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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

PROOF OF EVIDENCE

of

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of WSP

On behalf of Cambridgeshire County Council

30th July 2025

Planning Inspectorate Reference: DPI/E0535/25/1

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1. INTRODUCTION

1.1 Qualifications and Experience

- 1.1.1 I hold a MA in Geography from the University of Cambridge, an MSc(Eng) in Transport Planning and Engineering from the Institute for Transport Studies at the University of Leeds and an MBA from the Open University. I am a Chartered Member of the Chartered Institute of Logistics and Transport and a Chartered Manager of the Chartered Management Institute.
- 1.1.2 I have over 25 years of experience in the transport sector working on the development of schemes, their appraisal and making the case for funding. I am a Technical Director at WSP and lead the Business Case Advisory team in the Communities and Mobility discipline.
- 1.1.3 I am an expert in the application of His Majesty's Treasury (HMT) Green Book guidance and Department for Transport's (DfT) Transport Business Case Guidance, along with the requirements of DfT's Transport Analysis Guidance (TAG), for projects focused on transport and land-use development, including major highway; mass transit, rail and light rail infrastructure; mixed-use developments; urban realm improvements; and operational technology solutions. I have led the development of the successful business cases for the funding of the expansion of the Midland Metro in Birmingham, the redevelopment of Birmingham New Street and Reading stations, and for a range of local transport bids which have secured central government and devolved government funding.
- 1.1.4 Alongside working for a range of clients to successfully develop business cases, I have worked on behalf of DfT, Transport for London, Combined Authorities and Local Enterprise Partnerships as a technical reviewer of business cases and economic appraisals.

1.2 Scope of My Evidence

- 1.2.1 The scope of my evidence will address the identification of the preferred option for the Cambourne to Cambridge Busway Scheme and the consideration of alternative options at the Outline Business Case (OBC) stage. I will explain how the Scheme will deliver transport, economic and social benefits by introducing a high-quality, reliable public transport service connecting communities along the corridor together, with key employment sites and central Cambridge. I will cover how the Scheme, by unlocking development, enables significant housing and economic growth in the Cambourne to Cambridge corridor and will demonstrate the Scheme Value for Money.
- 1.2.2 I will describe Scheme implementation with respect to Scheme affordability referencing the funding sources identified in the financial case of the OBC. The availability of funding is addressed by Mr Baker in his Proof of Evidence [CD26-01-APP-W1-1].

1.2.3 In covering this scope, my evidence will address Matters 3 and 6 in the Statement of Matters [CD25-01, pages 1 and 2].

Table 1.1 Coverage of Certain Matters in Proof of Evidence as set out in the Statement of Matters

Statement of Matters [CD25-01] Reference	Statement of Matters text	Coverage through my Proof of Evidence	Coverage through Proofs of Evidence of Others
3:	The main alternative options considered by CCC and the reasons for choosing the preferred option set out in the Order.		
3a	a. The rationale for the preferred option and the alternatives considered.	I will describe how the OBC has been developed (section 2) and present the rationale for the preferred option (paragraphs 3.2.1-3.2.35), including the process of considering alternatives (paragraphs 2.3.7-2.3.15).	The rationale for the preferred option and the consideration of alternatives is covered in the Proofs of Evidence of Mr Baker [CD26-01-APP-W1-1] and Mr Saunders [CD26-01-APP-W3-1].
3b	b. The cost of the scheme and overall benefits.	I will describe the costs and benefits of the scheme as reported in the OBC (paragraphs 3.2.3-3.2.27).	The cost of the scheme and overall benefits are dealt with in the Proofs of Evidence of Mr Baker [CD26-01-APP-W1-1], Mr Lewis [CD26-01-APP-W10-1] and Mr Saunders [CD26-01-APP-W3-1].

Statement of Matters [CD25-01] Reference	Statement of Matters text	Coverage through my Proof of Evidence	Coverage through Proofs of Evidence of Others
6:	Having regard to the criteria for justifying compulsory purchase powers in paragraphs 12 to 15 of the Ministry of Housing, Communities & Local Government 'Guidance on the Compulsory Purchase Process' published in October 2024 and updated in January 2025		
6c	Whether there are likely to be any impediments to CCC implementing the scheme, including the availability of funding	I will describe the sources of funding which have been identified for the Scheme (paragraphs 2.5.25-2.5.26).	The availability of funding is dealt with in the Proof of Evidence of Mr Baker [CD26-01-APP-W1-1]

1.2.4 My evidence on the Scheme costs, benefits and Value for Money is also relevant for the consideration of Matter 6a, which relates to whether there is a compelling case to justify conferring powers on Cambridgeshire County Council (CCC) to deliver the Scheme.

1.2.5 Before addressing these Matters and responding to the representations made relevant to my evidence, I will set out the process that has been followed for the development of the OBC and OBC Addendum, which present the case for the Scheme.

2. DEVELOPMENT OF THE OUTLINE BUSINESS CASE

2.1 Business Case Development

2.1.1 The purpose of the OBC is to identify the preferred option and set out arrangements required to ensure the successful delivery of the project. In doing so, the OBC presents

the rationale for the delivery of the Scheme for decision-makers to consider and determine whether to approve continuing to progress the Scheme.

- 2.1.2 The OBC for the Cambourne to Cambridge Public Transport Project (CtoC) [CD1-20] was completed in January 2020. It was developed in line with HMT and DfT guidance on the preparation of a 5-Case business case model [CD8-17, page 6, The business case].
- 2.1.3 In 2021, an independent review of the OBC was carried out by Amey, 'Cambourne to Cambridge Better Public Transport Project - Independent Audit of Key Assumptions and Constraints' [CD8-27]. The scope of the Audit was to review the assumptions and constraints that underpinned the analysis that led to the selection of the preferred route and the elimination of alternative options for CtoC. The findings of the Audit [CD8-27, page 76, Audit Conclusion] included that the business case development followed the HMT Green Book and the DfT's TAG methodology, including that a number of alternative route options had been examined.
- 2.1.4 The OBC Addendum [CD1-21] was produced in 2024 to reflect project developments since 2020 and provides a companion document to the OBC. Areas of the OBC were identified for updating reflecting changes including policy priorities, developments in transport modelling and policy context, and updated Scheme costs and funding. The Addendum supports the development of the business case for the Scheme up to the Transport and Works Act Order submission.
- 2.1.5 Both the OBC and OBC Addendum were developed in accordance with DfT's TAG [CD8-25] for the analysis of impacts of the Scheme, using the version available at the time of the work. In my evidence references to TAG refer to these versions of the guidance. Where there have been updates in guidance since the OBC Addendum was produced, these will be taken into consideration for the Full Business Case (FBC).
- 2.1.6 The FBC will also reflect the latest Value for Money Framework [CD8-32] which supersedes the DfT's guidance on value for money when the analysis was undertaken for the OBC and OBC Addendum. The updated approach provides for an indicative benefit cost ratio (BCR) metric that is intended to be "*a means of improving the visibility and transparency of wider economic impacts in the value for money assessment*" [CD8-32, page 4, 1.1.4].

2.2 The Scheme

- 2.2.1 The Cambourne to Cambridge Busway Scheme is a proposed new 13.6km long public transport route linking Cambourne and Cambridge. It will include a dedicated busway serving communities in Cambourne and the proposed Bourn Airfield development, as well as in Hardwick, Coton and the West Cambridge campus. An emergency and maintenance access track, to be used as a path for active travel - particularly by cyclists and pedestrians - will run alongside the busway. A new travel hub (a Park and Ride facility) will be provided at Scotland Farm where drivers can leave their cars and

continue into the city by bus or bike. Mr Lonergan's Proof of Evidence [CD26-01-APP-W8-1] provides further details on the Scheme.

2.3 The Outline Business Case (January 2020)

OBC STRATEGIC CASE

- 2.3.1 The role of the OBC Strategic Case is to establish the strategic and policy context of the Scheme, the need for the project and provide an assessment of the Scheme's ability to address transport and wider policy requirements. As set out in the DfT business case guidance [CD8-17, page 13, The strategic dimension], the Strategic Case covers the project background and progress to date, identification of the need for the Scheme through an evidence-based assessment, the ensuing aims and objectives for the Scheme identified as a result, and through an option assessment process identifies a preferred option.
- 2.3.2 My evidence provides a summary of the context for the Scheme in terms of its strategic economic benefits and the rationale for the preferred option. Mr Baker's evidence [CD26-01-APP-W1-1] addresses the need for the Scheme and the full option development process and selection of the preferred route option.
- 2.3.3 The rationale for the preferred option relates to the range of positive impacts that will result from high-quality, quicker, more reliable, more frequent public transport services connecting people to places of employment, study and key services and helping existing and new communities along the A428/A1303 to grow sustainably by providing an alternative to the car as the primary mode of travel.
- 2.3.4 The Scheme contributes to the Greater Cambridge City Deal aims and objectives, as discussed in Mr Baker's evidence [CD26-01-APP-W1-1], by removing some of the barriers to economic growth within Greater Cambridge by improving connectivity between current and future housing, including Cambourne West and Bourn Airfield, and key employment sites, including West Cambridge. The strategic economic benefits of the Scheme on the Cambridge and national economies, as set out in the Strategic Case [CD1-20.05, page 57, 5.7], are:
- Improving labour market access and mobility benefiting employers and the workforce. The Scheme will connect major growth sites in the Cambourne to Cambridge corridor enabling an adequate supply of labour both to the city centre and other Cambridge employment hubs, and the Scheme will improve access to education and training opportunities, which will promote upskilling.
 - Supporting business investment and long-term economic growth. The Scheme, by improving public transport connectivity and capacity from the West to the city centre, will enhance investment prospects, particularly at

Cambourne West, Bourn Airfield and Cambridge West, encouraging accelerated economic growth along the corridor.

