards to the assumption that all vehicles on the network will have zero emissions by ~2085, while linear progression in the phasing out of internal combustion engined vehicles up to 2085 may be possible, this is not assumed in the TAG Data Book…."

3.2.4 In addition, DfT's ongoing advice has been that beyond the horizon year of 2050 Scheme promoters should assume that the emission rates stay the same. This is reiterated in DfT's latest guidance dated August 2025 entitled *Local Transport Quantifiable Carbon Guidance* which states under the heading *Scheme level traffic modelling-based assessment* at Paragraph 7.47 **[CD8-41, pdf page 79, paragraph 7.47]**:

"Data for appraisal years beyond 2050 can be held constant up to the end of the assessment period (extrapolated horizontally). This is illustrated in Figure 7-2. Alternatively, the annual change between the final two modelled years could be applied beyond the final modelled year if considered appropriate."

3.2.5 In the case of this Scheme, it is not considered there is any reason to deviate from the TAG Data Book for the post 2050 situation as there is no basis for doing so plus the updated emission rates (May 2025, v2.01) used in the Carbon Assessment Update (August 2025) **[CD-26-01-APP-W3-2, pdf pages 17 to 24]** demonstrate a relatively low level of petrol and diesel percentage of cars. In Section 3.3 below I have provided further details of the car and diesel percentages used in the updated assessment using the latest TAG Data Book (May 2025, v2.01) **[CD8-42]** which are also relevant to this element of the objection.

3.2.6 In summary, the use of the TAG Data Book is industry standard and the calculations presented in the November 2024 Environmental Statement **[CD1-10.01]** and those updated and presented in my Proof of Evidence as the Carbon Assessment Update (August 2025) **[CD-26-01-APP-W3-2, pdf pages 17 to 24]** have been carried out in accordance with that standard. I therefore disagree that "*The use of constant proportion of car kilometres by fuel type (electric vs petrol or diesel) post 2050"* is inaccurate as to use any other means of calculating emissions aside from industry standards could not be supported.

3.3 Rebuttal in Relation to Outdated Forecast

3.3.1 The following presents my rebuttal in relation to paragraph 5.2.2 of Louise Hirst's Proof of Evidence **[CD26-10-W5-1, pdf page 6, paragraph 5.2 and 5.2.2]** where it is stated that:

*"5.2 The CO_2 emission calculations presented in the Environmental Statement **[CD1-10.01]** have two critical issues, which lead to an inaccurate forecast of proportion of car kilometres by fuel type (electric vs petrol or diesel) and corresponding artificially inflated calculations of carbon savings. These issues are summarised below.*

5.2.2 Outdated forecast: The use of outdated forecasts of proportion of car kilometres by fuel type (electric vs petrol or diesel)."

3.3.2 The forecasts presented in the November 2024 Environmental Statement **[CD1-10.01]** were based on the TAG data available at the time of assessment (TAG Data Book v1.18, May 2022). As stated in my Proof of Evidence **[CD26-01-APP-W3-1, pdf page 57, paragraphs 7.7.6 and 7.7.7]**:

"Since submission of the ES [Environmental Statement] *an updated TAG Data Book has been issued and as a result a recalculation has been undertaken to address this element of the objection. The results are discussed above in Section 6.12 and presented in Appendix C of my Proof of Evidence (Carbon Assessment Update **[CD26-01-APP-W3-2]**) and can be compared with that presented in Figure 10-2 of the ES **[CD1-10.01, page 131]**.*

*Appendix C of my Proof of Evidence **[CD26-01-APP-W3-2, pdf page 18]** r*eports that *"The overall combined impact of these updates is marginal with the overall estimated net whole-life carbon impact and associated net zero payback period being commensurate with the scale of the original assessment"."*

3.3.3 Although Louise Hirst is correct that the results presented in the Environmental Statement **[CD1-10.01]** are now outdated this is inevitable given that the TAG Data Book is often updated (typically DfT release a new Data Book twice a year) so the results reported in the Environmental Statement can only reflect the Data Book available at the time of the assessment. However, the results presented in the Environmental Statement have been updated since submission of the ES to reflect the updated TAG Data Book (May 2025 v2.01) and Table 3 of Appendix C of my Proof of Evidence **[CD26-01-APP-W3-2, pdf page 23]** presents a summary of the updates made which for the TAG Data Book can be summarised as:

