GREATER CAMBRIDGE PARTNERSHIP

Growing and sharing prosperity

Delivering our City Deal

GREATER CAMBRIDGE PARTNERSHIP JOINT ASSEMBLY

10:30 a.m.

Thursday 7th September 2023

Main Hall
Storey's Field Centre
Eddington Avenue
Cambridge
CB3 1AA

The meeting will be live streamed and can be accessed from the GCP YouTube Channel - Link

AGENDA

		PAGE NUMBER
	PART ONE	
1.	**Apologies for Absence**	(-)
2.	**Declaration of Interests**	(-)
3.	**Minutes**	(3-31)
4.	**Public Questions**	(32)
5.	**Petitions**	(-)
6.	**Making Connections Outline Business Case and Next Steps**	(33-383)
7.	**Greater Cambridge Partnership Future Investment Strategy 3**	(384-397)
	PART TWO – to commence no earlier than 2:00 p.m.	
8.	**Cambridge South-East Transport Scheme**	(398-407)
9.	**Better Public Transport – Waterbeach to Cambridge and Waterbeach Greenway**	(408-426)
10.	**Better Public Transport - Cambridge Eastern Access Project**	(427-438)
11.	**Quarterly Progress Report**	(439-517)
12.	**Date of Next Meeting**	

- 2:00 p.m. Thursday 23rd November 2023

MEMBERSHIP

The Joint Assembly comprises the following members:

Councillor Tim Bick (Chairperson)	-	Cambridge City Council
Councillor Katie Thornburrow (Vice Chairperson)	-	Cambridge City Council
Councillor Simon Smith	-	Cambridge City Council
Councillor Claire Daunton		Cambridgeshire County Council
Councillor Graham Wilson	-	Cambridgeshire County Council
Councillor Neil Shailer	-	Cambridgeshire County Council
Councillor Paul Bearpark	-	South Cambridgeshire District Council
Councillor Annika Osborne	-	South Cambridgeshire District Council
Councillor Heather Williams	-	South Cambridgeshire District Council
Heather Richards	-	Business Representative
Christopher Walkinshaw	-	Business Representative
Claire Ruskin	-	Business Representative
Karen Kennedy	-	University Representative
Kristin-Anne Rutter	-	University Representative
Helen Valentine	-	University Representative

The meeting will be live streamed and can be accessed from the GCP YouTube Channel **- *Link*** . We support the principle of transparency and encourage filming, recording and taking photographs at meetings that are open to the public. We also welcome the use of social networking and micro-blogging websites (such as Twitter and Facebook) to communicate with people about what's happening, as it happens.

If you have accessibility needs, please let Democratic Services know.

For more information about this meeting, please contact Nicholas Mills (Cambridgeshire County Council Democratic Services) on 01223 699763 or via e-mail at Nicholas.Mills@cambridgeshire.gov.uk.

Greater Cambridge Partnership Joint Assembly

Minutes of the Greater Cambridge Partnership (GCP) Joint Assembly
Thursday 8 June 2023
12:00 p.m. – 5:55 p.m.

Present:

Members of the GCP Joint Assembly:

Cllr Tim Bick (Chairperson)	Cambridge City Council
Cllr Simon Smith	Cambridge City Council
Cllr Katie Thornburrow (Vice-Chairperson)	Cambridge City Council
Cllr Claire Daunton	Cambridgeshire County Council
Cllr Neil Shailer	Cambridgeshire County Council
Cllr Graham Wilson	Cambridgeshire County Council
Cllr Paul Bearpark	South Cambridgeshire District Council
Cllr Annika Osborne	South Cambridgeshire District Council
Claire Ruskin	Business Representative
Christopher Walkinshaw	Business Representative
Karen Kennedy	University Representative
Kristin-Anne Rutter	University Representative
Helen Valentine	University Representative

Officers:

Kerry Allen	Senior Delivery Project Manager (GCP)
Peter Blake	Transport Director (GCP)
Daniel Clarke	Strategy and Partnerships Manager (GCP)
Thomas Fitzpatrick	Programme Manager (GCP)
Ben Hathway	Senior Delivery Project Manager (GCP)
Niamh Matthews	Assistant Director: Strategy and Programme (GCP)
Lynne Miles	Director of City Access (GCP)
Nick Mills	Democratic Services Officer (CCC)
Rachel Stopard	Chief Executive (GCP)
Wilma Wilkie	Governance and Relationship Manager (GCP)

1. Election of Chairperson

It was proposed by Councillor Thornburrow, duly seconded and resolved unanimously that Councillor Bick be elected Chairperson of the GCP Joint Assembly for the 2023/24 municipal year.

2. Appointment of Vice-Chairperson

It was proposed by Councillor Shailer, seconded by Councillor Daunton and resolved unanimously that Councillor Thornburrow be elected Vice-Chairperson of the GCP Joint Assembly for the 2023/24 municipal year.

3. Apologies for Absence

Apologies for absence were received from Councillor Williams and Heather Richards.

The Chairperson welcomed Councillor Wilson to the Joint Assembly, and expressed thanks to former Joint Assembly member Councillor Alex Beckett, noting that he had been appointed as the County Council's substitute representative on the Executive Board.

4. Declarations of Interest

Kristin-Anne Rutter declared a non-statutory disclosable interest in relation to the Making Connections Consultation Feedback and the City Access Strategy (agenda item 10), as an Executive Director of CBC Ltd.

5. Minutes

While discussing the minutes of the previous Joint Assembly meeting, it was proposed and agreed unanimously to amend the first sentence of the last bullet point to the Joint Assembly's discussion on agenda item 6 (Greater Cambridge Greenways – Barton, Horningsea, Melbourn and Sawston) as follows (addition in bold):

- Supported the proposal from Councillor Van de Ven to prioritise work on the link between Melbourn and Meldreth train station, highlighting the importance of ensuring residents and employees across the region were able to access the train network through active travel**, including access to the Waterbeach station on the Horningsea Greenway**.

The minutes of the previous Joint Assembly meeting, held on 16 February 2023, were agreed as a correct record, subject to the above amendment, and were signed by the Chairperson.

6. Public Questions

The Chairperson informed the Joint Assembly that twelve public questions had been accepted and that the questions would be taken at the start of the relevant agenda item, with details of the questions and a summary of the responses provided in Appendix A of the minutes.

It was noted that three questions related to agenda Item 9 (Greater Cambridge Greenways – Bottisham, Swaffham and St Ives), and six questions related to agenda item 10 (Making Connections Consultation Feedback and the City Access Strategy).

7. Petitions

The Chairperson notified the Joint Assembly that no petitions had been submitted.

8. Quarterly Progress Report

The Assistant Director of Strategy and Programme presented a report to the Joint Assembly which provided an update on progress across the GCP's whole programme, and which included details of a proposal to undertake a procurement exercise to provide the GCP with specific legal support for the programme.

While discussing the report, the Joint Assembly:

- Sought clarification on why the Chisholm Trail Cycle Links Phase 2 project had been marked with a red status in the table in Section 6.1 of the report. It was confirmed that the delay was due to ongoing discussions with the rail authority to obtain access to its land to finalise the route alignment.

- Expressed concern that the budget status for the Waterbeach Station had been marked with a red status in the table in Section 7.1 of the report, noting that the development of Waterbeach New Town was contingent on delivery of the train station. Members were informed that the matter related to in-year spend which would be picked up in the current year, and that the impact was minimal.

- Observed an underspend of £8.4m this year and sought reassurances that the GCP had sufficient capacity to deliver the levels of increased spending over the next year that were detailed in the report. It was clarified that spend would increase significantly over the next few years due to construction stage commencing on various large projects, and that capacity had been increased accordingly to ensure this could occur. Spend specifically related to the City Access programme was subject to the ongoing considerations by the Joint Assembly and Executive Board on the development of the project.

- Highlighted the need for apprenticeships in the construction and retro fitting sectors, acknowledging that the programme had been developed to include

flexibility on the provision of courses that were required and for which there was demand.

- Emphasised the importance of ensuring the GCP's work and achievements in the skills sector received sufficient prominence alongside the transport and infrastructure projects.

- Paid tribute to the successes of the GCP in the smart workstream, noting the opportunities for further developments with the construction of Cambridge South train station, and clarified that there were no public information campaigns planned beyond press releases and community engagement on individual projects.

- Clarified that Mobility as a Service, referenced in Section 9.10 of the report, was a project that sought to join different layers of the transport system together to simplify the planning of multi-modal journeys. Once established, it would provide insight into behavioural changes, as well as opportunities to incentivise further changes.

- Established that the deployment of up to thirteen automated vehicles on the Biomedical Campus and the West Cambridge campus was anticipated for April 2024.

- Suggested that the table of strategic risks listed in Section 5 of the report should include a risk for negative public opinion of the GCP and a risk for projects having to be taken through separate governance processes at the County Council as the GCP's accountable body. It was noted that both these risks were included in a separate, wider risk register, but it was agreed to also consider their inclusion in the one that was part of quarterly progress reports.

- Welcomed and supported the proposal to undertake a procurement exercise for legal support to the GCP, emphasising the importance of ensuring the highest quality support was obtained.

9. Greater Cambridge Greenways – Bottisham, Swaffham and St Ives

Three public questions were received from Al Hanagan, Professor Sir David Spiegelhalter, and Josh Grantham (on behalf of Camcycle). The questions and a summary of the responses are provided at Appendix A of the minutes.

Councillor Alex Bulat, Cambridgeshire County Councillor for the Abbey division, was invited to address the Joint Assembly. Welcoming the Greenways project and the level of consultation that had been conducted with local residents and members, Councillor Bulat drew attention to longstanding safety issues along Riverside, which formed part of the Bottisham Greenway. Noting that various proposals over the past thirteen years to resolve such issues had not been successful to date, including pedestrianisation of Riverside, she urged the GCP to develop the Greenways scheme in a holistic way that

reflected these ongoing concerns over the safety of both cyclists and pedestrians along the Riverside section of the route.

Councillor Jean Glasberg, Cambridge City Councillor for the Newnham ward, was invited to address the Joint Assembly. Welcoming the support for active travel provided by the Greenways project, Councillor Glasberg nonetheless expressed concern over the safety of some aspects of the scheme and highlighted her assertion that pedestrians were above cyclists in the hierarchy of road users. She also paid tribute to the consultations that had been carried out for the Grantchester Greenway, and emphasised the importance of ensuring all consultations were conducted to such a standard. It was clarified that independent road safety assessments were carried out before, during and after the development of all the Greenways schemes, and that the same approach was taken to all the consultations across the different routes.

The Transport Director presented the report, which set out the Outline Business Cases for the Bottisham, Swaffham and St Ives Greenways, as well as a proposed programme of delivery. Following a public engagement, various changes were proposed for the schemes, as set out in Sections 2.4 to 2.9 of the report.

While discussing the report, the Joint Assembly:

- Welcomed and supported the proposals that would be presented to the Executive Board on 29 June 2023.

- Suggested that connecting the Bottisham Greenway to High Street in Bottisham would increase access to the cycle route for villages in the surrounding area, and it was acknowledged that officers were considering the costs and deliverability of such an extension.

- Highlighted the inherent dangers for cyclists at road junctions and requested that the design of the Bottisham Greenway at the Newmarket Road / High Ditch Road junction and the Ditton Lane crossing be reconsidered to maximise the safety of the route, with one member suggesting that controlled crossings could be beneficial at these locations, particularly during peak hours.

- Drew attention to significant maintenance issues on the Bottisham Greenway, including a section of the route where exposed tree roots currently made usage difficult, and clarified that the GCP would look to resolve such issues before completing the route and handing over responsibility for maintenance to the County Council. Members also expressed concern that they were not kept informed of the ongoing discussions with the County Council about how the Greenways would be maintained once responsibility was handed over, and it was agreed that a report on the issue would be presented at the next meeting.

- Drew attention to the need to protect the high number of listed trees and hedges along the Swaffham Greenway. It was suggested that keeping the Greenway behind hedgerows, wherever possible, would further protect cyclists from the nearby road.

- Expressed concern about the narrow width of Green Bank Road on the Swaffham Greenway, although it was acknowledged that the report stated that alternatives would be considered for that section of the route. It was noted that cycleways needed to be 3 metres wide (or 1.5 metre if only one-way) to be compliant with LTN 1/20 guidance. While the local environment and adjoining roads sometimes restricted the width of cycleways, members were assured that all routes were subject to road safety audits.

- Highlighted the importance of ensuring safety at that the section of the St Ives Greenway that connected to Over, which involved a crossing of the guided busway. The Joint Assembly acknowledged the wider safety concerns that had been raised by members of the public and local members, and it was emphasised that clear signage would be a necessary feature along all the Greenway routes.

- Highlighted the importance of future-proofing the Greenway routes, for example using high-quality materials, to increase active travel in a sustainable, long-term way.

- Welcomed the high level of engagement with residents and local stakeholders that had been carried out and highlighted the importance of ensuring such engagements continued throughout the development and construction of the Greenway routes, to explain why particular decisions or changes were made, such as to route alignment and surface materials. Members also requested for such engagements to include local parish, district/city and county councillors in acknowledgement of their knowledge of local areas.