- Supporting productivity growth through agglomeration economies. The Scheme, by encouraging high-quality public transport accessibility to the city centre will bring about land use change resulting in higher development density for employees and businesses, leading to improved productivity. Alongside dynamic clustering of economic activity, productivity will also be enhanced where no change in land use occurs as the Scheme will deliver reduced public transport journey times, increasing effective density.

2.3.5 These core types of beneficial economic impact described above will also have consequential impacts for promoting economic growth, particularly in relation to [CD1-20.05, page 58, 5.7]:

- Supporting inclusive economic growth. The Scheme will reduce social inequalities by creating employment opportunities and housing market improvements, particularly by increasing housing market affordability and offering an attractive transport alternative for those residents and visitors without access to a car.
- Quality of life impacts. The Scheme will help to prevent increased road traffic, reducing negative externalities such as local and global emissions, road traffic accidents, general road traffic congestion, noise, and severance. By reducing congestion, the Scheme will also ensure that the quality of life of residents and workers in Cambridge is maintained, which is important to both existing and potential investors in the local economy.

2.3.6 The Scheme will support the additional housing and jobs growth required to realise the growth ambition of Greater Cambridge by addressing the following transport issues and opportunities [CD1-20.05, page 60, Chapter 6]:

- Traffic congestion because of increasing inward commuting to Cambridge employment opportunities from the surrounding urban area, highlighting the need for sustainable public transport connectivity between home and workplace to support economic growth. The Scheme offers an opportunity to encourage mode shift from car to high-quality public transport services and active travel modes, providing sustainable transport services to support further economic growth in West Cambridge.
- Providing a public transport network, which can meet the needs of commuters, not only to access the city centre, but also employment centres across Cambridge. The Scheme offers an opportunity to connect

residents in the A428/A1303 corridor to a wide variety of journey destinations across Cambridge through interchange with other public transport services.

- An East West Rail station at Cambourne would offer a rail service for Cambourne residents travelling to destinations readily accessible from Cambridge railway stations. The Scheme would complement East West Rail as CtoC would be the key public transport mode for intermediate locations in the corridor including the Bourn Airfield and West Cambridge developments situated between Cambourne and Cambridge city centre.
- The CtoC scheme corridor has some local existing cycling links, although not an end-to-end segregated cycle route between Cambourne and the city centre. The Scheme will offer improved cycling infrastructure to encourage greater use of cycling and a reduction in the use of the car.

2.3.7 The preferred option for the Scheme was developed following an extensive option development and assessment process, aligned to DfT's guidance 'The Transport Appraisal Process' [CD8-24], and reported in the Options Appraisal Reports 1, 2 and 3 [CD1-20.07, CD1-20.08 and CD1-20.09 respectively]. As illustrated in the Strategic Case [CD1-20.05, page 95, Figure 43], option assessment was carried out for two phases: Phase 1 of the scheme being the section of route between Maddingley Mulch roundabout and the city centre and Phase 2 of the scheme being the section between Cambourne and Maddingley Mulch roundabout.

2.3.8 At the Strategic Outline Business Case (SOBC) stage five options were identified for further assessment [CD1-20.07, page 34, Figure 16]. These options represented on-road and off-road proposals [CD1-20.07, page 69, Table 16]. Following the approval of the SOBC, further work was undertaken to identify a preferred route alignment for Phases 1 and 2, as well as for the Park and Ride site, encompassing the following shortlisted options [CD1-20.08, page 12, **Executive Summary**]:

- Low Cost a and b – Recommended on-road option between Maddingley Mulch Roundabout and Cambridge City Centre, with incorporation of a Park and Ride site either at Waterworks (a) or Scotland Farm (b)
- Do Something 1a and 1b – Recommended off-road option running between Maddingley Mulch Roundabout and Cambridge City Centre, incorporating a Park and Ride site either at Waterworks (a) or Scotland Farm (b) and improvement to the off and on slips of the M11 junction 13 and the junction with Maddingley Road.

2.3.9 An Illustrative Comparator was also defined for the full Cambourne to Grange Road corridor to provide a comparison against the shortlisted Phase 1 options.

2.3.10 The results of the Multi-Criteria assessment demonstrated that Do Something 1 performed most strongly (with no differentiation between the Park and Ride locations) [CD1-20.05, page 102, Table 19]. Similarly, the analysis of monetised costs and benefits showed the Do Something options performed more strongly than the Low Cost options (0.19:1 and 0.15:1 for Do Something 1a and 1b respectively, compared to 0.03:1 for both Low Cost a and b) [CD1-20.05, page 102, Table 20].

2.3.11 The same option assessment approach was applied for the Phase 2 section of the corridor considering three options [CD1-20.05, page 105]:

- **Option 1** – Off-road segregated route. A new public transport route adjacent to the A428 and St Neots Road. The route would be entirely off-road with minimal interaction with general traffic, except at junctions.
- **Option 2** – On-road with junction improvements. Public transport vehicles would run on-road along St Neots Road with general traffic east of the Bourn roundabout. There would be basic junction improvements.
- **Option 3** – On-road with public transport priority lanes. Public transport vehicles would run on-road along St Neots Road in priority lanes running in both directions.

2.3.12 Each option was tested with the two Park and Ride sites.

2.3.13 The results of the Multi-Criteria assessment demonstrated that option 1b (off-road segregated with Scotland Farm Park and Ride site) performed most strongly [CD1-20.05, page 108, Table 24]. The analysis of monetised costs and benefits showed little differentiation between the options with the results ranging between 0.31:1 to 0.35:1 [CD1-20.05, page 108, Table 25].

2.3.14 To fully consider the value for money the options would potentially deliver and to inform the optioneering process, an assessment of the Wider Economic Impacts (WEIs) was undertaken to compare off-road and on-road options. The assessment showed that there was substantially higher WEI benefits with an off-road option compared to an on-road option [CD1-20.05, page 108, Figure 51].

2.3.15 The conclusion of the assessment of options was that Option 1b (Off-road segregated with Scotland Farm Park and Ride) was the best performing option and was therefore recommended to be taken forward as the preferred option [CD1-20.05, page 109, 10.4.2.4].

OBC ECONOMIC CASE

2.3.16 The role of the Economic Case is to present the assessment of the impacts of the preferred option and provide a Value for Money assessment undertaken in line with HMT and DfT guidance for scheme appraisal involving government expenditure [CD8-17,

The economic dimension]. The Economic Case covers economic, environmental, social and distributional impacts the Scheme is expected to deliver.

2.3.17 The Economic Case for CtoC [CD1-21.02] is focused on the monetisation of the strategic economic benefits of the Scheme. These will support the continued economic growth of Cambridge by unlocking land for housing, improving connectivity between residential and employment areas and reducing congestion and making better use of limited road space by prioritising sustainable transport.

2.3.18 An assessment of the Scheme Value for Money was carried out based on DfT appraisal guidance [CD8-25]. Value for money takes into account monetised costs and impacts, as well as the findings of qualitative and non-monetised assessments. The monetised impacts of the Scheme assessed in the Value for Money Statement are as follows:

- Strategic (wider) economic impacts [CD8-25, page 5, Units A2-1 to A2-4].
- Transport user benefits [CD8-25, page 6, Unit A5-4].
- Environmental, social and distribution impacts [CD8-25, page 5, Units A3, A4-1 and A4-2].
- Active mode impacts assessment [CD8-25, page 6, Unit A5-1].

2.3.19 The Value for Money Statement indicates that the Scheme is expected to deliver Medium Value for Money when indicative monetised benefits are included [CD1-20.02, page 60]. The valuable role CtoC plays in unlocking and supporting future housing and economic growth is demonstrated by the assessment of the land value uplift benefit of £288m Present Value (PV) in 2010 prices and values over a 60-year appraisal period, based on dependent development at Cambourne West and Bourne Airfield [CD1-20.02 page 38, Table 17].