- May 2023 assessment used TAG Databook May 2022 V1.18 for changes in general traffic flows (Annual Average Daily Traffic) and TAG Databook November 2022 V1.20.1 for modal shift impacts - bus and walking & cycling / Active Modal Appraisal Toolkit (AMAT); and

- July 2025 update presented in my Proof of Evidence used TAG Databook May 2025 v2.01 for all user emission assessments.

3.3.4 Paragraph 6.2 of Louise Louise Hirst's Proof of Evidence **[CD26-10-W5-1, pdf page 6, paragraph 6.2]** provides details of the results presented in the Environmental Statement **[CD1-10.01]** and states ***"****Using a constant proportion of vehicle kilometres by fuel type post 2050 effectively assumes that ~56% of car kilometres will be petrol or diesel in 2085; equal to the May 2022 TAG data for 2050."* Whilst this is correct for the Environmental Statement **[CD1-10.01]** using the May 2022 TAG Data Book V1.18, the updated TAG Data Book (May 2025 v2.01) at Table A1.3.9 **[CD8-24, Table A1.3.9]** under the heading *Proportion of cars, LGV and other vehicle kilometres using petrol, diesel or electricity* provides a figure of 15% to be used for petrol cars, 3% for diesel cars (i.e. 18% total as opposed to 56%) and 82% for electric cars for 2050 (note the same figures are also provided in Table A1.3.9 for the years 2048 and 2049). The figure of 18% petrol and diesel cars rather than 56% petrol and diesel cars has been used in the updated calculations presented in my Proof of Evidence. Table A1.3.9 is also reproduced in Appendix A of this Rebuttal.

3.4 Environmental Statement Conclusions in Relation to Greenhouse Gas Emissions

3.4.1 In addition, the conclusions presented in the Environmental Statement **[CD1-10.01]** are unchanged with point 4 of Appendix C of my Proof of Evidence **[CD26-01-APP-W3-2, pdf page 18]** summarising the outcome of the reassessment as follows *"The overall combined impact of these updates is marginal with the overall estimated net whole-life carbon impact and associated net zero payback period being commensurate with the scale of the original assessment."*

3.4.2 The Environmental Statement reported **[CD1-10.01, pdf page 128, paragraphs 10.3.5 and 10.3.6)**:

"10.3.5. The magnitude of carbon reduction accords with a minor benefit, but not a significant beneficial effect given the long return period to reach net zero (2078) and low overall carbon reduction.

"10.3.6. Sensitivity tests have been run in addition to the standard scenario to see the effects of the progressive work by the city council to deter car use (see Figure 10-2). These estimate considerably higher net carbon benefits of -47,040 tCO2e, with the Scheme becoming carbon neutral some 34 years earlier, around 2044. This would be a moderate benefit and a significant beneficial effect."

3.4.3 In terms of significance of effects reported in the Environmental Statement **[CD1-10.01]** the conclusion of the updated calculations remain the same (i.e. a minor beneficial effect) with the predicted year for achieving net zero remaining as 2078 in the Core/Standard assessment albeit under an optimistic sensitivity test, the net zero payback period changes from 2044 in the Environmental Statement assessment to 2050 in the updated assessment.

3.4.4 In summary:

- the Greenhouse Gas calculations including updates have been undertaken in accordance with DfT industry standard which were correct at the time;

- the updates to reflect latest TAG factors and guidance have accounted for a predicted change in the proportion of petrol and diesel cars and accord with

the requirement to use a constant proportion of vehicle kilometres by fuel type post 2050; and

- the conclusion reported in the Environmental Statement remain the same.

4. STATEMENT OF TRUTH

4.1.1 This rebuttal which I have prepared and provide is true and is given in accordance with the guidance of my professional institutions. I confirm that the opinions expressed are my true and professional opinions.