- Clarified that after the Executive Board considered the changes proposed in the report, the GCP would refine the design of the schemes, in continuous dialogue with local residents and members, before a final report would pull all the issues together and seek approval for the construction of the Greenways.

- Suggested that the GCP support the Combined Authority and County Council in their efforts to obtain guidance from the Government on how to classify the various modern modes of transport, such as electric bikes and scooters.

10. Making Connections Consultation Feedback and the City Access Strategy

Eight public questions were received from Martin Lucas-Smith, William Bannell, David Stoughton (on behalf of Living Streets Cambridge), Sarah Hughes (on behalf of Cambs Sustainable Travel Alliance), Neil Mackay (on behalf of Mackays of Cambridge Ltd.), Richard Wood (on behalf of Cambridge Area Bus Users), Sarah Lightowlers (on behalf of Cambridgeshire Parents for the Sustainable Travel Zone), and Josh Grantham (on behalf of Camcycle). A further question had been submitted by Jethro Gauld (on behalf of East Cambs Climate Action Network). As he was unable to attend the meeting to present his question, he would receive a written response to his question. The questions and a summary of the responses are provided at Appendix A of the minutes.

Councillor Elliot Tong, Cambridge City Councillor for the Abbey ward, was invited to address the Joint Assembly. Noting that the economic impact assessment (EIA) that had been conducted by the GCP in September 2022 was focused on the financial logistics of City Access as a transport scheme, Councillor Tong queried whether a further EIA would be carried out to assess the wider economic impacts before a final decision was made on the project. He noted that the proposals would likely lead to a reduction in the annual revenue that the City Council received from parking charges, while both small and large businesses had expressed concern about the financial impacts that they would potentially suffer. He also sought clarification on the reasoning behind the assumption that people who stopped using private cars because of the proposals would use buses instead, as opposed to other alternative forms of transport. It was confirmed that further assessments would be performed, if the scheme progressed, which would consider the wider economic impacts of the proposals before any final decisions were made. It was also noted that assumptions were based on the results of a standard modelling process that was used consistently by the GCP to predict modals shifts, and any changes to the proposals would be subjected to the same modelling process.

Councillor Susan van de Ven, Cambridgeshire County Councillor for the Melbourn and Bassingbourn division, was invited to address the Joint Assembly. Highlighting the limited or non-existent bus services and active travel routes available to residents in smaller villages across the County, Councillor Van de Ven argued that they had little option other than travelling by car to reach the nearest train station. She argued that any redesign or augmentation of the existing bus network should exploit any opportunities for bus and rail links, to expand the public transport network and its accessibility. In acknowledgement of Councillor Van de Ven's concerns it was suggested that a franchised bus network would allow for these kinds of wider, social perspectives to be considered throughout the decision-making process of service provision.

The Director of City Access presented the report, which detailed the methodology and process of the second Making Connections consultation, which ran from 17 October 2022 to 23 December 2022, and its headline findings, which were drawn from over 24,000 responses to a public survey, demographically representative opinion polling, written submissions from organisations in the Cambridge travel-to-work-area, targeted meetings with representative and seldom-heard groups, and a series of in-person and virtual engagement events. These findings, summarised in Section 3 of the report and set out in detail in Appendix 1 to the report, had led to the identification of a range of themes and concerns to be addressed, including whether to change any of the core parameters of the scheme, whether to change any of the rules about who was required to pay and under what circumstances, and whether to change any of the benefits that the scheme would deliver. The Joint Assembly was invited to consider these potential changes to the Making Connections proposals, as set out in Section 5 of the report, and to give a view as to whether and how the Executive Board should proceed with the proposals. The Joint Assembly received a presentation on the consultation and potential changes to the proposals, which was published on the meeting website and will be attached at Appendix B of the signed minutes.

While discussing the development of the City Access project that led to the second Making Connections consultation, how the consultation had been carried out, and the headline findings that had been identified, the Joint Assembly:

- Observed that several significant events had occurred since the City Access project had commenced, including the Covid-19 pandemic, the withdrawal from the European Union, the war in Ukraine, the ongoing cost-of-living crisis and a deteriorating public bus network, and expressed concern that the potential impacts on businesses and residents could exacerbate problems they were already facing. Notwithstanding these concerns, it was also suggested that some of these events, alongside others, had served to underline the importance of finding a solution to the problems in the Greater Cambridge area, which were only likely to worsen according to the projected levels of growth in the region.

- Highlighted the ongoing need to improve public transport while reducing congestion and pollution in the Greater Cambridge area. It was emphasised that the City Access proposals were designed to improve the situation for those already living in or visiting the Greater Cambridge area, rather than to promote or create further growth in the region.

- Acknowledged the value of the Government agreeing to non-voting members being appointed by the Business Board and University of Cambridge to the Joint Assembly and Executive Board, as they had been able to provide greater longevity and continuity throughout the development of the City Deal compared to the voting members, who were subject to regular elections.

- Noted that various changes had taken place since the consultation concluded in December 2022, including the ongoing development by the Combined Authority of Local Transport and Connectivity Plan, confirmation of the preferred alignment of East West Rail, and ongoing discussions about potential franchising of the local bus network, and queried whether such developments would affect the proposals or their cost. Members were assured that the updated Local Transport and Connectivity Plan would not affect the policy basis for the proposals. While franchising would increase public involvement and accountability in the decision-making process of bus service provision, it was acknowledged that the current limited, expensive, and unreliable network was not suitable for franchising, and would require significant improvements before it could be considered.

- Welcomed the high level of responses received during the consultation, highlighting the significant increase in public participation compared to previous consultations, and it was suggested that this was due to the inclusion of specific, tangible proposals for people to consider and comment on. It was agreed that the consultation process had been fair, accessible and effective, and the Joint Assembly paid tribute to all those who participated. Members also observed that it was the first consultation that had sought to influence the outcome, although it was noted that it was normal to campaign towards certain objectives during consultations.

- Queried whether the anticipated number of responses submitted from people living outside the Greater Cambridge area had been received, and it was clarified that

approximately 3,000 respondents had indicated they were from outside the Greater Cambridge area, compared to 16,000 respondents indicating they were from within the Greater Cambridge area, with an additional 6,000 respondents providing no indication either way.

- Considered whether the consultation had been clear on the issue of a charge as part of the proposed Sustainable Travel Zone, with one member expressing concern that it had not been sufficiently explicit when seeking opinions on the proposals.

- Observed that the consultation had been carried out during a period of significant disruption to the local bus network and expressed concern that people may have consequently found it harder to have confidence in the proposals to improve bus services. It was noted that people who responded to the consultation were likely to be those who held stronger views, either for or against the proposals.

- Expressed concern that an insufficient level of assessment had been carried out on the impacts of the proposals on businesses, commuters and residents, although it was acknowledged that assessments and engagement was ongoing and would continue throughout the development of the proposals. It was also noted that if the scheme progressed, a deeper analysis of the consultation responses would be conducted to provide a more detailed assessment of the issues that were raised.

- Emphasised the importance of ensuring there was public trust and confidence in the consultation, including relating to how it had been carried out and how the GCP would respond to the issues and concerns that had been raised before making a final decision on the proposals. Attention was drawn to the consultation's alignment with the Gunning Principles, including that there was sufficient information to give 'intelligent consideration', that there was adequate time for consideration and response, and that 'conscientious consideration' was being given to the consultation responses before a decision was made.

- Established that the Consultation Institute had provided feedback following its independent audit of the GCP's consultation approach, and it was agreed to include this feedback in the report to the Executive Board.

- Highlighted the importance of fairness and equalities when developing the proposals to ensure that the impacts did not disproportionally affect people on low income, key workers, young people, or those without any viable alternative to travelling by car. Attention was drawn to a specific question in the consultation survey which sought to seek opinions on how the proposals dealt with this issue, and members were assured that, if the scheme developed further, a detailed analysis of the responses to this question would inform any adaptations to the proposals, to balance the benefits and impacts as fairly as possible. Members also acknowledged that the current situation could be equally perceived as unfair, with minimal or non-existent bus services in rural areas leaving residents with no choice but to buy a car when they could not afford it.

- Acknowledged the headline findings of the consultation, which indicated almost universal support for the proposed improvements to the bus services and active

travel network, but also significant opposition to the proposed Sustainable Travel Zone. However, it was argued that the two were intrinsically linked to each other and that there were no realistic alternative funding mechanisms to support the proposed improvements.

- Suggested that the consultation and results should have been more explicit in the distinction between cycling and walking, given their differing requirements.

- Expressed concern about the level of opposition to the proposed charging mechanism, with one member arguing that the scheme should not go ahead when it had received support from only 34% of respondents. Other members, however, argued that only 20% of respondents had said they could not be persuaded by potential changes to the proposals, which suggested that the level of support could significantly increase if appropriate changes were identified.

- Highlighted the fact that younger people were generally more supportive of the Sustainable Travel Zone proposals, while residents of the city of Cambridge were also more supportive than those living outside the city. It was also noted that there was a higher level of opposition in the areas north-east of Cambridge, where it was argued the public transport provision was particularly limited.

- Highlighted the need to proactively support people who shifted to move sustainable modes of transport, including cycling and walking, and to respond to their concerns and suggestions. It was suggested that the GCP could consider providing grants to people to enable them to use active travel networks, including the Greenways.

While discussing the issues raised during the consultation and the potential changes that could be made to the proposals, the Joint Assembly:

- Considered and generally opposed a general exemption or discount for residents of the STZ, based on the following observations:

    - The financial impact on the revenue to support improvements to the bus and active travel networks would be too significant, given that many journeys within the proposed STZ area were undertaken by residents of the city;

    - It would unfairly benefit people who lived within Cambridge, who it was argued were generally financially more able to pay a charge, and who already benefitted from a better bus and active travel network that offered more alternative choices to a car journey. People who lived within the STZ would also be those who most benefitted from the reduced pollution and cleaner air that would result from the proposals;

    - The level of support in the consultation for such an exemption or discount in the consultation was significant, however, and a limited exemption or discount for a certain number of days could therefore be considered as an alternative.

- Requested further investigation on the potential impacts of the proposals on the different types of businesses and whether any discounts or exemptions could be appropriate, based on the following observations:

    - Many businesses that local communities relied on were already suffering because of the current economic situation, particularly small businesses, and the proposed charge could have a harmful impact on businesses both inside and outside the proposed STZ area. It was not clear what benefits the proposals offered for businesses, unlike residents and commuters, who would benefit from an improved bus service and active travel network.

    - Businesses contributed to the congestion problems, both directly and indirectly, while higher levels of domestic tourism had led to increased level of visiting coaches and cars. However, coaches, including school coaches, reduced the number of vehicles on the road and therefore helped reduce congestion. It would be necessary to differentiate between business and private vehicles or journeys when applying any discounts or exemptions.

    - Shuttle buses between shopping centres, integrated deliveries and better organised last mile deliveries could benefit businesses and such initiatives could be supported as part of the proposals, although it was acknowledged that some businesses, such as concrete delivery vehicles, had no alternative means of transport or method of operation. The impacts would vary according to the nature and size of the businesses, and it was noted that freight consolidation pilots were included as part of the proposals.

    - Although improvements to the public transport network would be implemented well in advance of a charge being implemented, it was not clear how businesses would be supported in their preparation during this time, or how they had generally responded to the proposals in the consultation.

- Considered and generally opposed an exemption or discount for electric vehicles, based on the following observations:

    - Electric vehicles still contributed to congestion as much as non-electric vehicles, and as their proportion of vehicles was expected to increase in the future, such an exemption or discount could significantly reduce the revenue needed for supporting the bus service and active travel improvements.

    - Electric vehicles tended to be owned by wealthier people who would simultaneously be more able to pay a charge, so any such discount or exemption would have a disproportionate impact on people with lower incomes.

    - Electric mopeds, electric motorbikes and electric three-wheeled vehicles contributed less to congestion and pollution, so perhaps a more targeted discount or exemption could be considered.

- Considered and acknowledged a need to further consider the issue of trip chaining, based on the following observations:

    - Visiting various destinations within single journeys could be significantly more difficult and time-consuming if done on public transport, particularly for parents taking children to childcare or school. It was suggested that such an issue particularly affected women with parenting responsibilities. However, improvements to the public transport network would provide more options.

    - The proposed daily charge, rather than a per mile charge, would allow some people to make various trips on one day and pay just once, rather than spreading them out over various days, with most trip-chains consisting of a long journey that would be expected to be paid for if it was within the STZ.

- Considered and generally opposed changing the hours of operation, but acknowledged a need to further consider the issue, based on the following observations:

    - It would permit journeys that were not time-constrained to be made during non-peak hours, thus reducing congestion during peak hours. If reducing congestion was the main objective, it could be difficult to justify charging people for travelling when there was no congestion. However, such a shift in behaviour could simply displace congestion to outside peak hours and could have a significant impact on revenue for improving bus services and the active travel network.