2.3.20 The Scheme was also assessed to produce productivity benefits where changes in economic scale and density produce productivity benefits for companies and workers. These benefits were valued as a national impact of £9.6m PV [CD1-20.02 page 36, Table 16].

2.3.21 In addition to the considerable economic benefits, the Scheme produces transport benefits of £84m PV associated with transport network improvements (journey time savings and reduced highway congestion) [CD1-20.02, page 33, Table 12].

2.3.22 The Scheme costs were estimated as £195m PV [CD1-20.02, page 55, Table 26], produced in line with DfT guidance on the preparation of cost inputs for appraisal [CD8-25, page 4, Unit A1-2].

2.3.23 Testing of the sensitivity of the results to changes in key parameters was carried out for optimism bias, risk, electric vehicle operation and an alternative high growth scenario.

The results for these tests were not materially different from the core scenario [CD1-20.02, page 63, Table 32].

OBC FINANCIAL CASE

- 2.3.24 The Financial Case presents the estimated whole life cost for the scheme and its funding arrangements, therefore its affordability [CD8-17, page 26, The financial dimension]. The scheme costs for the preferred option are based on the designs for a physically guided system as set out in the Preferred Option Drawings [CD1-20.24]. The costs include preparation costs, the design, construction, land acquisition, inflation and other costs.
- 2.3.25 As set out in the Financial Case [CD1-20.03, page 10, Table 2] in January 2020, the total (nominal) cost of the scheme at OBC stage was £127.6m, exclusive of risk allowance. A P80 value of 25% was applied to the base cost producing a capital cost for the preferred option of £160.5m (nominal) [CD1-20.03, page 10, Table 3]. The P80 value represents an 80% likelihood that the project would be delivered within budget.
- 2.3.26 Maintenance costs for the scheme were calculated from 2024 to 2084 with a total whole life cycle budget of £66.0m (2018 prices) [CD1-20.03, page 11, 2.4]. This is equivalent to £1.1m per annum. The maintenance costs also included the operating costs for the Scotland Farm Park and Ride site. It is noted that maintenance costs would be subject to negotiation with potential Park and Ride operators.
- 2.3.27 Additionally, the final decision on the operating model is yet to be confirmed. As such the costs for the purchase and operation of new vehicles for CtoC are not included in the funding request [CD1-20.03, page 12, 2.5]. The preferred operating model will be confirmed in the FBC.
- 2.3.28 Funding for CtoC is identified as being primarily through the City Deal [CD1-20.03, page 13, 3], the funding partnership between central government and local partners. The City Deal funding aims to enable Greater Cambridge to promote economic growth and development. GCP is seeking to also recover an appropriate proportion of the cost from local developer contributions, secured through the planning process.

OBC COMMERCIAL CASE

- 2.3.29 The role of the Commercial Case is to provide evidence of the commercial viability of the Scheme and the procurement strategy to engage with the market [CD8-17, page 28, The commercial dimension]. The Commercial Case covers the output-based specification, procurement strategy, sourcing options, payment mechanisms, pricing framework and pricing mechanisms, risk allocation and transfer, contract length, human resource issues and contract management.
- 2.3.30 The emerging preferred procurement strategy presented in the OBC [CD1-20.01] was the appointment of a contractor under a design and build contract. Adoption of this

strategy would result in early collaboration between GCP and the contractor and was considered the most cost-effective procurement method. The NEC4 delivery approach was recommended as it encourages cooperation between parties and includes an Early Warning feature to promote an active approach to risk resolution. The preferred contract condition described in the OBC was a target cost contract with activity schedule as the financial risks are shared between the employer and the contractor, incentivising the contractor.

OBC MANAGEMENT CASE

- 2.3.31 The role of the Management Case is to assess whether the Scheme is deliverable [CD8-17, page 31, The management dimension]. The Management Case covers project planning, governance structure, risk management, communications and stakeholder management to ascertain if sufficient resources are available to deliver the Scheme on time and to budget and in accordance with specifications.
- 2.3.32 As described in the evidence of Mr Baker [CD26-01-APP-W1-1] the delivery of CtoC is overseen by the GCP, the Scheme promoters and the Scheme has progressed through the GCP's standard approval processes.
- 2.3.33 To ensure that the forecast benefits can be realised and the objectives for the Scheme are achieved a benefits realisation plan was developed providing a framework to plan for, track and confirm realisation through scheme implementation [CD2-20.05, page 49, Table 16]. An outline Monitoring and Evaluation Plan was developed to report on how funding will be utilised for the CtoC project and how its expenditure represents value for money to the taxpayer and how spending aligns with the GCP's main objectives [CD2-20.04, page 57, Table 19]. The DfT's guidance 'Monitoring and Evaluation Framework for Local Authority Major Schemes' forms the basis of the monitoring strategy alongside the GCP's Assurance Framework [CD2-20.04, page 52, 13].

2.4 Independent Audit

- 2.4.1 In 2021, an independent review of the OBC was carried out by Amey, 'Cambourne to Cambridge Better Public Transport Project - Independent Audit of Key Assumptions and Constraints' [CD8-27]. The scope of the Audit was to review the assumptions and constraints that underpinned the analysis that led to the selection of the preferred route and the elimination of alternative options for the Cambourne to Cambridge Better Public Transport Project. The objective was to test the robustness of those assumptions and constraints and determine whether *"they remain appropriate in the context of the current strategic frameworks, developments relating to Cambridgeshire Autonomous Metro (CAM) network and the East West Rail plans"* [CD8-27, page 11, 1].
- 2.4.2 The Audit [CD8-27, page 70, 7.1] found that strategies and objectives underpinning the CtoC scheme continued to be valid and were based on the evidence of Greater Cambridge growing rapidly and consequently Cambridge's transport infrastructure being

under pressure with high levels of congestion on the key corridors into and out of the city. The Audit confirmed the importance of the A428/A1303 corridor for the area's growth and justification for the Scheme based on it linking housing and employment growth areas.

- 2.4.3 Regarding East West Rail (EWR), the Audit noted that EWR does not provide an alternative to travel along the corridor to West Cambridge and the city centre, with the two schemes serving different travel markets. Therefore, addressing the transport and housing constraints that underpin the scheme remained valid and CtoC remained the only means of increasing capacity on the A428/A1303 corridor and addressing the public transport needs of the growing population [CD8-27, page 72, **section 7.1.5**].
- 2.4.4 The Audit reported [CD8-27, page 73, **section 7.2.2**] that the Options Development and appraisal broadly followed HMT and DfT guidance, with GCP amending some features of the scheme in response to stakeholder representations. It was recognised that with the demise of CAM, it should not be taken into consideration for the further development of the scheme.
- 2.4.5 The Audit stated [CD8-27, page 75, **section 7.3**] that the preferred option alignment may be changed following the outcomes of the Environmental Impact Assessment and mitigation measures included (which is reflected in the route alignment approved by the Executive Board in September 2022). Alternative route options which had been put forward by opponents of the preferred route were reviewed with considerations made of deliverability, local impacts and strategic goals.
- 2.4.6 The conclusions of the Audit include [CD8-27, page 76, Audit Conclusion]:
- The scheme is in alignment with national, regional and local policies on the economy and transport
 - The business case development followed the HMT Green Book and the DfT's TAG methodology
 - The appraisal was carried out in a robust manner
 - A number of alternative route options were put forward and were examined
 - The business case must balance local concerns with the wider strategic goals.
- 2.4.7 The findings and recommendations of the Audit informed the next stages of the development of the Scheme.

2.5 OBC Addendum

- 2.5.1 The OBC Addendum was produced in 2024 to reflect project developments since 2020 and provides a companion document to the OBC. The Addendum supports the development of the business case for the Scheme up to the Transport and Works Act Order submission. Areas of the OBC were identified for updating reflecting changes including updated TAG, policy priorities, developments in transport modelling and policy context, and updated Scheme costs and funding.

STRATEGIC CASE ADDENDUM

- 2.5.2 The Strategic Case Addendum [CD1-21.01] focuses on a review and update of the alignment of local, regional and national policy priorities. The Strategic Case Addendum captures the development of the proposed scheme design and provides an update on other schemes and developments related to the CtoC scheme.
- 2.5.3 The Strategic Case Addendum introduces the framework for the Spending Objective Analysis Statement [CD1-21.01, page 40, Table 6-1], which is presented alongside the Value for Money Statement in the Economic Case Addendum.
- 2.5.4 The Strategic Case Addendum shows that CtoC will contribute to the delivery of the latest local strategic policy priorities for Cambridge, which are included in [CD1-21.01, page 15, 3.1]:
- (a) The Case for Change for Cambridge, produced by the Department for Levelling Up, Housing and Communities, outlines the economic rationale for the growth of Cambridge and its potential to enhance its position as Europe's science capital including improvements to transport in Greater Cambridge.
 - (b) The Greater Cambridge Local Plan First Proposals is a joint local plan for Cambridge City Council and South Cambridgeshire District Council. The Local Plan will ensure a consistent approach to planning and construction across both areas up to 2041. The consultation stage on the First Proposals has been completed. The First Proposals include the mixed-use development at the Cambourne West site of 2,350 homes and 3,500 homes at the Bourn Airfield site.
 - (c) The **Local Transport and Connectivity Plan (LTCP)** is the Combined Authority's long-term strategy to improve transport in Cambridgeshire and Peterborough. The LTCP aims to address major transport issues such as climate change, pollution, inequality, and public health. It aims to support growth in jobs, the economy, and housing growth while also protecting and improving the environment.