    - Most people would be unable to change their hours of travel to outside peak hours, meaning that key workers and people in lower income employment were likely to be disproportionally affected. Conversely, people who were able to adapt their hours of travel were also likely to be more able to pay a charge. Notwithstanding, it was acknowledged that the Joint Assembly did not have evidence to support this and that more information on the potential impacts of such changes was required before a decision could be made.

- Considered and generally opposed reducing the charge, but acknowledged a need to further consider the issue, based on the following observations:

    - Current levels of inflation would effectively reduce the charge over time, and a reduction of the initial charge would therefore impact the revenue income for the bus and active travel network improvements. The alternative would be to progressively increase the charge if inflation persisted in the future.

    - Lowering the charge would reduce the incentive to use alternative forms of transport to cars, which was one of the underlying objectives of the proposals. A £2 bus fare was intended to be more attractive than a £5 vehicle charge, and a reduced vehicle charge would therefore reduce the appeal of buses.

- According to the consultation findings, businesses were generally more concerned about the level of the charge than individual people, who were generally more concerned about any charge at all.

- A reduced charge for certain people, vehicles, days or times could however be considered as an alternative to a complete reduction in the charge, as could an incrementally phased introduction of the charge.

– Considered and generally opposed reducing the boundary of the STZ, based on the following observations:

    - While concerns raised by people living close to the proposed boundary were understandable, particularly when the boundary passed through the middle of communities, similar issues would be raised by people living close to wherever a reduced boundary was proposed.

    - Removing Addenbrookes and the wider Cambridge Biomedical Campus from the STZ would result in residents of the zone paying the proposed charge to access the site while non-residents of the zone would not have to pay.

    - Maintaining Cambridge North train station in the STZ would require significant improvements to the bus services connecting rural areas to the station. It was suggested that a free shuttle service from the Milton Park & Ride to the station could also alleviate concerns about its inclusion in the zone.

– Considered and generally supported further consideration of free days or free time for account holders, based on the following observations:

    - A system of free days or time could potentially resolve a wide range of difficult issues that had been raised with one simple approach, although the logistics and monitoring could be complicated.

    - More detailed information was needed on how such a system would function, including whether it would be applied per person, per vehicle or per household.

    - The vouchers for free days or time could potentially be exchanged for funds to help purchase a new bike or to use buses.

– Considered and acknowledged a need to further consider exemptions for all hospital patients and their visitors, based on the following observations:

    - Access to hospitals had been a key issue identified in the consultation, with high parking charges at Addenbrookes already a cause of difficulty for many people visiting the site. However, it was suggested that a distinction should be made between people visiting the hospitals on the Cambridge

Biomedical Campus for medical reasons, and the significant proportion that travelled there for work.

- Improving public transport and active travel links at all hours in Addenbrookes and the wider Cambridge Biomedical Campus was important for staff and patients, particularly with the forthcoming construction of Cambridge South train station. It was suggested that a free shuttle service from the Trumpington Park & Ride to Addenbrookes and the CBC could also alleviate concerns about its inclusion in the zone.

- The proposals already included various exemptions for regular visitors to Addenbrookes, and with improvements to the public transport and active travel links to the site included as a key feature of the proposals, additional exemptions could significantly affect the revenue that would fund such improvements.

- Formal opinions should be sought from the various stakeholders on the Cambridge Biomedical Campus, to best inform any decision on whether to expand the exemptions and to what extent to do so.

– Considered and generally supported further consideration of discounts for people on low income, based on the following observations:

- Argued that throughout the process of finalising the proposals the impact on people with lower income should be at the forefront of considerations, to ensure that the scheme was progressive. While it was acknowledged that they were likely most benefit from improvements to public transport, this was not universally the case.

- Such a discount or exemption would also need to be considered for people with mobility or health issues that made it impossible to use public transport.

- A discount for people on low income would potentially require a means testing process that it was suggested could be degrading for those who undertook it, while a reimbursement scheme would still require people to initially pay the charge. It was also argued that the need to consider such discounts indicated wider flaws in the proposals.

- Further information was required on other processes, such as the NHS Healthcare Travel Costs Scheme, to establish how any changes to the proposals would be aligned.

– Considered and generally supported further consideration of exemptions for unpaid carers and charity volunteers, based on the following observations:

- Women were disproportionally affected by the lack of such exemptions, and it was argued that the value of their unpaid work should be reflected appropriately.

    - The logistics for managing and monitoring such exemptions would be difficult, especially without a national definition for who would qualify for such categories.

- Considered and generally supported further consideration of exemptions for out-commuters near the boundary of the proposed STZ, based on the following observations:

    - Most of the proposals were focused on commuting into the STZ, rather than commuting out of it, with such journeys not having a significant contribution to the overall congestion problems.

    - It was difficult to imagine a workable solution, although it was suggested that such people could keep their cars in Park and Ride sites, reaching them via active travel or public transport.

In addition to these discussions, the Joint Assembly:

- Acknowledged the need to refine the proposals, but expressed concern that making significant changes or changing the core parameters of the scheme could have too much of a negative impact on the objectives to reduce congestion and raise revenue for improving the bus and active travel network, suggesting that providing further discounts or exemptions could be a better option.

- Emphasised the need to ensure the proposals included enough flexibility to make amendments in the future once any scheme was in place and monitoring of its impacts and effectiveness had been carried out. It was not possible to envisage and consider every possible scenario that people may find themselves in beforehand.

- Emphasised the importance of informing people that the proposed charge would not be implemented until improvements to the public transport network had already been implemented. It was suggested that initial priority for bus improvements should be focused in rural areas, where the wider benefits of reduced congestion would not be experienced. Members highlighted the importance of informing people of the available options and any relevant considerations for their journeys, including those who travel for work, school and social reasons.

- Suggested that the promotion of car sharing could also be an effective way to reduce congestion and reduce dependency on bus services. Providing schools with bus passes to distribute could also help alleviate concerns related to school runs.

- Requested further information on journeys within the Greater Cambridge region, including where they originated and ended, and differentiating between peak hours and non-peak hours. Members also requested further information on the potential of setting up user accounts so that potential savings could be identified and passed on to drivers.

- Queried whether the findings from the consultation could also lead to separate work, including nudging travel behaviour in the short-term to improve usage of public transport and the active travel network. Members were informed that there was ongoing work around behaviour change that was being undertaken at the same time, including the improvement of collecting data on travel choices and behaviour.

- Emphasised that the Joint Assembly would like to scrutinise options for changes to the proposals, along with additional information on the impacts that such changes would have on the underlying objectives of the scheme, as well additional information on the economic impact to Cambridge and the wider region, before they were presented to the Executive Board. It was agreed to convene an extraordinary meeting on 26 June 2023, in advance of the Executive Board meeting scheduled for 29 June 2023.

In summarising the Joint Assembly's discussion, the Chairperson welcomed the findings of the second Making Connections consultation, noting the support for the proposals and acknowledging the concerns that had been raised. While a number of proposed changes had been considered by the Joint Assembly, with some receiving greater support than others, it had been agreed that a range of further information was required on the impacts that such changes would have on the overall scheme if they were implemented. He drew attention to underlying concerns that large scale changes could lead to a reduction in the revenue from the proposed STZ, potentially impacting the objective to improve public transport and active travel networks while reducing congestion, and emphasised the importance of improving trust and confidence of the public in the proposals. He concluded that members supported the Executive Board proceeding with the development of the proposals consider potential options for proposed changes and test them against the scheme's policies and objectives, although it was emphasised that the Joint Assembly would like to scrutinise the options before the Executive Board made a decision.

11. Date of Next Meeting

The Joint Assembly noted that, further to the extraordinary joint meeting with the Executive Board that would be held on Monday 26 June 2023, the next scheduled meeting was due be held on Thursday 7 September 2023, and noted the programme of meeting dates up to the end of 2024.

Chairperson
7 September 2023

Greater Cambridge Partnership Joint Assembly – 8 June 2023
Appendix A – Public Questions Listed by Agenda Item

From	Question	Answer
Al Hanagan Resident and member of Riverside Area Residents' Association	**Agenda Item 9 – Greater Cambridge Greenways** ***Shared Use*** Riverside is a busy, often narrow and often contested space. Most conflict is between cyclists/ e-scooters and pedestrians as very few vehicles use Riverside. Pedestrians mainly walk along the riverfront and in the road as footpaths are narrow or non-existent. Three Greenways (Horningsea, Bottisham and Swaffhams) are projected to converge on Riverside. P5 of the report states that the DoT seeks a minimum 20% uplift in user numbers and the GCP may set itself a higher target. However, the proposed traffic count will only identify existing levels of conflict. Can the committee: • State the GCP target figure for future volumes of (i) cyclists (ii) pedestrians (iii) other users such as e-scooters, powered bikes and mopeds, per Greenway? • Guarantee that the Feasibility stage will comprehensively model the impact of all three Greenways on cyclist, pedestrian and other user volumes along Riverside and at the Stourbridge Common entrance, based on the DoT minimum increase of 20% or the GCP target figure, whichever is higher? • Confirm that the Greenway website promise that "*In all places there will be improved safety measures, and the path will be separate from road traffic'* will apply to Riverside, and that if new and/or expanded footpaths are needed to protect pedestrians, these will be provided?	The target of 20% within the Outline Business Case is based on DfT guidance. The next stage of the Business Case (the Full Business Case) will look at specific targets in more detail. As the Joint Assembly and Executive Board have previously stated, the aim is to achieve as much mode shift as possible. The Full Business Case for these schemes will look at the cumulative effect of all 3 schemes in the area. The points with regard to design will be addressed in the next stage of design following comments received during this engagement. However, I would reiterate that RSA's are undertaken for all the Greenways schemes.

	• Confirm that where Riverside is too narrow to accommodate both a cycle path and a footpath, pedestrian safety will be given absolute priority in layout design decisions?	
Professor Sir David Spiegelhalter Resident and member of Riverside Area Residents' Association	**Agenda Item 9 – Greater Cambridge Greenways** ***Red Asphalt Surfacing*** Because of the shared use and space constraints in many sections of Riverside, we are concerned that a dedicated red asphalt cycle path will increase conflict and danger by creating a sense of entitlement among cyclists and powered scooters that they can travel at speed with impunity. It will be like putting a motorway down a high street. The core issue is Greenway user behaviour. Can the committee: • Guarantee that the Preliminary design stage review will seek out and consider all available research on the respective effects of (i) dedicated cycle paths, and (ii) shared space approaches, on cyclist and e-scooter user behaviour? • Guarantee that all such research will be made publicly available? • Guarantee that appropriate speed-reducing measures will be incorporated?? • Guarantee design decisions on surfacing along Riverside will be informed by such research, and the issue of managing Greenway user behaviour to maximise pedestrian safety given absolute priority in design decisions?	A meeting was held with the Riverside Area Residents' Association and Local Members on 17th April 2023. GCP agreed it will undertake a review of the proposed red asphalt, the lining design and the entrance and egress to Stourbridge common during the next design stage. The design of these schemes are developed in accordance with local and national design standards. They are also subject to Road Safety Audit.

Josh Grantham on behalf of Camcycle	**Agenda Item 9 – Greater Cambridge Greenways** It has been clear throughout this stage of the Greenways consultation, that the previous work done has not been fully understood, considered and acted upon. For example, where challenges were previously highlighted, little has been done to resolve the concerns. Furthermore many of the major infrastructure elements have been removed any decision making process behind their removal apparently arbitrary. For example: members of Camcycle recently submitted a FOI request to understand the reasoning behind the proposal for an unsatisfactory and dangerous section of route along Green Bank Road in Swaffham Bulbeck. The GCP stated that the "issues log" which they released earlier is the only documentation they have. The issues log mentions some potential downsides to that route, things like "the Ramblers might object" but they are both speculative and hardly decisive. This strongly implies that no serious work was done on progressing the proposal since the 2019 consultation for a route along the existing footpath. We have also heard in the response that an underpass on Ditton Lane would 'represent poor value for money' with the feasibility work identifying issues such as utilities, flood risk and land acquisition and safety of underpasses. These are typical constraints for infrastructure like this and are very similar to those of the Chisholm Trail underpass on Newmarket Road, a piece of infrastructure that has transformed cycling in the local area. Where is the detailed review of alternatives (including those previously suggested) to the underpass. It is clear that the design teams employed by the GCP to do this work are not being held to a high enough standard. We therefore ask the GCP to create a scrutiny panel to review the design work at a much more regular interval. The current level of engagement with key stakeholders is simply not enough.	I disagree. CamCycle alongside other user groups took part in a NMU workshop to understand the design on 10th February 2023. Bottisham Greenway engagement concluded in March 2023 where stakeholders and members of the public were invited to engage on the proposals. Where changes are being recommended to the Board these are clearly set out in the papers. Officers work closely with teams of engineers at specialist consultancies in order to inform the designs that are put forward for sign off by the Executive Board. Judgement on issues day to day is taken based on significant experience in delivery of schemes, working with internal stakeholders and consultants. Following the engagement for Swaffham Greenways (March 2023). GCP met with Elected Members and stakeholders to discuss re-routing cyclists and equestrians from Green Bank Road. This work is currently in progress with the design team GCP need to manage the competing priorities of the Greenways network whilst ensuring cost control and deliverability. Installing an underpass on Ditton Lane would be cost prohibitive and would add a considerable length to the programme due to the engagement and coordination with the utility companies.

Martin Lucas-Smith Petersfield Resident	**Agenda Item 10 – Making Connections Consultation Feedback and the City Access Strategy** One of the interesting outcomes of the last nine months of public debate on how to reduce traffic and fund public transport has been the emergence of an option which both sides of seem to agree on: a Workplace Parking Levy. Both those campaigning for sustainable transport as well as even the South Cambs Conservative MP seem in favour. A Workplace Parking Levy (a charge on employers who provide workplace parking) would answer a common complaint: Namely, that larger employers, who benefit most from growth and are most responsible for the congestion problems it creates, currently do not contribute to solving it. The current GCP proposals put all the onus on citizens, omitting companies. A WPL would quickly bring in £5-10m of annual bus subsidy, reducing pressure on city-wide congestion charging. It would be straightforward to implement. It taxes employers not employees. It has no regressive impacts. It would not see employers would move away just because of parking taxation. It doesn't need camera infrastructure, nor a complex exemption system. It encourages workplaces to help employees by subsidising cycling and public transport. And it nudges employers to replace inefficiently-used land with things like much-needed housing instead. Page 84 says "a Workplace Parking Levy scheme would perform significantly less well than a sustainable travel zone in terms of overall traffic reduction." Whilst this is obviously true, no proposal is ever a complete solution. It's not a reason not to include it, balancing other measures.	In this session today, the Joint Assembly is asked to consider the report GCP Officers have prepared, which sets out the public response to the proposals on which we consulted, and to discuss the options available for adapting the scheme in response to the views shared in the 2022 Consultation. It has been quite a long journey of five years or more to get to the point of this consultation, that involved assessing and consulting on a range of options, including through a Citizens Assembly. The Making Connections proposals did not include a WPL it was assessed and rejected at those previous stages both by the technical assessment and by public opinion. Previous rounds of consultation, including 2017's Our Big Conversation, 2019's Choices for Better Journeys, and the 2021 Making Connections consultation, found that respondents preferred road user charging options to new parking charges, including a WPL. The conclusions of the previous technical work and consultation findings broadly reflects the points that Mr Lucas-Smith sets out: WPLs can raise revenue and reduce traffic but on a smaller scale than the proposed STZ and is would therefore have a much more modest impact on addressing the issues of congestion and pollution far below the objective of 15% below 2011 levels needed to ensure reliable and efficient public transport. A WPL alone won't solve the problem. There is of course nothing to preclude consideration of a WPL or other 'balancing measures' as suggested by Mr Lucas Smith. A WPL specifically would require a further statutory

	Can the Assembly please commit to keep a WPL on the agenda and consider its introduction alongside other measures? Speaking as a sustainable transport advocate frustrated with various aspects of the STZ, I can tell you that taxing larger businesses would give the GCP much-needed credibility by people on all sides of the debate.	consultation and so could not be implemented as part of a package on the basis of the consultation just held. It is worth noting that it is not quite correct to say that a WPL is a cost to employers but not employees. Whilst the charge is levied on employers, they may choose to pass this on to the employees that use the spaces and there would be no means of stopping them from doing so. Nottingham's experience with its WPL saw around 40% of employers pass on the costs to their employees. If implemented alongside the Sustainable Travel Zone, this would be likely to result in some people paying two different charges for the same car journey to work.
William Bannell	**Agenda Item 10 – Making Connections Consultation Feedback and the City Access Strategy** My question relates to the GCP making connections report, and the issue of pubic trust which has been destroyed in recent months by the manner and behaviour of Councillors with regard to the GCP plans for the city. This report is widely regarded as not credible, and not a genuine representation of what the public really thinks and feels. I'll give you 6 examples why: - GCP data and stats in the 2022 presentation were debunked at an early stage by residents, calling into question the overall validity of the presentation itself (debunked figures which are still on the website I would like to add). - In December the County Council voted against having the consultation independently verified. - In March the County Council voted against holding a proper referendum which would have provided us with an authentic	GCP has taken care to ensure the integrity of all materials and communications presented during our Making Connections consultation although where specific concerns are raised about errors we will investigate and where necessary correct them. As part of our standard governance and assurance process all of our business cases are independently audited, as was the Strategic Outline Case presented to the Executive Board last September. Any future business case development will likewise be independently audited. As part of the consultation process, GCP also engaged the Consultation Institute to provide an independent review of our approach. GCP met with a wide range of stakeholders in a series of formal and informal engagement events during the consultation, in order to maximise the number and variety of

	survey of opinion using the same strict rules as an election, which would have been credible and legitimate. - There were public meetings and engagements which took place over the consultation period which were not listed among the public engagements. - There was a meeting held with the GCP board at a local business which remained private and undisclosed to the public, not mentioned in the report. Maybe there were more secret undisclosed meetings. - And during the election, no candidate spoke in favour of the proposals, but did everything they could to avoid the issue and distance themselves from them. All this creates a very suspect picture, and Councillor's appear disingenuous. It is easy to understand why the people of Cambridge don't believe a word anyone here says. Can this Assembly carry on like everything is okay, or are they going to need to attempt to restore public confidence? How do Assembly members intend to address this issue of trust?	views received, which are being used to inform the next stages of our Making Connections programme. We have listed these in the consultation report but if you believe there have been specific omissions or oversights please let us know and we can if necessary correct them. The consultation period was a point in time for formal feedback on a specific question but as you would expect we continue to engage with stakeholders on an ongoing and as needed basis as a point of good practice. Decisions taken by the Cambridgeshire County Council, as well as electoral statements by candidates, are beyond GCP's responsibility and it would be inappropriate to comment on them.
David Stoughton Chair Living Streets Cambridge	**Agenda Item 10 – Making Connections Consultation Feedback and the City Access Strategy** Cambridge Living Streets welcomes the GCP report on the Making Connections consultation and calls on the Joint Assembly to endorse the call to action for active travel investment that it reveals. . 70% of respondents support the bus improvement strategy. An even higher 75% of respondents call for measures to improve walking and cycling. This overwhelming mandate for a shift in priorities towards	Secure, long-term funding for active travel improvements, and creating the space for better pedestrian facilities and a safer and more pleasant environment is a core part of the Making Connections vision. You are right that there is clear support from the public for the walking, wheeling and public realm elements of the Making Connections proposals. Revenue raised from the Sustainable Travel Zone (STZ) would be intended to support continuing improvements and

	more active travel must be converted into actions or politicians and officers risk losing public confidence and trust. As yet more evidence demonstrates that walking is the most used active travel mode, we question why it has been for so long the 'Cinderella' in transport investment? 65% of consultation respondents use it as their 'most common transport', reinforcing the point that walking - to work, to school and college, for shopping, leisure and access to amenities - is a key type of economic activity. Why haven't the GCP and politicians changed their mindset on walking and moved beyond fine words and dribbles of investment to deliver a comprehensive strategy for the whole city and beyond? Why is so little attention paid to pavement quality and amenities when the evidence shows these are the greatest determinants of the choice to walk? And why haven't they 'joined the dots' and recognised that investment that transforms our streets into safer and pleasanter environments also supports our health and wellbeing, cuts costs for the NHS and helps to save the planet?	maintenance of cycling, walking and wheeling infrastructure. The precise balance and detail of investment remains to be defined, in part on the basis of the response to this consultation. All of this evidence, including Living Streets Cambridge's response to the consultation, which was gratefully received, will form part of the evidence base that supports future decision making on how the sustainable travel fund should be best invested if some form of Making Connections proposals proceed. The City Access programme is not only the Making Connections proposals, although that is the focus of this meeting. It also includes work on a Road Network Hierarchy Review for Cambridge, which takes a whole-city approach to understanding which routes and areas can be prioritised for place-making and active travel, including pedestrians. An update on RNHR is planned for later this year. Elsewhere across the Transport Programme, GCP is committed to improving active travel in the Greater Cambridge area, and this includes walking and wheeling as well as cycling. In the proposed budget for the March 2023 Executive Board, around £125m was allocated to active travel projects. GCP are following the Active Travel Hierarchy that is adopted within the Active Travel Strategy for the County Council, this puts pedestrians at the top of the Hierarchy, and our schemes are designed taking this into account. We are providing for pedestrians across the Greenways network through reduction in speeds in urban areas to improve general safety, improvements to multiple crossings across the network and in some areas providing better segregation such as along Cowley Road, Milton Road and Histon Road.

Sarah Hughes Cambs Sustainable Travel Alliance	**Agenda Item 10 – Making Connections Consultation Feedback and the City Access Strategy** The Making Connections report clearly shows that the public would like better sustainable transport options: 70% are in favour of the proposed bus improvements and 75% of measures to improve walking, cycling and public spaces. Overall, only 17% of those polled by the GCP were against road charging in any form; many who opposed or were unsure about the STZ reported there were changes that would encourage them to support it. People will never be able to get to where they want to be safely, easily and affordably by bus, walking, wheeling or cycling while central government funding lacks a sustainable, long-term plan, and while bus services aren't under local control. Last October's bus service withdrawals would have left many villages without any service whatsoever, had the Combined Authority not funded tendered replacements. In February, the Government's three month extension to the Bus Recovery Grant was announced so late that some services had already been registered for withdrawal (again). In March, the Secretary of State for Transport announced cuts to active travel schemes in England outside London, including a two-thirds cut to promised capital investment in infrastructure for walking, wheeling, and cycling. A decision not to progress Making Connections would be a decision to perpetuate the sporadic, precarious funding situation, and a decision to tolerate aggravated traffic congestion, unreliable bus services and unsatisfactory conditions for walking, wheeling and cycling. It would	It is clear from the feedback from the consultation that there is a clear recognition of the transport issues facing our area, and a strong desire to see improvements to public transport and active travel. One of the most important aspects of the Making Connections programme is the potential to establish a stable, long-term funding source for public and sustainable transport for Greater Cambridge. The focus of today will be the Joint Assembly considering directly whether it considers it worth looking at potential amendments to the proposals that could balance the need to address the concerns we heard during the consultation but also the support we heard for the vision it sets out. I am sure they will welcome your comments which supports them in doing so.

	also be a decision to ignore the clear public message of support for sustainable transport. Given the precarious and short-term nature of central government funding for sustainable transport, does the Joint Assembly agree that, alongside bringing buses under contract to the local transport authority, they have a duty to work together to find a reliable funding source that is under local control?	
Neil Mackay Managing director Mackays of Cambridge Ltd	**Agenda Item 10 – Making Connections Consultation Feedback and the City Access Strategy** During public questions in Cambridge City Council on May 25th I addressed the City Council. In doing so I had assumed that they had conducted a detailed impact analysis on the true cost of the £50 per lorry per day tax proposed and devised a means to scrutinise that data. I asked "What is that total figure and how was it derived?" I also asked "What will the total additional cost burden be for all Cambridge businesses that will fall within the currently proposed Congestion Charge zone?" Why do I need to know? Because my business receives between 6 and 10 deliveries by lorry per day. Which I estimate is equivalent to £104,000 pounds per year out of pocket. Sadly I failed to receive an adequate reply to either question Councillor Davey the newly elected leader of the City council stated that "The work that has been done to date on small business is not as we would like it!!" I would therefore like to address the same questions to the GCP Assembly in the hope that the organisation that has put forward the proposals for consultation, will themselves, have done some really rigorous work on this crucially important area, which is of great interest to not just the business operators within the area, but also their employees and customers.	The Strategic Outline Business Case considered looked at a range of impacts, on which basis a preferred option was put out to consultation. It followed standard approach set out by central government of an iterative method of scheme development and appraisal. Preliminary assessment was undertaken in order to identify a preferred option for consultation at a formative stage, which is what we did last year. Part of the purpose of the consultation was to gather evidence of expected impacts that could support any future more detailed scheme development and assessment of impacts. We have now heard what both the public and various stakeholders, including business, said about the proposals – including similar opinions to those expressed in this question. Now is the time to digest all the data, all the views and reflect what to do next. Evidence of concerns around impacts on businesses, especially small businesses is flagged in the JA papers as an issue to consider if further work is undertaken and there may be a range of ways of responding to these concerns informed by the consultation.