- (d) The **Cambridgeshire's Active Travel Strategy** provides a comprehensive set of policies that will enable quality provision of active travel infrastructure and initiatives in Cambridgeshire to contribute to the County Council's target to achieve net zero carbon by 2045.
- (e) CCC declared a Climate and Environment Emergency in May 2019, setting the Council on a pathway to securing a sustainable future for it and its residents.

2.5.5 Consistent with these policy priorities the Scheme will deliver a sustainable transport network which enhances connectivity between Cambourne and Cambridge, contributing towards the provision of an integrated public transport network, and will support the delivery of new homes planned in the A428/A1303 corridor. CtoC will also enable and encourage more people to travel by active travel modes as the Scheme includes an emergency and maintenance access track offering improved infrastructure for cyclists. The Scheme is aligned with the ambition of the County Council to be net zero by 2045.

2.5.6 Mr Lewis' Proof of Evidence [CD26-01-APP-W10-1] describes in more detail these planning policies and the contribution of CtoC to achieving their aims.

2.5.7 In the summer of 2022, the fourth public consultation was undertaken on the CtoC proposals as part of the Environmental Impact Assessment [CD1-06.12]. The focus was how to best manage and mitigate the impacts of the Scheme. Informed by the feedback from the public consultation the GCP Executive Board decided on the preferred route at the Executive Board meeting on 22 September 2022.

ECONOMIC CASE ADDENDUM

2.5.8 The Economic Case Addendum [CD1-21.02] focuses on a review of the Scheme Value for Money case. As a result of an update to the modelling suite, the latest modelling inputs were used. Scheme costs were also updated based on the latest Scheme design and a Quantified Cost Risk Assessment (QCRA). The Addendum also incorporated in the Value for Money assessment the latest available DfT appraisal guidance.

2.5.9 The Value for Money Statement presented in the Economic Case Addendum [CD1-21.02, page 36, 4.4.93] indicates that the Scheme is expected to continue to deliver Medium Value for Money. The assessment of Value for Money uses switching value analysis to consider the effect of incorporating the dependent development benefits in the comparison of benefits against costs. The switching value analysis calculates how much additional benefit is required to move the Value for Money category, e.g. from Low to Medium, and what percentage this is of the total estimated dependent development benefit.

- 2.5.10 While some of the planned housing can be delivered before transport constraints limit development, 3,850 new homes in the corridor at Cambourne West and Bourn Airfield sites are dependent on the Scheme being in place. As shown in Table 4-21 [CD1-21.02, page 29], with 74% of these dependent development benefits realised, the (core scenario) Scheme would be categorised as Medium Value for Money. If an additional 2,000 or so homes planned for Cambourne are delivered [CD6-04, page 41], the Scheme would provide even more economic benefits. High Value for Money would be achieved based on realising 68% of these estimated dependent development benefits (with 45% of them implying Medium Value for Money).
- 2.5.11 The £222.3m PV benefits from land value uplift resulting from the removal of transport constraints will result in a change in land use to more productive uses. These land value uplift benefits represent the net private benefit of the development which accrues to the landowner/developer after taking account of build costs and the current land value. They are offset to a small extent (£38.0m PV) by the negative impact of additional traffic on the network, generated by the new housing (Transport External Costs, TECs). There are also negligible monetised impacts from the loss of amenity (LAVs) and the health benefits of providing affordable housing. Overall, the value of the benefit from dependent development being unlocked by the Scheme is £184.2m PV [CD21.02, page 26, Table 4-17].
- 2.5.12 While the benefits from unlocking new housing generate the greatest level of benefits for the Scheme, there are a range of other economic, social and environmental benefits that inform the Value for Money assessment.
- 2.5.13 As identified in the OBC Economic Case, it is anticipated that there will be wider economic impacts on productivity and access to employment opportunities driven by the improved performance of the highway network (under the fixed land use scenario) due to mode shift from private car [CD21.02, page 17, Table 4-11]. These are estimated to amount to £3m PV.
- 2.5.14 The Scheme will also produce transport user benefits. These benefits include journey time savings for users of CtoC. There are also journey time benefits for road users because of mode shift from car to public transport reducing road congestion. Reduced road congestion also produces quantified savings in vehicle operating costs. When monetised in line with DfT guidance [CD8-25, page 4 Unit A1.3] these amount to £48.3m PV [CD21.02, page 14, Tables 4-5 and 4-6].
- 2.5.15 Given that the scheme will also provide facilities for cyclists and pedestrians, the DfT's Active Mode Appraisal Toolkit (AMAT) was used to quantify the walking and cycling demand and benefits estimating £21.3m PV in positive active travel impacts [CD21.02, page 15, Table 4-7].

- 2.5.16 The updated Scheme capital cost estimate was developed by WSP quantity surveyors [CD1-21-03, page 7, Table 3-1] and has been used for the updated Scheme economic appraisal. In February 2024, a QCRA was carried out which provided a P80 value for risk (31% of base cost). In line with TAG [CD8-25, page 4, Unit A1-2], the QCRA value was compared with the recommended levels of optimism bias. Given the characteristics of the proposed Scheme, namely optical guidance on a busway, the optimism bias levels for roads and rail (including guided buses on tracks) were deemed most appropriate for comparison.
- 2.5.17 At OBC stage, the TAG recommended optimism bias levels for road and rail are 23% and 33% respectively. As the QCRA reflects the Scheme specific risks and is within the range of the recommended optimism bias levels, it was applied for the appraisal.
- 2.5.18 Operating costs were assumed to remain the same as for the OBC, while maintenance and renewals costs were reviewed and updated for the Economic Case Addendum. Over the appraisal period the operating, maintenance and renewals costs were estimated to amount to £55.7m PV and altogether the Present Value of Costs for the economic appraisal is £138m PV [CD1-21.02, page 16, Table 4-9].
- 2.5.19 Recognising uncertainty around the appraisal assumptions and inputs, sensitivity analysis was undertaken applying changes to the costs and benefits [CD1-21.02, page 18, Table 4-13]. This sensitivity analysis demonstrated the robustness of the Value for Money assessment with the Initial and Adjusted BCRs not significantly changing and the Scheme expected to remain Medium Value for Money when indicative benefits are included.
- 2.5.20 Further sensitivity tests were undertaken on the value of dependent development benefits [CD1-21.02, page 29, Table 4-22] and the effect of COVID-19 on transport demand and benefits [CD9-25]. As documented in [CD32-9], while it is recognised that there are uncertainties over future traffic growth and levels of housing in the corridor, the results of the Value for Money assessment, undertaken in line with DfT guidance [CD8-32], demonstrate that these uncertainties are not anticipated to detrimentally impact the assessment of the Scheme being at least Medium Value for Money.

FINANCIAL CASE ADDENDUM

- 2.5.21 The Financial Case Addendum [CD1-21.03] reports the Capital cost estimates, funding arrangements and accounting implications as of April 2024.
- 2.5.22 The preferred option scheme costs were updated for the Addendum following a review of the latest scheme design which included an optical guided busway specification (August 2022) and delivery plan. The previous cost estimate had assumed physical guidance.

2.5.23 The updated scheme cost estimate is £192.3m [CD1-21.03, page 7, Table 3-1], including inflation based upon the updated scheme programme of a construction start of 1Q2026 with completion scheduled for 4Q2027. An allowance of 3% inflation contingency per annum is included.

2.5.24 The operating cost estimates were retained from the OBC with the lifecycle costs revised following a review, which produced an estimate over the 60-year appraisal period of £7.7m (2022 prices) [CD1-21.03, page 8, 3.2.4].

2.5.25 The Scheme will be funded through the Greater Cambridge City Deal, along with third party Section 106 contributions [CD1-21.03, page 8, 3.3]. GCP has allocated sufficient funds from the City Deal to meet the balance of the remaining anticipated costs of the CtoC scheme following the receipt of developer contributions. These contributions are anticipated to amount to £37.7m. They include:

- Cambourne West: Section 106 funding of £8.7m secured plus direct delivery of the Broadway Link (£400,000) and the internal route within the site
- Bourn Airfield: Planning permission has been granted and a £20m Section 106 agreement is in place, plus direct delivery of the internal route within the site
- West Cambridge: Planning permission has been granted and a £9m Section 106 agreement is in place

2.5.26 The allocation of City Deal funds to the GCP's overall programme is regularly monitored by the GCP Executive Board to ensure that as projects progress to FBC the required funds are in place for each approved investment.