		If the Board asks us to proceed with further scheme development, any future stage of technical work would involve a more detailed round of both scheme design and impact assessment, which would be presented to Executive Board members in advance of them being asked to make a recommendation. The final decision would be a matter for Cambridgeshire County Council as the charging authority.
Richard Wood Secretary, Cambridge Area Bus Users	**Agenda Item 10 – Making Connections Consultation Feedback and the City Access Strategy** Do Joint Assembly members agree that bus users in the Greater Cambridge area will remain unable to make convenient, affordable bus journeys, unless services are under local control and funding is sustainable, long-term and also under local control? October 2022's bus service withdrawals left many rural residents fearful of being unable to get to work, school/college, medical appointments or recreational activities, until the Combined Authority funded tendered replacements. Fears returned early this year, as the Government's three month extension to the Bus Recovery Grant was announced so late that some services had already been registered for withdrawal. Bus service provision in the Greater Cambridge area is over-ripe for reform – and has clear public support. The Making Connections report recorded 70% in favour of proposed bus improvements. Even those opposed to the Sustainable Travel Zone recognised – and in large measure supported – the need for better bus services. Whilst the commitment of the Greater Cambridge Partnership to collaborate with the Combined Authority to stabilise the network by	One of the most important aspects of the Making Connections programme is the potential to establish a stable, long-term funding source for public and sustainable transport for Greater Cambridge. It is certainly the case that the deregulated bus network nationally has been struggling, with passengers still below pre-COVID levels. Car traffic has recovered relatively more quickly, and we have therefore seen a car-led recovery from COVID. Last year, the Mayor of Cambridgeshire & Peterborough took the decision to step in and help support a number of services that otherwise would have been withdrawn as not commercially viable. The response to the consultation feedback has made it clear that people want the bus network to be able to support a level of social need that goes beyond what can be, and is currently being, provided on a commercial basis. The question now is how to deliver that. The technical work that has led us to this point shows us that we need both revenue and a reduction in overall traffic levels to deliver that reliability and service that will give people genuine alternatives.

	bringing bus provision under local control is welcome, this is not enough. Bus service funding can neither rely solely on farebox revenue nor upon the vagaries of sporadic, precarious, central government grants. Do Joint Assembly members agree that, alongside bringing buses under contract to the local transport authority, they have a duty to work together to find reliable, sustainable funding sources which are under local control? Do Joint Assembly members further agree that any decision to abandon (rather than modify) the Making Connections proposals would be a decision to ignore the clear public message of support for sustainable transport, a decision to tolerate aggravated traffic congestion, and a perpetuation of unreliable, declining, bus services?	It is now for the Joint Assembly and Executive Board to decide whether and how to adapt the proposals in order to respond to public feedback in the consultation, and build a scheme which addresses our area's transport needs.
Sara Lightowlers on behalf of the group Cambridgeshire Parents for the Sustainable Travel Zone'	**Agenda Item 10 – Making Connections Consultation Feedback and the City Access Strategy** The Making Connections Report shows that there is significant concern amongst local residents and groups that the proposed Sustainable Travel Zone could disadvantage low-income groups. However, data suggests that these groups also disproportionately bear the serious harms of the status quo: air and noise pollution, and congested, unsafe roads. This is despite the fact that households in the lowest income areas contribute less to these problems due to lower rates of car ownership, fewer diesel vehicles, and fewer miles driven. In 2021, 38% of households in the lowest income quintile nationwide (compared with 16% in the highest quintile) did not own a car; infrequent and unreliable public transport provision is likely to be a major problem for this group, particularly for families who may be making multistep journeys.	GCP is committed to making sure that any proposal does not disadvantage those on low incomes, and that there is a more affordable alternative to the private car as a primary mode of travel. Alongside the consultation materials we published preliminary SDIA, HIA and EqIA documents. These are of course living documents and will be updated to reflect evidence gathered during the consultation, as well as to reflect any scheme changes, if the Board instructs us to proceed with further work. Our consultation materials emphasised that a scheme would have a range of Discounts, Exemptions, and Reimbursements (DERs) available, including a proposed low income discount, so that the Sustainable Travel Zone is not exclusionary based on wealth. The detailed public feedback on the way in which

	What assessment has the GCP made of the impacts, both economic and on health outcomes, on low income families, of the current proposals versus the status quo?	those DERs were set out that will help us with more detailed scheme design if the Board ask us to proceed. You are correct to point out that the package proposed was not only the zone but the approximate doubling in scale of the bus network through a range of service and route improvement and fare reductions – all of which would be expected to disproportionately benefit those on lower incomes who are more likely to be bus passengers and more likely to be underserved, isolated and let down by the status quo. You are also correct to point out the evidence shows that people on lower incomes suffer disproportionately from the environmental and health impacts caused by traffic congestion and pollution.
Josh Grantham on behalf of Camcycle	**Agenda Item 10 – Making Connections Consultation Feedback and the City Access Strategy** The consultation shows strong support for active travel and public transport improvements and Camcycle believes that by making the scheme better and fairer we can achieve a high quality transport system for everyone. **BETTER** As noted in 3.12, many people have reminded the GCP that Making Connections must not be allowed to become solely about the bus network. 75% of consultation respondents cycled, with strong support for improved cycleways and secure cycle parking, including among those who opposed a road charge. The most popular sustainable travel measure was making the city more accessible for disabled people. The GCP should start delivering more active travel improvements that people want now on top of already scheduled projects.	In addition to the Making Connections proposals which are the focus of today, the GCP's City Access programme includes work to develop an Integrated Parking Strategy which would consider the whole approach to parking across Greater Cambridge including how to tackle any unintended consequences of a potential STZ such as how to stop vehicles being left at the edges of the proposed Zone. An update is planned for later this year. With regards to bus fare pricing, I believe the proposal is that both Milton and Histon bus fare would be £1 - the rationale being that the £1 flat fare would apply to the current Stagecoach Megarider Zone and the £2 fare the Megarider plus zones.

	This must include links between towns and villages, not just into and within Cambridge. The GCP should also fast-track progress on the road network hierarchy and residents' parking schemes to free up road space for active travel. **FAIRER** Motor traffic reduction and a reliable source of funding are essential for better active travel, so it is vital that the GCP delivers a plan that will work. To address concerns, progress is needed on an appropriate scheme of exemptions. For example, a Workplace Parking Levy for the Biomedical Campus could ensure larger employers contribute while providing the necessary exclusions for those visiting the hospitals. Extending the zone to weekends but adding a system of free passes could provide more flexibility for people's different circumstances while still tackling traffic issues. People in Cambridgeshire need better walking, cycling and wheeling infrastructure now and the guarantee of a scheme that will prioritise sustainable transport for the future. Will the GCP commit to strengthen its commitment to active travel by ring fencing funding and bringing forward new schemes and ensure the effectiveness of a revised STZ for funding and traffic reduction?	Of course with any such boundary it will create what feels like a slightly artificial distinction between places close to one another that are just inside and just outside the boundary. These fare proposals, like everything in the consultation, were indicative and subject to change as more detailed work on bus service options progresses and depending on how the Board steers us to proceed in response to the consultation. The rationale for aligning with existing commercial fare zones was to allow rapid implementation of proposed bus improvements funded by the £50m the GCP board has set aside from the city deal to front-fund bus improvements before any charge comes into place. The consultation set out that these could start as early as next year depending on decision timing. Fare reductions could be one of the quickest things to implement if planned to align with the existing system. There would be scope over time to review and amend the fare structure and deal with any anomalies that do arise, particularly if the Mayor takes forward a franchised network in which case the ongoing fare structure would be matter for the CPCA.

Greater Cambridge Partnership Joint Assembly
Public Questions Protocol

PLEASE READ THE PROTOCOL AND THE NOTES BELOW BEFORE SUBMITTING YOUR QUESTION

Notes: The Joint Assembly Chairperson has confirmed that when exercising their discretion to allow questions to be asked at meetings, they intend to apply the following principles:

- Questions should relate to matters on which members are being asked to reach a decision.
- Multiple questions by the same person on the same agenda item will not be accepted.
- GCP officers will not read out questions on behalf of those concerned. The expectation is that those asking questions will do so personally (or by someone else they nominate to do so on their behalf) *. Where this is not possible questions will be handled as routine correspondence and a written response provided.
- The 300 word limit will be applied strictly and questions exceeding this limit will be automatically rejected.

* where possible the option of remote attendance will be offered, but not all venues used have the equipment necessary to enable this.

At the discretion of the Chairperson, members of the public may ask questions at meetings of the Joint Assembly. This standard protocol is to be observed by public speakers:

- Notice of the question should be sent to the Greater Cambridge Partnership Public Questions inbox [**public.questions@greatercambridge.org.uk**] no later than 10 a.m. three working days before the meeting.
- Questions should be limited to a maximum of 300 words.
- Questioners will not be permitted to raise the competence or performance of a member, officer or representative of any partner on the Joint Assembly, nor any matter involving exempt information (normally considered as 'confidential').
- Questioners cannot make any abusive or defamatory comments.
- If any clarification of what the questioner has said is required, the Chairperson will have the discretion to allow other Joint Assembly members to ask questions.
- The questioner will not be permitted to participate in any subsequent discussion and will not be entitled to vote.
- The Chairperson will decide when and what time will be set aside for questions depending on the amount of business on the agenda for the meeting.
- Individual questioners will be permitted to speak for a maximum of three minutes.
- In the event of questions considered by the Chairperson as duplicating one another, it may be necessary for a spokesperson to be nominated to put forward the question on behalf of other questioners. If a spokesperson cannot be nominated or agreed, the questioner of the first such question received will be entitled to put forward their question.
- Questions should relate to items that are on the agenda for discussion at the meeting in question. The Chairperson will have the discretion to allow questions to be asked on other issues.

The deadline for receipt of public questions for this meeting is 10:00 a.m. on Monday 4th September 2023

Agenda Item No: 6

Making Connections Outline Business Case and Next Steps

Report to: Greater Cambridge Partnership Joint Assembly

Date 7th September 2023

Lead Officer: Lynne Miles – Director of City Access, GCP

1 Background and Recommendation

1.1 The GCP's public transport improvements and City Access strategy sit at the heart of the City Deal. They aim to address some of the major pressures on the local economy and mitigate future risks of non-intervention by reducing congestion and pollution, and by providing people with better, healthier, more sustainable options for their journeys.

1.2 In 2014 the Greater Cambridge City Deal struck with the Coalition government tasked this area with establishing the GCP Executive Board to take shared democratic decisions on behalf of its partner organisations: Cambridge City Council, South Cambridgeshire District Council and Cambridgeshire County Council (CCC) working with the business and education community. The purpose of the deal was to support delivery of the Local Plans' visions for sustainable and inclusive growth in Greater Cambridge; to allow the area to fulfil its potential in supporting national economic success benefitting the UK economy and wider society, whilst ensuring that the growth is inclusive and sustainable.

1.3 Since then, on behalf of its partner organisations, and alongside the Cambridgeshire & Peterborough Combined Authority (CPCA), the GCP Executive Board has developed and is now delivering a £1bn programme of public and private investment, primarily in transport infrastructure, to support the growth vision set out by the current local plan.

1.4 Alongside this, the Board tasked officers, initially in 2015, with developing a proposition that could frame that infrastructure investment with demand management measures. The objective being to improve public transport services by reducing the congestion in and around the city that was damaging the economy and making Greater Cambridge a less attractive place to live, work and do business.

1.5 The GCP is a time-limited organisation whose overarching objective is to deliver investment over 15 years, through the consensus decision making of the three partner authorities, and works in collaboration with the Mayoral Combined Authority. The GCP will not implement the recommendations of this paper but, if partner

organisations choose to take them forward, they will maximise the value, impact and potential of the GCP's infrastructure investment across the rest of its programme.

1.6 If a STZ were approved, the GCP would also leave a funding legacy to the city region, by using a proportion of a one-off central government funding agreement for the city region (the City Deal of £500m over 15 years) and investing it such that it secures an ongoing locally-raised and directed revenue source, which would be legally ringfenced to spend on achieving transport objectives. It offers an ongoing means of funding bus service provision in the public interest rather than on a (declining) commercial model, and funding infrastructure provision and maintenance for years to come in a wider context of increasing pressures on local government core funding.

1.7 The recommendation from officers is that this package has the potential to make a significant contribution to the objectives the GCP Board collectively set for itself. It is the culmination of several years of work to provide a recommended answer to the challenge first set by the Executive Board in 2015, which has included several rounds of public consultation and the UK's first Citizens Assembly on transport policy. Various other solutions have been considered over the last eight years. These these recommendations are the result of many years of conversation with the residents and workers of Greater Cambridge and beyond. These conversations have focused on asking people what they want public and sustainable transport to look like, and how to deliver it, in an environment where there are no easy solutions and marginal interventions have proved inadequate for the scale of the challenge.

1.8 The Joint Assembly is asked to comment on the Outline Business Case, and in particular to assess whether it supports a modified scenario 1 (Scenario 1A), as described in section 5, as the preferred option to achieve scheme objectives whilst responding to consultation feedback.

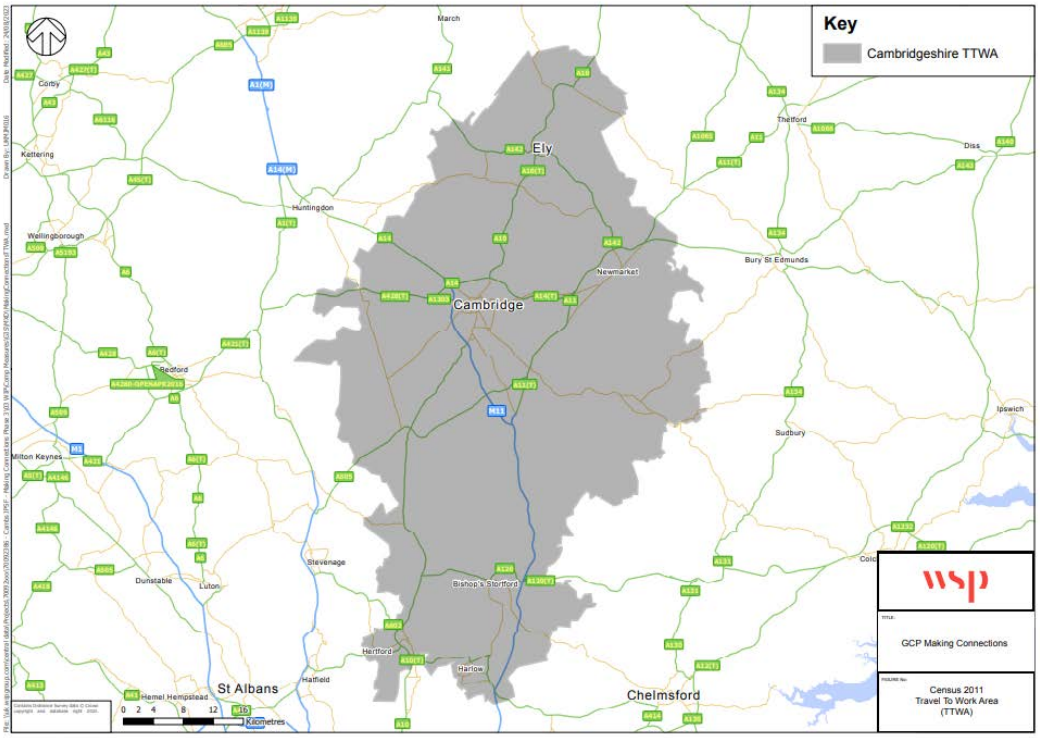
Context: growth and capacity

1.9 The Greater Cambridge area is forecast to grow significantly. Successive development plans over the last 20 years have supported the economic success of the area and provided for housing and employment land to support that growth. The adopted Cambridge and South Cambridgeshire Local Plans plan for 44,000 more jobs and 33,500 homes by 2031.[1] The 2021 Census showed that significant population growth has already taken place, with 35,000 more Greater Cambridge residents than in 2011.[2] Greater Cambridge is a net 'importer' of workers, with a travel to work area stretching beyond Cambridgeshire into parts of Hertfordshire, Essex, and Suffolk.

[1] Cambridge Local Plan 2018 https://www.cambridge.gov.uk/media/6890/local-plan-2018.pdf; South Cambridgeshire Local Plan 2018 https://www.scambs.gov.uk/media/17793/south-cambridgeshire-adopted-local-plan-2018.pdf

[2] https://www.ons.gov.uk/visualisations/censusareachanges/E07000008/ https://www.ons.gov.uk/visualisations/censusareachanges/E07000012/

Figure 1: Cambridge Travel to Work Area (TTWA)[3]



1.10 Growth in Greater Cambridge over the past decade was faster than had previously been forecast which has led to upward revisions of the growth trajectory for the next local plan period. Additional growth is also expected from the emerging joint Greater Cambridge Local Plan covering the period to 2041. There is also significant planned growth in the wider travel-to-work area as set out in neighbouring authorities' Local Plans. All of this means that travel demand is expected to continue to increase.

1.11 Evidence from the past decade is that the pace of population and employment growth has cancelled out the benefit of marginal gains in mode shift arising from previous active travel investment, parking charges and other policies aimed at encouraging people out of their cars and onto sustainable modes[4]. Given the rate of growth projected a step change will be required to deliver Net Zero objectives.

1.12 In July 2023 the Secretary of State for Levelling Up, Housing and Communities announced a "Long-term plan for housing" which placed particular emphasis on ambitions for growth in housing and research space in Cambridge, and to address current constraining factors including congestion and the need for effective sustainable transport networks.[5] Any government proposals for further development in Cambridge, including urban redevelopment and densification, will increase the

[3] Source: Office for National Statistics Travel to Work Areas. TTWAs are still defined using 2011 Census travel to work data because the 2021 census was undertaken during 'work from home where possible' COVID lockdown instructions.
[4] Technical Assessment of the impact of measures proposed as an alternative to fiscal options to address future congestion in Cambridge, 2019 https://greatercambs.filecamp.com/s/kLtJXgfboUIdzqnC/d
[5] Long-term plan for housing: Secretary of State's speech - GOV.UK (www.gov.uk)

necessity and urgency of system-wide intervention due to additional journeys and transport demand.

1.13 This forecast growth has implications for how people make journeys in Greater Cambridge. Much of the additional employment growth will be located in areas outside the city centre which are less well served by the current public transport network. Between 2010 and 2019 the number of motor vehicles entering and leaving Cambridge's radial cordon increased by 9%, even with a higher proportion of people travelling by public transport and active modes in 2018 than in 2011.[6] Although car traffic is currently lower than 2019, it is almost back to pre-COVID levels.[7] Congestion causes daily misery for people trying to access jobs, education and services, as well as contributing to high levels of pollution and emissions. 115 deaths in Greater Cambridge in 2021 were estimated to be attributable to poor air quality (to which transport contributes)[8]. Transport was also the second largest contributor to greenhouse gases emissions in Cambridgeshire in 2020, accounting for 23% of emissions.[9]

1.14 Congestion undermines the bus network, making services slower, less reliable and therefore less attractive - and ultimately, less economically viable. This creates a vicious spiral where congestion causes bus services to be worse, leading more people to feel they have no viable alternative other than to drive, which increases congestion and further worsens bus services. High levels of congestion can also make walking, cycling and wheeling less safe and attractive as alternatives.

1.15 Some parts and people of Greater Cambridge and the wider travel-to-work area are being held back by a lack of any viable public transport or safe walking and cycling routes. Poor transport connections compromise social fairness by limiting access to jobs, education, training and leisure opportunities. This can isolate people and communities, creating a less socially integrated area. Without additional funding, existing bus routes are likely to continue to become less viable and more services are likely to be reduced or withdrawn.

1.16 Recovery from the Covid-19 pandemic has shown car trip levels return close to pre-pandemic levels (-7% in March 2023 from February 2020), whilst bus patronage, walking and cycling have begun to recover more slowly (-13%, -10%, and -29% respectively compared with pre-pandemic levels)[7]. The risk of a car-based recovery remains, potentially worsening existing congestion, pollution and emissions issues.

1.17 Planned growth in the Greater Cambridge area, plus additional growth from the emerging joint Greater Cambridge Local Plan means that, even with more flexible

[6] Technical Assessment of the impact of measures proposed as an alternative to fiscal options to address future congestion in Cambridge, 2019 https://greatercambs.filecamp.com/s/kLtJXgfboUIdzqnC/d

[7] Cambridgeshire County Council, 'Quarterly Transport Update: Cambridge & South Cambridgeshire COVID-19 Transport Impacts & Recovery' April 2023 https://cambridgeshireinsight.org.uk/roads-transport-and-active-travel/transport-data-insights/

[8] Source: Cambridge City Council (2022). Air Quality Annual Status Report based on data from Office for Health, Improvement and Disparities: https://www.cambridge.gov.uk/media/11277/air-quality-annual-status-report-2022.pdf

[9] Department for Business, Energy & Industrial Strategy, UK local authority and regional greenhouse emissions national statistics, 2005-2020 https://www.gov.uk/government/statistics/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics-2005-to-2020

working than pre-pandemic, pressure on the transport network will grow. Many (more) people will still need to travel, not just for work but also for education, to access services including health services, and for leisure and retail – and the GCP agenda is encouraging, wherever possible, those journeys to be made using ultra-low or zero-emission public transport or by cycling, walking or another active travel option.

Context: climate emergency, cost-of-living crisis, and public health

1.18 Climate change and the cost-of-living crisis are both issues of great concern, and tackling them is more important than ever. The City Access programme, including Making Connections, represents a crucial opportunity to take meaningful and urgently needed action on both matters. The delivery of an affordable, attractive sustainable transport network is vital if the Greater Cambridge area is to remain a vibrant and attractive place to live, work, visit, and offer an excellent quality of life to its residents. In addition, the impact of car dependency on levels of physical activity and obesity, and unequal access to car travel for those with lower personal mobility, make transport investment a public health and equity issue.

1.19 Summer 2023 has seen climate temperature records broken, and severe heatwaves and weather events have had an impact across Europe and the world.[10] Climate scientists and the head of the UN have expressed deep concern about an "era of global boiling", with July 2023 set to be the world's warmest month on record.[11]

1.20 All three GCP Partner Councils have declared a climate emergency, committing themselves to finding ways to reduce the region's impact in the form of carbon emissions and air pollution. Cambridge City Council's Climate Change Strategy aspires for "*Cambridge to be net zero carbon by 2030*"[12] and South Cambridgeshire's Zero Carbon Strategy to "*halve carbon emissions by 2030 and reduce them to zero by 2050*".[13] Similarly, in May 2019, Cambridgeshire County Council also declared a climate emergency and has published a 'Climate Change and Environment Strategy' for the County of Cambridgeshire to be net-zero by 2045.[14]

1.21 Transport accounts for the single largest segment of carbon emissions in Greater Cambridge (33.4% in 2020), and the second-largest segment in Cambridgeshire as a whole (23.2%).[15] Addressing the portion of emissions which are caused by the way we travel is therefore a vital part of an effective climate strategy.

1.22 At the same time, sustained inflation and cost-of-living increases continue to place greater financial pressure on the residents of Greater Cambridge, making transport costs more expensive and increasing the need for better, more reliable, and more affordable public transport and active travel options. This is especially true for those who currently have no alternative to paying a disproportionate fraction of their

[10] Climate records tumble, leaving Earth in uncharted territory - scientists - BBC News; Europe and US heatwaves near 'impossible' without climate change - BBC News
[11] Climate change: July set to be world's warmest month on record - BBC News
[12] Climate Change Strategy - Cambridge City Council, p.13
[13] scdc-zero-carbon-strategy-web.pdf (scambs.gov.uk), p.5
[14] Part 1 - Climate Change and Environment Strategy 2022 (cambridgeshire.gov.uk)
[15] UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2020 - GOV.UK (www.gov.uk)

household income (as much as 25% or more[16]) to keep a car on the road, or who cannot afford one at all.

1.23 'Forced Car Ownership', whereby those on low incomes are forced to own and use cars due to affordable housing being located far from their destinations and a lack of reliable or affordable public transport, drastically increases vulnerability to unexpected expenses and reduces the ability to cover utility and fuel costs and repay debts.[17] In the current climate of elevated energy bills and higher interest and mortgage rates, providing an improved public transport alternative thus becomes an even greater priority.

1.24 Poor service under the current system of public transport results in unequal access to opportunities such as education, jobs, healthcare, leisure, and green spaces, and a lack of confidence amidst abrupt service cancellations and route cuts.[18] English households on the lowest 20% of incomes are more than twice as likely to have no access to a car than those in the wealthiest households, and in 2019 they travelled half as far by car as their wealthier counterparts.[19] Moreover, those who benefit least from personal vehicle use are often those most impacted by the air quality, noise, and health disbenefits of heavy-traffic areas.

1.25 Alongside the relationship between income and employment type, people facing relative health and mobility issues are also less likely to own a car. For example, in Greater Cambridge 38% of people with lower levels of personal mobility, whose day-to-day activity is limited by a long-term illness or health problem, do not own a car[20]. In addition, the population classed as obese is rising: nearly a third of children aged 2 to 15 are overweight or obese and younger generations are becoming obese at earlier ages and staying obese for longer. According to Public Health England, physical inactivity is a main risk factor for obesity[21].

1.26 Moving away from a car-first network can help transform our city and economy into one which is more inclusive and equitable.

1.27 To ensure that any Making Connections package does not further exclude those on lower incomes from travel throughout Greater Cambridge, the proposals as consulted on in 2022 included plans for reduced bus fares and a low-income discount. The cost of living has emerged as a key concern in the responses to the Making Connections 2022 consultation, which have been responded to by further work developing the discounts, exemptions, and reimbursements, as well as an Equalities Impact Assessment.

[16] On the side of motorists | IPPR
[17] Mattioli, Giulio, "'Forced Car Ownership' in the UK and Germany: Socio-Spatial Patterns and Potential Economic Stress Impacts", Social Inclusion, 5:4, 2017, p.147-160
[18] Anger as Stagecoach East announces 21 bus route closures in Cambridgeshire (cambridgeindependent.co.uk); Cambridge students 'angry' as Stagecoach bus cuts will make it 'impossible' to get to college - Cambridgeshire Live (cambridge-news.co.uk)
[19] On the side of motorists | IPPR
[20] ONS Census (2021). Car or Van Availability by Long-Term Health Problem
[21] Health matters: obesity and the food environment - GOV.UK (www.gov.uk)

Future transport vision

1.28 To address current and future transport issues, tackle climate change, help address the public health challenge and secure the inclusive and sustainable growth of our area, we need to reduce car dependence and promote the use of sustainable modes of transport wherever possible. Offering a real competitive alternative to the car has three key elements:

- New sustainable transport infrastructure;
- An enhanced network of affordable public transport services; and
- Creating space for sustainable transport and discouraging car use.