2.5.27 Based on the OBC showing both the Scheme's Value for Money and alignment with strategic priorities, the GCP is anticipated to approve the funding allocated for the Scheme, as set out in Mr Baker's Proof of Evidence [CD26-01-APP-W1-1]. The Scheme is therefore considered affordable based on City Deal funding and Section 106 funding.

MANAGEMENT CASE ADDENDUM

2.5.28 The Management Case [CD1-21.04] was updated including an update of project dependencies and the project plan. A risk management update was also provided for project risks.

COMMERCIAL CASE

2.5.29 No updates were made to the OBC Commercial Case.

2.6 Value for Money Framework (May 2025)

- 2.6.1 The May 2025 framework [CD8-32] sets out an ‘indicative’ BCR metric, which reflects a change from the DfT’s guidance on value for money at the time of the analyses presented in the Economic Cases of the OBC [CD1-20.02] and OBC Addendum [CD1-21.02]. It is intended to be “*a means of improving the visibility and transparency of wider economic impacts in the value for money assessment*” [CD8-32, page 4, 1.1.4].
- 2.6.2 The BCR metric derived from monetised impacts informs the Value for Money assessment. As described in DfT’s Value for Money Framework [CD8-32, page 17, 4.3.3], three types of monetised impact are recognised: established, evolving and indicative. These impacts are presented in three different BCR metrics, namely: initial, adjusted and indicative. These metrics are cumulative with each one including all the impacts from the previous metric.
- 2.6.3 The adjusted BCR metric is used to inform the provisional Value for Money category [CD8-32, page 20, 4.3.11]. Where indicative impacts have been estimated, as they have for the dependent development impacts for the Scheme, they are included in the indicative BCR metric and inform the final stage of the Value for Money assessment [CD8-32, page 20, 4.3.13].
- 2.6.4 At the time of the OBC and OBC Addendum the guidance did not include producing an indicative BCR. Instead switching value analysis was applied for informing the final assessment of the Value for Money category [CD1-21.02, page 29, Tables 4-21 and 4-22].
- 2.6.5 The inclusion of the dependent development benefits results in an indicative BCR metric of 1.8:1 [CD9-32, page 4, Table 4], which implies Medium Value for Money [CD8-32, page 24, Table 5.1].
- 2.6.6 The BCR metrics for the sensitivity tests range between 1.7:1 and 2.7:1 [CD9-32, page 9, 29] implying Medium Value for Money for the Scheme, with the potential for High Value for Money should the proposed housing levels identified in the Emerging Local Plan [CD6-04] be delivered.

3. MAIN ISSUES FOR THE INSPECTOR RELEVANT TO MY EVIDENCE

3.1 Relevant **Matters**

- 3.1.1 **Matter 3:** The main alternative options considered by CCC and the reasons for choosing the preferred option set out in the Order.
 - a) The rationale for the preferred option and the alternatives considered.
 - b) The cost of the scheme and overall benefits
- 3.1.2 **Matter 6:** Having regard to the criteria for justifying compulsory purchase powers in paragraphs 12 to 15 of the Ministry of Housing, Communities & Local Government

'Guidance on the Compulsory Purchase Process' published in October 2024 and updated in January 2025:

- c) Whether there are likely to be any impediments to CCC implementing the scheme, including the availability of funding

3.2 Rationale for the Preferred Option (Matter 3)

- 3.2.1 The rationale for the preferred option is presented in the OBC and OBC Addendum, consistent with HMT and DfT guidance. Through the five dimensions of the 5-Case Model the case for the Scheme is made, including the alternatives considered and the cost and overall benefits of the preferred option.
- 3.2.2 The five dimensions demonstrate the Scheme's strategic fit, value for money, affordability, commercial viability and deliverability. Underpinning the strategic and value for money cases are the transport, economic, social and environmental benefits. The realisation of these benefits will ensure the Scheme achieves its three principal objectives and value for money.

SCHEME COSTS

- 3.2.3 The Scheme has been developed and designed to deliver the objectives established, a wide range of benefits and value for money. As described previously (2.5.21-2.5.24) estimates have been produced for the capital and whole life costs of the Scheme. Table 3.1 presents a breakdown of the £192.3m (nominal) capital cost estimate to implement the Scheme.

Table 3.1. Preferred Option Scheme Costs (nominal)

Item	Cost £m
Base Direct / Indirect Construction Costs	97.88
Base In-Direct Non-Construction Costs	24.66
Risk/Contingency	37.94
<i>Total</i>	<i>160.48</i>
Inflation forecast	13.32
Inflation risk @3%	11.01
Land take cost	7.47
Total	192.29

Note: Costs rounded to 2 decimal places

- 3.2.4 Consistent with DfT guidance [CD8-25, page 4, Unit 1-2] and to enable comparison with the monetised benefits described below, the costs were discounted and rebased to produce 2010 Present Values in 2010 prices. This conversion results in Scheme capital

costs of £82.3m PV. Altogether the Present Value of Costs (including whole-life costs) for the economic appraisal is £138m PV [CD1-21.02, page 16, Table 4-9].

TRANSPORT BENEFITS

- 3.2.5 The Scheme will deliver a high-quality, reliable public transport service connecting communities along the corridor together, with key employment sites and central Cambridge. The Scheme will directly address identified transport constraints on growth.
- 3.2.6 The Scheme will provide new bus service connectivity in the A428/A1303 corridor between Cambourne and central Cambridge, providing an assumed level of services to the following destinations:
- Cambourne to Cambridge city centre express bus service of 6 buses per hour
 - Cambourne to Biomedical Campus service of 2 buses per hour
 - Scotland Farm (A428 Park and Ride site) to Biomedical Campus service of 2 buses per hour in the peak period.
- 3.2.7 In addition, the West Cambridge interchange will offer the Scheme passengers connections to other bus services for travel to Cambridge North Station and the Cambridge Science Park.
- 3.2.8 The new Scheme bus services will provide a reduction in bus journey times and increase bus patronage as set out in the OBC Economic Addendum [CD1-21.02, page 13, 4.3]. The Scheme transport benefits are as follows:
- The Scheme will provide commuters travelling the full length of the busway from Cambourne West to the city centre (Grange Road) with an average end-to-end journey time in the morning peak of 17 minutes compared with 33 minutes without the Scheme
 - The Scheme will therefore provide a reduction of 50% in journey time for Cambourne West commuters travelling to Cambridge city centre during the morning peak
 - Over 10,000 passengers a day are forecast to use the Scheme, of which nearly 9,000 will be making new bus trips
 - The Scheme will increase bus travel mode share from 4% to 6% east of Scotland Farm Park and Ride site and encourage active travel use resulting in decongestion of the road network in the corridor

- Bus service reliability will be significantly improved as the segregated busway will largely separate the Scheme bus services from general road traffic congestion and delays.

3.2.9 Transport benefits will also accrue through the wider integration of the Scheme as part of the high-quality public transport (HQPT) connections for Cambridge, and in the longer term with Stage 3 of EWR, (although EWR Stage 3 is not yet defined or programmed). This HQPT network will be an enabler of economic growth by unlocking housing development and improving productivity through enhanced transport connectivity.

3.2.10 The Scheme will additionally be attractive for both existing and new active mode users as the emergency and maintenance access track which will run for most of the length of the guided busway will provide full access for pedestrians and cyclists. This active mode high-quality segregated facility is forecast to increase the number of cyclists on sections of the Scheme route resulting in physical activity (health) benefits [CD1-21.02, page 15, Table 4-7].

3.2.11 The value for the busway's transport benefits is estimated to be around £49m PV as a result of journey time savings for users of the Scheme and the road decongestion benefits due to the removal of vehicles on the road resulting from mode switch to the Scheme [CD1-21.02, pages 16 and 17, Tables 4-5 to 4-7].

ECONOMIC BENEFITS

3.2.12 The Scheme will support the continued economic growth of Cambridge by unlocking land for housing, improving connectivity between residential and employment areas and reducing congestion and making better use of limited road space by prioritising sustainable transport.

3.2.13 The Scheme will unlock the delivery of a total of 850 new homes at Cambourne West and 3,000 new homes at Bourn Airfield, a total of 3,850 new homes dependent on the delivery of CtoC. As well as being a significant social benefit, as explained below (3.2.17), this will generate a land value uplift from the change in land use and associated more productive use, as described in 2.5.10 and 2.5.11. The land value uplift is worth over £222m PV across both sites.

3.2.14 There is potentially a further land value uplift from the Emerging Local Plan [CD6-04, page 22, Figure 4] proposal for an additional 1,950 new homes in the Cambourne area of around £116m PV (based on the sensitivity test of 2,000 additional homes). This would result in £338m PV of total land value uplift [CD1-21.02, page 27, Table 4-18].