1.29 The bulk of investment in the GCP's sustainable infrastructure plan is building new, high-quality, segregated infrastructure for active travel and public transport. Delivery of the GCP's infrastructure programme is underway with improvements being made across Greater Cambridge over the next four years. This capacity is necessary to meet the growth proposals as outlined in the current adopted Local Plans as mentioned above.

1.30 The City Access programme will amplify the impacts of this City Deal investment and advance the latter two points – creating the conditions to provide more people with genuine alternatives to car travel which must happen first, before discouraging car use for those who will then have alternatives.

GCP City Access Programme

1.31 The City Access Programme has explored ways to deliver better, more competitive sustainable transport, particularly within Cambridge's constrained urban environment, including the narrow historic streets in the city centre. The Programme comprises the following parts:

- the Making Connections programme – focusing on transformational improvements to the bus network, improving the city's active travel environment, and reducing congestion and pollution – which is the focus of this paper;
- development of an Integrated Parking Strategy, including the delivery of further Residents' Parking Schemes;
- making best use of the city's road network, through a Road Network Hierarchy Review; and
- exploring ways to reduce commercially-generated congestion through freight consolidation.

1.32 The objectives of the programme are to:

- contribute to the overall GCP Board objective to reduce traffic by 15% from the 2011 baseline, freeing up road space for more public transport services, and other sustainable transport modes;
- ensure public transport is more affordable, accessible and connects to where people want to travel, both now and in the future;
- raise the money needed to fund the delivery of transformational bus network changes, fares reductions and improved walking and cycling routes;

- make it safe and attractive to walk and cycle for everyday journeys;
- support decarbonisation of transport and improvements to air quality; and
- make Greater Cambridge a more pleasant place to live, work travel or just be.

1.33 To support the development of the programme, extensive technical work has been undertaken and set out in detail in earlier papers.[22] This technical work has shown that:

- the scale of the challenge is such that significant measures are needed to address the issues;
- any package needs to combine interventions to support the uptake of public transport with one or more measures to discourage car use in order to maximise impact and free up road space; and
- the introduction of measures that discourage car use must be timed to ensure people have realistic alternatives in place first.

Previous technical work and consultation

1.34 The evolution of proposals to fulfil the City Access objectives since 2015 – when GCP was created – has been refined by five formal consultation exercises. Early engagement included Our Big Conversation (2017), Choices for Better Journeys (2019) and the Greater Cambridge Citizens' Assembly (2019), while more recently Making Connections consultations took place in 2021 and 2022.

1.35 Appendix 1 summarises the timeline of consultation, engagement and technical work for City Access and Making Connections which has shaped the options consulted upon and then assessed in the OBC and has cumulatively led to the recommendations set out in this paper.

1.36 Previous technical work identified several options which were consulted on as part of the Making Connections 2021 consultation, namely parking charges including a workplace parking levy (WPL), a pollution-based road user charge and a congestion-based road user charge (called a flexible charge in the 2021 consultation). This received almost 2,500 responses, and key findings included:[23]

- 71% of respondents supported the overall aims of reducing carbon emissions, tackling pollution and congestion, and improving public transport;
- 78% of respondents supported the proposals to improve and expand the bus network with cheaper, faster, more frequent and reliable services to more communities;

[22] See particularly 30th September 2021, 28th September 2022, and 29th June 2023 GCP Executive Board meetings and their associated technical papers (linked at the end of this report): https://cambridgeshire.cmis.uk.com/ccc_live/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/1571/Committee/26/SelectedTab/Documents/Default.aspx; https://cambridgeshire.cmis.uk.com/ccc_live/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/1853/Committee/26/Default.aspx; and https://cambridgeshire.cmis.uk.com/ccc_live/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/2125/Committee/26/Default.aspx

[23] Making Connections 2021 Consultation: Report of Consultation Findings https://www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/GCP-Making-Connections-report-13June22.pdf

- 68% supported reducing traffic to improve walking and cycling, while 52% supported reducing traffic to improve public spaces.
- options that involved charging cars for driving in an area were preferred to options involving additional or new parking charges.

1.37 The results of the 2021 Making Connections consultation informed a range of further technical work that underpinned the Strategic Outline Case (SOC), which was presented to the Executive Board on 28th September 2022[24], alongside the launch of a major public consultation on an indicative proposal package.

1.38 The SOC of 2022 considered alternative options to a road user charge including a Workplace Parking Levy (WPL) and a pollution (ULEZ-style) charge. The assessment concluded that those alternative options would perform significantly less well than a Sustainable Travel Zone (STZ) in terms of overall traffic reduction which would be key in delivering reliable bus services.

2 Consultation and Engagement

2.1 Following this, the Board agreed to run a second Making Connections public consultation from 17th October to 23rd December 2022, consisting of a major public survey which received over 24,000 responses, alongside demographically representative opinion polling, written submissions from organisations in the Cambridge travel-to-work-area, targeted meetings with representative and seldom-heard groups, and ran a series of in-person and virtual engagement events. GCP also commissioned an independent audit of its consultation approach from the Consultation Institute (tCI).

2.2 The three elements of the proposal package as consulted upon were:

- **Transforming the Bus Network**: Adding new routes, additional services, cheaper fares and longer operating hours. This bus network would be front-funded by the city deal during a ramp up period so that public transport improvements were in place before any charge.
- **Investing in sustainable travel schemes**: Alongside bus improvements, it was proposed to set aside part of the scheme revenues to invest in new sustainable travel schemes, such as better walking and cycling links.
- **Creating a Sustainable Travel Zone (STZ)**: The final part of the Making Connections proposals was for the introduction of a Sustainable Travel Zone in the form of a road user charge operating from 7am to 7pm on weekdays, and money raised would fund improvements to the bus network and sustainable travel schemes. This could be gradually introduced from 2025 and be fully operational in 2027/28. The introduction of the STZ was proposed to operate only once bus improvements had been implemented.

2.3 The consultation proposal package also included a list of proposed Discounts, Exemptions, and Reimbursements (informed by the previous consultation and

[24] Executive Board Agenda Pack 20th September 2022 (Item 7)
https://cambridgeshire.cmis.uk.com/ccc_live/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/1853/Committee/26/Default.aspx

engagement with key stakeholders in Autumn 2021) and asked for public feedback on what was proposed.

2.4 The results of this consultation have been used to inform the development of the Making Connections OBC, as presented in and alongside this paper.

2.5 The headline conclusions of the consultation can be found in the Appendix 1 to this paper and in the Consultation Analysis Report[25]. The consultation analysis presented in the report was independently reviewed by the Consultation Institute and the report of their findings is also available online[26]. Subsequent technical work has continued to analyse consultation feedback to inform development of the OBC, such as the Equalities Impact Assessment, Business Impact Assessment, and work on Discounts, Exemptions, and Reimbursements.

3 Options Assessment Report and scenario assessment

3.1 An Options Assessment Report (OAR) was published alongside the Strategic Outline Case (Sept 2022) and has now been updated to consider how the consultation scheme could be adapted to address both concerns and opportunities identified during the public consultation.

3.2 The consultation responses to the Making Connections package can be grouped into four broad categories:

- Changes to the parameters of the Sustainable Travel Zone scheme (such as hours of operation, charge level or boundary)
- Changes to the suite of discounts, exemptions or reimbursements
- Changes to the bus or wider sustainable transport offer that is funded and complementary to the Sustainable Travel Zone
- Elements considered not necessary to be changed in response to the consultation.

OAR Assessment of Scenarios

3.3 The analysis demonstrates that all the scenarios have positive impacts in terms of congestion and environmental benefits, and they all deliver varying levels of funding to facilitate transformation of the bus network and sustainable travel measures. The duration of benefits throughout the day is dependent on whether the scenario has peak hour or all day STZ charges and the level of funding available also varies depending on the hours of charging, but also the extent to which additional discounts are given.

3.4 This finding suggests all three scenarios, alongside the consultation scheme, have potential merit in terms of their strategic impact. Therefore, the OAR recommended that all scenarios are taken forward for more detailed assessment during the OBC stage. The do minimum/No STZ scenario is also included as a baseline.

[25] https://www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/Making-Connections-22/MC22-consultation-report.pdf
[26] https://www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/Making-Connections-22/MC22-independent-review.pdf

3.5 The table below describes the five scenarios considered in the updated Options Assessment Report:

Table 1 – Scenarios considered in the OAR

Option	Hours (weekdays)	Charge	Additional discounts
Consultation Proposal	7am-7pm	£5 (cars) £10 (vans) £50 (HGVs, coaches)	
Scenario 1 Peak only proposal	AM and PM peaks only	£5 (cars and smaller vans)	Smaller vans charged as cars 100% discount for hospital visitors and patients (and staff who park at the hospital)
Scenario 2 Consultation proposal + free days	7am-7pm AM phased in 2026 All-day 2027 or 28	No change	180 free days 2026 (AM only scheme) 180 free days 2027 100 free days 2028 50 free days 2029
Scenario 3 Minimalist option	AM and PM peaks only	£3 (cars)	100% discount for hospital visitors and patients (and staff who park at the hospital) 100 free days in 2027 and 2028
Do minimum (No STZ)	n/a	n/a	n/a

4 Outline Business Case and associated technical work

4.1 The Outline Business Case (OBC) further develops and assesses the scenarios; building on the preliminary assessment in the OAR and incorporating the findings of further technical work undertaken subsequent to the Strategic Outline Case stage.

4.2 It pays particular attention to options for responding to the findings of the 2022 consultation, alongside ongoing stakeholder engagement and previous updates and discussions at the Joint Assembly and GCP board.

4.3 It provides a summary of the options appraisal process as well as the benefits and disbenefits of the scenarios being appraised.

4.4 The scenarios assessed in the OBC are neither exhaustive nor final. The intention of the OBC is that it includes a range of option variants and sensitivity tests to help decision-makers understand the traffic, revenue and other wider impacts of further refinements that could be made to the scenarios, such as amending discounts or the bus improvement measures. **Thus, the OBC provides a technical foundation and evidence base on the impacts of a range of scenarios, allowing some flexibility to develop consensus on a preferred option**.

Table 2 – Refined scenarios & variants considered in the OBC

	Charge	Time	Implementation	Additional Discounts (to those consulted on)
Consultation Scheme	£5 for cars £10 LGV £50 HGV	7am-7pm weekdays	AM only 2026	
Scenario 1	£5 for cars £10 LGV £50 HGV	AM/ PM weekdays	starts 2027	Hospitals (patients and visitors) Smaller vans as cars
Scenario 1A	£5 for cars £10 LGV £50 HGV	AM/ PM weekdays	starts 2027	SME business discount 50 free days indefinitely
Scenario 2	£5 for cars £10 LGV £50 HGV	7am-7pm weekdays	AM only 2026	180 Free days 2026, 2027 100 Free days 2028 50 Free days 2029
Scenario 3	£3 for cars £10 LGV £50 HGV	AM / PM weekdays	starts in 2027	Hospitals (patients and visitors) 100 Free days 2027 100 free days 2028
Do minimum (No STZ)	Ref Case	n/a	n/a	n/a

4.5 There will be scope for further refinement of a preferred option beyond the OBC, but these are expected to be variations of a preferred scheme, as opposed to more substantive changes to the headline parameters of geography; time of day; charge levels; discounts; exemptions; reimbursements; and the scale of the wider bus and sustainable transport package.

Findings of the OBC

4.6 Overall, the OBC demonstrates that Scenarios 1, 2 and 3 achieve traffic reduction and are capable of funding bus and sustainable transport measures and, in general, contribute positively towards achieving objectives. The key consideration is about the *scale* of benefits and the extent to which they achieve the original objectives set, which must be balanced with questions of public and political acceptability.

4.7 The headline conclusion from the technical work is that an all-day scheme remains the most impactful against the scheme objectives, and that a reduction in charge level from £5 to £3 would:

- struggle to deliver the scale of benefits envisaged;
- offer a much more limited impact on traffic reduction; and
- pose a greater financial risk to the charging authority against wider economic turbulence.

4.8 Given the issues raised during the consultation and wider engagement Scenario 2 (all day charging with free days) represents the solution which best achieves scheme objectives, from a technical and analytical perspective. It:

- has the ability to deliver the largest level of bus and sustainable travel improvements that 70% of consultation respondents said they wanted;
- offers some response to consultation concerns
- goes furthest of the three scenarios towards achieving scheme objectives.

4.9 However, the Business Impact Assessment work suggests that, of the three scenarios, this would have the highest negative impact on small businesses in particular, a major issue flagged in consultation responses. And, unless free days were retained indefinitely (a variant tested in the OBC) it does less to respond to consultation concerns of the 58% who opposed the STZ than the other scenarios.