3.2.15 The Scheme will also support the local economy as follows:

- Productivity growth through agglomeration benefits bringing people and jobs closer together

- Better access to skilled employment opportunities across Cambridge, including the Biomedical Campus, will attract economically inactive people back to the workforce
- Businesses will be able to increase investment locally due to reduced business travel costs which will increase productivity.

3.2.16 These impacts result from the transport improvements and will provide nearly £3m PV of benefits for the national economy [CD21.02, page 17, Table 4-11]. Assessment of the impacts on the regional Greater Cambridge economy suggests around £100m per year of Gross Value Added (GVA) as a result of the Scheme's effect on new employment and the associated GVA [CD1-20.02, page 39, 7.3].

SOCIAL BENEFITS

3.2.17 The Scheme will unlock the delivery of a total of 2,350 new homes at Cambourne West and 3,500 new homes at Bourn Airfield. As part of the planning approvals, social/ affordable housing will comprise 30% of the new homes at Cambourne West and 40% of the new homes at Bourn Airfield. The Scheme will enable all the planned new homes to be fully delivered including the social/ affordable housing. The Emerging Local Plan [CD6-04, page 41] identifies around an additional 2,000 new homes for an expanded Cambourne which are likely to include further social/ affordable housing. As noted for Policy S/CB: Cambourne [CD6-04, page 100, Why is this policy needed?] EWR and CtoC provide *"an opportunity to consider how further development could make the most of these connections, but also make the overall Cambourne area a more sustainable place."* As part of this reliance on private car travel should be reduced.

3.2.18 The attractiveness of the busway and active travel facilities will benefit existing cyclists and encourage modal shift from car due to the improved journey ambience resulting in increased physical activity and improved health of residents. These scheme journey ambience improvements will provide nearly £21m PV of monetised social benefits [CD1-21.02, page 15, Table 4-7].

3.2.19 The Scheme will also provide better access to public transport and hence access to services and activities. Public transport accessibility will be improved, particularly for residents of the wider A428/A1303 transport corridor with access to a car, who with the Scotland Farm Park and Ride facility, will have good access to the Scheme bus services.

3.2.20 Over 40,000 existing households will have good accessibility to the Scheme [CD1-21.02, page 33, 4.4.77]. Although all these residents may not choose to use the Scheme on a regular basis, they will value having access to the Scheme for times when they may need it, for example when their car is unavailable. The number of households that will benefit from access to the Scheme will increase with the developments at Cambourne West, Bourn Airfield and Hardwick, which will total more than 6,000 new homes.

- 3.2.21 The busway will provide an enhanced journey experience as users of the Scheme will benefit from the new facilities and an improved travelling environment including the facility to interchange seamlessly at the Scotland Farm Park and Ride. By encouraging mode shift the Park and Ride facility will reduce traffic congestion into central Cambridge and improve wellbeing as previous car users will avoid the stress of searching for limited car parking space in central Cambridge.
- 3.2.22 The assessment of Scheme social impacts shows that there are positive impacts for the social groups considered. These include to the north of the centre of Cambourne where there is an area of localised deprivation [CD1-20.17, page 41, Appendix A], which with the Scheme implemented will have improved access to jobs and amenities. At the eastern end of the corridor, the Scheme will provide social benefits by providing improved access to quality public transport for a largely younger population (aged 16-25 years old), with limited access to a car [CD1-20.17, page 43, Appendix C and page 47, Appendix G].

ENVIRONMENTAL BENEFITS

- 3.2.23 There will be environmental benefits [CD1-09, page 13, **section 14**] for air pollution during operation (from NO₂ and particulates) as a result of the introduction of low and zero emission public transport services and mode shift from private cars to sustainable transport. This will benefit local air quality in both the corridor and in Cambridge city centre with three times as many receptors experiencing a decrease in NO₂ and particulates than an increase, though neither impact will be significant [CD1-10.1, pages 98, 7.4.3].
- 3.2.24 Mode shift is also estimated to reduce Greenhouse Gas emissions by around 36,000 tonnes of CO₂ equivalent (denoted as tCO₂e). When offset by the infrastructure carbon impact and changes in vegetation, the overall benefit is a net carbon reduction of around 5,000 tCO₂e [CD1-10.1, page 128, 10.3.4].
- 3.2.25 East of the M11, the City Wildlife site is designated as open space, however it is of very low quality currently. While some of it will be displaced by the Scheme overbridge, replacement open space will be provided on land west of the M11, which will be larger and of superior quality, representing a beneficial impact [CD1-10.1, page 105, 7.6.8].
- 3.2.26 As part of the delivery of the Scheme there will be biodiversity net gain (BNG) [CD1- 09, page 16, **section 20**]. This will be focused on the creation of hedgerow and woodland habitats as part of the Scheme, as well as offsite habitat creation, including new mixed deciduous woodland, traditional orchard and hedgerows. At a minimum there will be 10% BNG, with the aim of achieving 20%.
- 3.2.27 More detail on Scheme environmental benefits is provided in the Proof of Evidence of Mr Saunders [CD26-01-APP-W3-1].

BENEFITS REALISATION AND VALUE FOR MONEY

3.2.28 The realisation of the described transport, economic, social and environmental benefits will ensure the Scheme achieves its three principal objectives which are themselves aligned with the overarching goals of the City Deal. The objectives are [CD1-04, page 3, **section 4.1**]:

- Achieve improved accessibility to support the economic growth of the Greater Cambridge region
- Deliver a sustainable transport network/ system that connects areas between Cambourne and Cambridge along the A428/A1303 transport corridor
- Contribute to enhanced quality of life by relieving congestion and improving air quality within the surrounding areas along the A428/A1303 corridor and within Cambridge City.

3.2.29 As identified in the Spending Objective Analysis [CD1-21.02, page 39, Table 4-24] the implementation of the Scheme will respectively:

- Support productivity growth through agglomeration economies and a change of land use, notably where housing development is dependent on the Scheme. Also, the busway will improve labour market access. Monetised benefits of £189m PV.
- Reduce bus journey times between Cambourne West to Cambridge and provide interchange with the wider public transport network. Monetised benefits of £30m PV.
- Reduce peak time congestion in the A428/A1303 corridor and within Cambridge City by providing a high-quality, reliable public transport system and active travel route. There will be air quality benefits in most of the corridor due to reduced air pollution (from NO₂ and particulates) due to the introduction of low and zero emission public transport services and mode shift from private cars to sustainable transport with health benefits for active mode users. Monetised benefits of £51m PV.

3.2.30 Meeting the objectives for the Scheme and contributing to the delivery of the latest local strategic policy priorities for Cambridge (2.5.4-2.5.5) inform the holistic consideration of impacts for the Value for Money assessment for the Scheme.

3.2.31 Since the production of the OBC and OBC Addendum the DfT has issued revised guidance for presenting the results of the Value for Money assessment. Based on this, the results of the analysis of benefits and costs presented in the Economic Case of the OBC Addendum [CD1-21.02, pages 16-17, Tables 4-10 and 4-11 and page 26, Table 4-

17] have been used to produce updated BCRs, which include the indicative impacts of the dependent development at Cambourne West and Bourn Airfield.

- 3.2.32 These indicative BCR metrics of 1.8:1 for the core option and between 1.7:1 to 2.7:1 for a range of sensitivity tests imply Medium Value for Money for the Scheme [CD9-32, page 9, 29], with the potential for High Value for Money should the proposed housing levels identified in the Emerging Local Plan [CD6-04] be delivered. Additional benefits that will result from the developments in the Cambourne to Cambridge corridor include employment opportunities, which are not included in the BCR.
- 3.2.33 While it is recognised that there are uncertainties over future traffic growth and levels of housing in the corridor, the results of the Value for Money assessment, undertaken in line with DfT guidance [CD8-32], demonstrate that these uncertainties are not anticipated to detrimentally impact the assessment of the Scheme being at least Medium Value for Money.
- 3.2.34 With the potential for a full build-out of up to 10,000 new homes being delivered in the corridor, as assessed in the Greater Cambridge Local Plan Transport Evidence Report Preferred Option Update 2021 [CD6-05, Page 189, Table 37], in addition to the core assumption of 5,850 homes, as well as additional new housing further along the corridor at Tempsford, the indicative benefits and BCR metric could be even higher. Housing over and above the levels analysed however is dependent both on CtoC and an EWR station at Cambourne and so not all the development unlocked would be considered dependent solely on CtoC.
- 3.2.35 In selecting the preferred option a systematic optioneering process was followed, as described in 2.3.7-2.3.15, which included the consideration of alignments on-road and off-road and different locations for the Park and Ride site. As described in 2.5.7 the proposed alignment was identified as the preferred option and approved by the GCP Executive Board in September 2022. Further details on the rationale for the preferred option and alternatives considered are provided in the Proof of Evidence of Mr Baker [CD26-01-APP-W1-1].

3.3 Funding (**Matter 6**)

- 3.3.1 Funding is not deemed to be an impediment to CCC implementing the Scheme. As described in 2.5.25-2.5.26 funding for CtoC will be primarily through the City Deal, which aims to enable Greater Cambridge to promote economic growth and development. Funding will also be forthcoming from local developer contributions through the planning process. These contributions are anticipated to amount to £37.7m, including from the developers at Cambourne West, Bourn Airfield and Cambridge West.
- 3.3.2 The currently identified funding meets the estimated cost of the Scheme, demonstrating Scheme affordability. The availability of funding is addressed by Mr Baker in his Proof of Evidence [CD26-01-APP-W1-1].

4. REPRESENTATIONS MADE RELEVANT TO MY EVIDENCE

4.1 Introduction

4.1.1 This section addresses the formal objections raised to the Cambourne to Cambridge Transport and Works Act Order insofar as they relate to Matters 3 and 6 in the Statement of Matters.

4.1.2 I have considered the representations made which are relevant to my evidence and provide my responses to the Third Party Statements of Case.

4.2 Representations made

4.2.1 Representations were made by the following organisations and individuals with respect to the subject matter of my Proof of Evidence:

- Cambridge Busways Action Group (OBJ 143)
- Cambridge Past Present and Future (OBJ 251)
- CPRE Cambridgeshire and Peterborough (OBJ 308)
- Allan Thomas Treacy (OBJ 50)
- Coton Orchard Limited (OBJ 52)
- John Sadler (OBJ 102)
- Peter Singleton (OBJ 123)
- Federation of Cambridge Residents' Association (OBJ 309)

4.2.2 Each representation is addressed in turn providing a summary of key points, the main issues raised and my responses. Where the key points have been addressed by a previous response I provide a reference to the earlier response.

4.3 Summary of points made and impact of the scheme on Cambridge Busways Action Group (CBAG)

4.3.1 The main issues raised –

- An alternative lower cost option proposed by CPPF on Madingley Road would reduce the scheme's impact on the environment and offer a similar quality of service to the Scheme
- Perception that the scheme does not deliver value for money
- Impact of EWR has not been considered
- Scope of modelling - demand forecasting does not reflect change in travel behaviour post COVID-19 pandemic

My Responses

- 4.3.2 *An alternative, lower cost option.* The CBAG representation describes an alternative route proposal from Madingley Mulch towards the city centre, a route proposed by CPPF, using an on-road alignment on the A1303 Madingley Road with the provision of a segregated inbound bus lane. It is argued that this alternative would be a more cost-effective proposal with less environmental impact than the Scheme and would address transport constraints in west Cambridge.
- 4.3.3 The option development process for the Scheme considered various on-road alignments which included the shortlisting of an on-road alternative similar to the CPPF proposal, as described in 2.3.7 to 2.3.15. Scheme on-road and off-road alignment options were assessed using a Multi-Criteria framework and Value for Money assessment in line with DfT's guidance 'The Transport Appraisal Process' [CD8-24]. The assessment showed that only the preferred Scheme off-road alignment would deliver the WEIs to support economic growth [CD1-20.05, page 108, Figure 51]. A detailed explanation of the Scheme option development process and selection of the Scheme preferred option is provided in the Proof of Evidence of Mr Baker [CD26-01-APP-W1-1].
- 4.3.4 *Scheme does not deliver value for money.* For the reasons given above in my evidence (section 2.6), the implied Value for Money assessment is Medium Value for Money, and potentially High Value for Money. The Value for Money assessment for the Cambourne to Cambridge busway has been undertaken in line with the DfT's Value for Money Framework [CD8-32]. As set out in the framework, it takes an "*holistic approach to value for money, ensuring the assessment takes the full range of impacts of a proposal into consideration – not just monetised benefit cost ratios.*" [CD8-32, page 4, 1.1.3]. The provisional Value for Money category is derived from the BCR metric for established and evolving monetised impacts. The provisional Value for Money category for the Cambourne to Cambridge busway is Poor based upon the BCR metric of 0.5:1. However, this metric captures the Scheme transport benefits only. The Scheme's main role will be to support the continued economic growth of Cambridge by unlocking land for housing, improving connectivity between residential and employment areas and reducing congestion and making better use of limited road space by prioritising sustainable transport.
- 4.3.5 For the assessment of the final Value for Money category for the Scheme, indicative monetised impacts are included which capture the strategic economic dependent development benefits arising from the Scheme supporting the Bourn Airfield and West Cambourne developments [CD9-32]. Application of the May 2025 guidance produces an indicative BCR for CtoC of 1.8:1 which reflects the valuable role CtoC plays in unlocking and supporting future housing and economic growth. The final Value for Money category has the potential to be considered High Value for Money if an additional 2,000 homes are delivered at Cambourne [CD9-32, page 9, Table 9].

- 4.3.6 *Impact of EWR not considered.* The addendums for the OBC reflect the position for EWR when the work was undertaken. Given the absence of a scheme specification, timescales for delivery and committed funding, EWR was not considered near certain or more than likely, and in line with business case guidance [CD8-21, page 51, Table A2] was not included in the core scenario. This position has not changed. EWR to Cambridge remains uncertain as it is not funded or consented and has not reached Statutory Consultation.
- 4.3.7 As stated in the Strategic Case Addendum [CD1-21.01, page 43, 7.2.12], and noted in the Independent Audit (2.4.3), CtoC and EWR are anticipated to complement each other as CtoC will serve locations along the corridor and connect to the city from the west, whilst EWR will link to Cambridge South, the Biomedical Campus and Cambridge station. As described previously (2.5.19-2.5.20), sensitivity testing was undertaken for upside and downside impacts on the level of Scheme benefits that could result from higher or lower demand growth. These tests confirmed the complementarity of the CtoC and EWR schemes as the upside and downside impact assumptions do not alter the final Value for Money category for the Scheme.
- 4.3.8 *Scope of Modelling: Dealing with uncertainty (post-COVID).* The COVID-19 pandemic caused a change in trip making, creating uncertainty over future levels of transport demand in the Cambourne to Cambridge corridor. As identified in 2.5.20, to test the materiality of this uncertainty on the Value for Money case for the Scheme a sensitivity test was undertaken and documented [CD9-25] based on the DfT's Uncertainty Toolkit [CD8-22].
- 4.3.9 As described in [CD9-32], when monetised, the COVID-19 sensitivity test gives a lower value for conventional benefits (around 37% of the OBC core scenario), as would be expected due to the reduced level of traffic and lower traffic growth. The resulting indicative BCR for the COVID-19 sensitivity test is 1.7:1, which implies Medium Value for Money.

Conclusions on Representations by CBAG

- 4.3.10 It is my professional opinion that an established Multi-Criteria framework and Value for Money assessment, in line with DfT guidance, was used to assess alternative route options, including on-road and off-road. This assessment showed that only the preferred Scheme off-road alignment would deliver the outcomes to support economic growth.
- 4.3.11 It is my professional opinion that based on the DfT Value for Money Framework the Scheme delivers Medium Value for Money due to the valuable role CtoC plays in unlocking and supporting future housing at Cambourne West and Bourn Airfield and economic growth. The scheme would deliver High Value for Money if an additional 2,000 homes are delivered at Cambourne.

- 4.3.12 It is my professional opinion that in the absence of a scheme specification, timescales for delivery and committed funding, the effect of EWR on CtoC demand should not be considered in the core scenario, consistent with DfT's guidance. The position with respect to EWR has not materially changed since the appraisal for the OBC Addendum.
- 4.3.13 It is my professional opinion that post-COVID pandemic travel behaviour changes have been appropriately considered by applying DfT guidance. A sensitivity test has been undertaken in line with the DfT's Uncertainty Toolkit and the resulting indicative BCR implies that the Scheme remains Medium Value for Money, reflecting the Scheme's main role being to support the continued economic growth of Cambridge.
- 4.4 Summary of points made and impact of the scheme on Cambridge Past Present Future (CPPF) and Coton Parish Council (CPC)
- 4.4.1 The main issues raised –
- Scope of modelling - demand forecasting does not reflect change in travel behaviour post COVID-19 pandemic and hence flawed assessment of travel benefits and modal switch impacts
 - Impact of EWR not considered
 - Scheme objectives and benefits – the congestion objective will not be achieved by the Scheme
 - An alternative lower cost option proposed by CPPF and CPC on Madingley Road would reduce the scheme impact on the environment and offer a similar quality of service to the Scheme
 - Perception that the scheme does not deliver value for money

My Responses

- 4.4.2 *Scope of Modelling: Dealing with uncertainty (post-COVID) and hence flawed assessment of travel benefits and modal switch impacts.* As discussed above in my response to the representation from CBAG (4.3.8-4.3.9), the impact of COVID was considered in line with DfT guidance and the resulting indicative BCR implies that the Scheme remains Medium Value for Money.
- 4.4.3 *Impact of EWR not considered.* As discussed above in my response to the representation from CBAG (4.3.6-4.3.7), EWR was not considered in the core scenario as EWR did not meet the DfT's guidance for consideration in the economic appraisal.
- 4.4.4 *Scheme objectives and benefits – the congestion objective will not be achieved by the Scheme.* The results of the economic appraisal presented in the Economic Case Addendum estimate journey benefits for highway users of £15.7m PV [CD1-21.02, page

14, Table 4-5]. This indicates that the scheme objective related to congestion will be realised.

4.4.5 *An alternative lower cost option proposed by CPPF on Madingley Road would reduce the scheme impact on the environment and offer a similar quality of service to the Scheme.* As discussed above in my response to the representation from CBAG (4.3.2-4.3.3), an established Multi-Criteria framework and Value for Money assessment, in line with DfT guidance, was used to assess alternative route options.

4.4.6 *Perception that the scheme does not deliver value for money.* For the reasons I have given in my response to the representation from CBAG (4.3.4-4.3.5), the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.

Conclusions on Representations by Cambridge Past Present Future (CPPF) and Coton Parish Council (CPC)

4.4.7 It is my professional opinion for the reasons I have given in my response to the representation from CBAG that post-COVID pandemic travel behaviour changes have been appropriately considered in the CtoC business case by applying DfT Uncertainty Toolkit guidance.

4.4.8 It is my professional opinion for the reasons I have given in my response to the representation from CBAG that EWR did not meet the DfT's guidance for consideration in the economic appraisal of the core scenario.

4.4.9 It is my professional opinion that the business case for the CtoC scheme demonstrates that the anticipated impacts are aligned with the scheme objectives, including the congestion objective.

4.4.10 It is my professional opinion, as provided in my response to the representation from CBAG, that a Multi-Criteria framework and Value for Money assessment was used in line with DfT guidance to assess alternative route options, including on-road and off-road.

4.4.11 It is my professional opinion for the reasons I have given in my response to the representation from CBAG that the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.

4.5 Summary of points made and impact of the scheme on CPRE Cambridgeshire and Peterborough

4.5.1 The main issues raised –

- Perception that the Scheme does not deliver value for money
- An alternative lower cost option proposed by CPPF on Madingley Road

My Responses

4.5.2 *Perception that the scheme does not deliver value for money.* For the reasons I have given in my response to the representation from CBAG (4.3.4-4.3.5), the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.

4.5.3 *An alternative lower cost option proposed by CPPF on Madingley Road.* As discussed above in my response to the representation from CBAG (4.3.2-4.3.3), an established Multi-Criteria framework and Value for Money assessment, in line with DfT guidance, was used to assess alternative route options.

Conclusions on Representations by CPRE Cambridgeshire and Peterborough

4.5.4 It is my professional opinion for the reasons I have given in my response to the representation from CBAG that the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.

4.5.5 It is my professional opinion, as provided in my response to the representation from CBAG, that a Multi-Criteria framework and Value for Money assessment was used in line with DfT guidance to assess alternative route options, including on-road and off-road.

4.6 Summary of points made and impact of the scheme by Allan Thomas Treacy

4.6.1 The main issues raised –

- Scope of Modelling: Dealing with uncertainty (post-COVID) and hence flawed assessment of travel benefits and modal switch impacts
- Impact of EWR not considered.

My Responses

4.6.2 *Scope of Modelling: Dealing with uncertainty (post-COVID) and hence flawed assessment of travel benefits and modal switch impacts.* As discussed above in my response to the representation from CBAG (4.3.7-4.3.8), the impact of COVID was considered in line with DfT guidance.

4.6.3 *Impact of EWR not considered.* As discussed above in my response to the representation from CBAG (4.3.6) EWR was not considered in the core scenario as EWR did not meet the DfT's guidance for consideration in the economic appraisal.

Conclusions on Representations by Allan Thomas Treacy

4.6.4 It is my professional opinion for the reasons I have given in my response to the representation from CBAG that post-COVID pandemic travel behaviour changes have

been appropriately considered in the CtoC business case by applying DfT Uncertainty Toolkit guidance.

4.6.5 It is my professional opinion for the reasons I have given in my response to the representation from CBAG that EWR did not meet the DfT's guidance for consideration in the economic appraisal of the core scenario.

4.7 Summary of points made and impact of the scheme by Coton Orchard Limited

4.7.1 The main issues raised –

- Perception that the Scheme does not deliver value for money
- An alternative lower cost option proposed by CPPF on Madingley Road

My Responses

4.7.2 *Perception that the scheme does not deliver value for money.* For the reasons I have given in my response to the representation from CBAG (4.3.4-4.3.5), the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.

4.7.3 *An alternative lower cost option proposed by CPPF on Madingley Road.* As discussed above in my response to the representation from CBAG (4.3.2-4.3.3), an established Multi-Criteria framework and Value for Money assessment, in line with DfT guidance, was used to assess alternative route options.

Conclusions on Representations by Coton Orchard Limited

4.7.4 It is my professional opinion for the reasons I have given in my response to the representation from CBAG that the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.

4.7.5 It is my professional opinion, as provided in my response to the representation from CBAG, that a Multi-Criteria framework and Value for Money assessment was used in line with DfT guidance to assess alternative route options, including on-road and off-road.

4.8 Summary of points made and impact of the scheme by John Sadler

4.8.1 The main issues raised –

- Perception that the Scheme does not deliver value for money
- An alternative lower cost option proposed by CPPF on Madingley Road

My Responses

4.8.2 *Perception that the scheme does not deliver value for money.* For the reasons I have given in my response to the representation from CBAG (4.3.4-4.3.5), the Value for

Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.

- 4.8.3 *An alternative lower cost option proposed by CPPF on Madingley Road.* As discussed above in my response to the representation from CBAG (4.3.2-4.3.3), an established Multi-Criteria framework and Value for Money assessment, in line with DfT guidance, was used to assess alternative route options.

Conclusions on Representations by John Sadler

- 4.8.4 It is my professional opinion for the reasons I have given in my response to the representation from CBAG that the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.
- 4.8.5 It is my professional opinion, as provided in my response to the representation from CBAG, that a Multi-Criteria framework and Value for Money assessment was used in line with DfT guidance to assess alternative route options, including on-road and off-road.

4.9 Summary of points made and impact of the scheme by Peter Singleton

4.9.1 The main issues raised –

- Perception that the Scheme does not deliver value for money
- An alternative lower cost option proposed by CPPF on Madingley Road

My Responses

- 4.9.2 *Perception that the scheme does not deliver value for money.* For the reasons I have given in my response to the representation from CBAG (4.3.4-4.3.5), the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.
- 4.9.3 *An alternative lower cost option proposed by CPPF on Madingley Road.* As discussed above in my response to the representation from CBAG (4.3.2-4.3.3), an established Multi-Criteria framework and Value for Money assessment, in line with DfT guidance, was used to assess alternative route options.

Conclusions on Representations by Peter Singleton

- 4.9.4 It is my professional opinion for the reasons I have given in my response to the representation from CBAG that the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.

4.9.5 It is my professional opinion, as provided in my response to the representation from CBAG, that a Multi-Criteria framework and Value for Money assessment was used in line with DfT guidance to assess alternative route options, including on-road and off-road.

4.10 Summary of points made and impact of the scheme by **the Federation of Cambridge Residents' Association**

4.10.1 The main issues raised –

- Perception that the Scheme does not deliver value for money

My Response

4.10.2 *Perception that the scheme does not deliver value for money.* For the reasons I have given in my response to the representation from CBAG (4.3.4-4.3.5), the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.

Conclusion on Representations by the Federation of Cambridge Residents' Association

4.10.3 It is my professional opinion for the reasons I have given in my response to the representation from CBAG that the Value for Money assessment for the scheme is Medium Value for Money and potentially High Value for Money if the 2,000 new homes at Cambourne are considered.

5. CONCLUSIONS

5.1.1 Having considered the development of the OBC documentation (including the OBC Addendum) for the Scheme, I have concluded that, in my opinion:

- The development of the OBC documentation is consistent with HMT and DfT guidance on business cases and the analytical approaches for the appraisal of the scheme
- Consistent with guidance a range of options were considered including on-road and off-road alignments and locations for the Park and Ride site
- Following a structured Multi-Criteria assessment of the options the preferred option was identified based on fit with strategic priorities and value for money
- The preferred option for the scheme is assessed as Medium Value for Money
- The value for money of the preferred option remains robust under a range of scenarios including lower highway demand and benefits
- There is potential for the Scheme to achieve High Value for Money if the 2,000 new homes at Cambourne are considered.

6. STATEMENT OF TRUTH

The evidence which I have prepared and provided in this Proof of Evidence is true and is given in accordance with the guidance of my professional institution. I confirm that the opinions expressed are my true and professional opinions.