4.10 Scenario 1 (AM and PM peak hours of operation):

- is forecast to reduce traffic when it is at its worst (i.e., during peak hours) almost as much as scenario 2;
- would provide investment to offer a substantial improvement in public transport investment when compared against the current bus network in Greater Cambridgeshire;
- goes further than Scenario 2 in terms of responding to consultation feedback on STZ concerns, and further in addressing issues raised in the Business Impact Assessment and Equalities Impact Assessment.

4.11 Scenario 3 performs the least well against objectives of the three scenarios:

- It offers more limited impacts on traffic and a reduced opportunity to transform funding for buses and sustainable travel – adding free days to further address consultation concerns would reduce the impact still further;
- There are concerns in terms of the Equalities Impact Assessment and Social and Distributional Assessment in relation to the reduction in bus service options for those without access to a car and those in rural areas most costly to serve by bus;
- It offers limited scope to include further additional discounts or reductions to charge levels given the lower level of funding generated.

4.12 However, Scenario 3 goes furthest in modifying the STZ proposition in response to the 58% of those who oppose the consultation version of the STZ.

4.13 The ‘No STZ’ option is not recommended because

- performance against objectives is forecast to be negative (i.e., the future situation will worsen compared to the current situation).
- this has significant negative equalities implications, in particular for those on lower incomes or who for other reasons have no access to a car and are currently poorly served by the commercial bus network, which is in the process of long term structural decline. Services will continue to be removed

on the basis of commercial viability without some means of intervening to reverse this trend.

- it would also have negative business implications, compromising the ability of employees, deliveries and customers to access the city in future.

4.14 If the decision were to be not to proceed with an STZ then other policy options could be explored if decision makers still wish to make progress towards the City Access objectives of reducing traffic and raising revenue to fund public transport operating costs and wider City Deal objectives (see section 8). However, previous technical work has demonstrated that other policy approaches would deliver less against objectives than a STZ[27].

5 Recommendations for the Sustainable Travel Zone (STZ)

5.1 Based on the findings of the OBC, **the officer recommendation is that the GCP Board agree to proceed with the proposed Sustainable Travel Zone proposal** in order to deliver the road space and revenue required to invest in public and sustainable transport improvements.

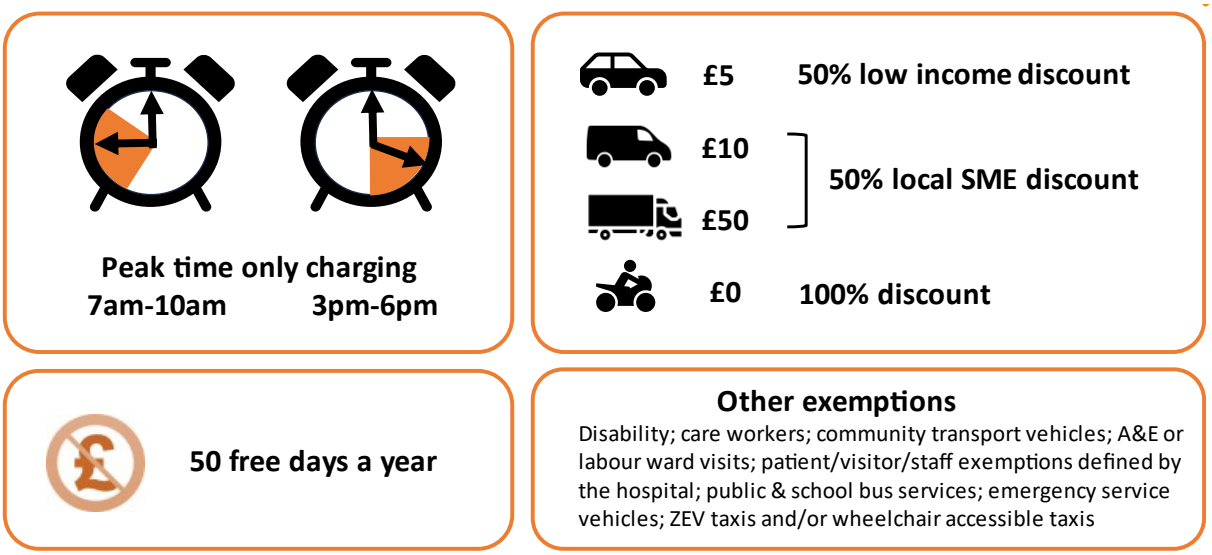
5.2 It is recommended that this be based on a modified version of OBC Scenario 1: peak hour only charging. Charging would begin in 2026/2027, after several years of investment in improved bus services, and the value of the charge would be reviewed in 2029/30 and periodically thereafter and when necessary uprated in line with inflation. Charge rates would remain as per the consultation with the exception of motorbikes where a 100% discount is suggested in response to consultation feedback. The impact of this on mode shift, safety, noise and pollution should be kept under review.

5.3 This is because Scenario 1 best balances achievement of scheme objectives with responding to concerns expressed during the consultation. Whilst not delivering as much benefit as Scenario 2 in terms of traffic reduction or revenue raising, moving to 'peak time only' operation substantially reduces the potential negative impact on small businesses and the self-employed, and goes further to reflect consultation feedback than Scenario 2.

5.4 However, it is recommended that the Final Business Case tests a **modification of Scenario 1 ("Scenario 1A") to include an allowance of free days for personal account holders** to **be retained indefinitely** (50 per year or around 1 per week). This is because the free days element of Scenario 2 helps to address a very wide range of issues raised in the consultation and the Equalities Impact Assessment.

27 Consultation website for Making Connections 2022
https://consultcambs.uk.engagementhq.com/18150/widgets/56016/documents/32502

Figure 2 – Summary of recommended STZ option



5.5 The proposed package of Discounts, Exemptions and Reimbursements set out in the consultation has been reviewed and in some cases modified in response to consultation findings. Ongoing work is summarised in the Discounts, Exemptions and Reimbursements (DER) technical paper appended[28].

5.6 The OBC also sets the parameters for monitoring, managing and evaluating impact and benefit realisation. The extent to which the scheme is achieving its objectives in terms of traffic reduction and public transport improvement should be formally kept under review with the potential to make future adjustments where necessary. This should include consideration of unforeseen impacts. It would be a legal requirement to report annually on the disbursement of the net revenues, which would be legally ringfenced for transport. Impact monitoring could potentially also be communicated through this annual report.

Peak Hours and earlier finish

5.7 The shift to peak hours is a major change to the parameters of the scheme compared. The consultation scheme proposed charging for 12 hours out of 24 (7am to 7pm), but **it is recommended that the scheme should instead charge for 6 hours out of 24 (in the peak hours of 7am-10am and 3pm-6pm).**

5.8 This would mitigate a number of negative impacts identified through the Business Impact Assessment, Equalities Impact Assessment, Social and Distributional Impact Assessment and concerns raised through the consultation.

5.9 It restricts charging to the times of day when traffic is heaviest (therefore maintaining maximum impact in terms of creating road space and reducing congestion when it is most needed), and it allows greater freedom for people to move around, and deliveries to be received, in the middle of the day. This is expected to be of particular benefit to stay at home parents/carers, or older people who don't qualify for a

[28] www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-K-Discounts-Exemptions-Reimbursements.pdf

disability exemption. Both of these groups are flagged as being at greater risk of social isolation if they are reliant on car travel.

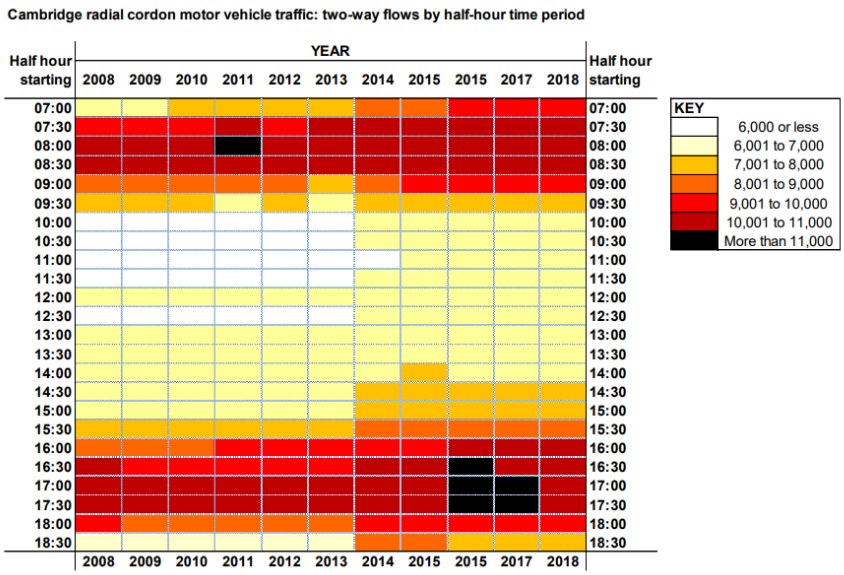
5.10 Many consultation respondents and stakeholders such as Teversham Parish Council, Cambridge Past, Present and Future and the Cambridgeshire Residents Group suggested that peak time only charging would be a more reasonable approach which would reduce the impact on businesses. Finishing the scheme at 6pm would have benefits for the night time economy, allowing visitors to arrive earlier without charge and increasing spending in the local economy.

5.11 Peak time only charging also allows greater flexibility for free access to healthcare appointments outside of charging hours. The all day scheme would have more significant retail and leisure industry impacts than a peak time only scheme.

5.12 Finishing charging at 6pm rather than 7pm allows greater freedom for people to use their car for evening social, leisure, volunteering and caring activities without restriction and was suggested by a number of consultation respondents such as Cambridge United and Chesterton Bowls Club.

5.13 Halving charging hours does have significant impacts in terms of revenue compared to the consultation scheme which would reduce the investment available in subsidising public and active travel compared to both the consultation scheme and scenario 2. It also increases the likelihood of 'peak spreading' (increased traffic in the inter-peak non-chargeable hours) which should be kept under review.

Figure 3 – Cambridge radial cordon motor vehicle traffic: two-way flows by half-hour time period (based on pre-COVID data)



5.14 The CPCA will take account of all potential sources of revenue to support the bus network through their work on bus reform including but not limited to STZ net revenues[29].

[29] Cambridgeshire & Peterborough Combined Authority: Bus Reform (https://cambridgeshirepeterborough-ca.gov.uk/what-we-deliver/transport/buses/bus-reform/)

Free days

5.15 In response to the consultation, the OBC has considered the possibility of offering 'Free days' which would give individual account holders the opportunity of a fixed number of days to travel without paying a charge. Scenario 2 was designed to test the principle of free days. However, the financial impact of adding free days to Scenario 1 has also been assessed through the OBC as a potential variant: Scenario 1A. Based on the technical work and consultation feedback balanced with the Business Impact Assessment **the officer recommendation is that the STZ scheme should include an allowance of free days to be retained indefinitely.**

5.16 Inclusion of free days in the scheme substantially mitigates concerns expressed through the consultation about access to hospital and other medical appointments but it also mitigates a wide range of other concerns expressed through the consultation.

5.17 A recurring theme of the consultation feedback was that the proposals were aiming at the right objectives but that the scheme as set out was perceived by many as unfair or punitive, since whilst people may be able to change their habitual behaviour (commuting and leisure trips) to other modes, there will always be some circumstances in which people feel a car is reasonably required. The examples given ranged widely, but the commonality was that the needs were ad hoc, and varied between people. It is not operationally feasible to define all of those circumstances and design exemptions or rebates to match them. But allowing a general 'budget' for those circumstances gives flexibility for people to use them as best fits their own circumstances.

5.18 Free days would give people the flexibility to use a car occasionally for other trips where the car is needed. This might include taking a pet to the vet; visiting an elderly relative; shopping for bulky goods such as hardware or furniture; taking donated goods to a charity shop; bringing home a stack of books for marking; carrying sports equipment to practice.

5.19 Free days also indirectly mitigate impact on retail businesses whose customers are more car reliant than average, such as DIY stores, garden centres, charity shops, and supermarkets (especially budget supermarkets that do not offer home delivery). Allowing a free day per week (in addition to weekends) means that customers can still make trips to purchase bulky goods by car.

5.20 In practice, free days would be linked to an account, and could be tied to a household/address or to individual cars. This would reduce the incentive for households to use second or third cars to travel free all week and avoid giving greater benefits to (typically) higher income households with multiple cars compared with (typically) lower income households reliant on a single car. It is assumed free days would apply on a per household basis, with the allowance being able to be shared in the case of households in multiple occupation.

5.21 It is assumed at this stage that free days would apply to anyone who opened an account, irrespective of address. There is the potential to levy a small administration fee to set up an account in order to deter people from setting up multiple accounts. However detail of the 'scheme rules' for free days would finalised in the next phase of design work.

5.22 Estimates of the impact of free days on revenue and traffic impacts are more uncertain and dependent on a number of assumptions about account take up and the proportion of eligible free days that are used in practice. The OBC sets out the assumptions made, and sensitivity tests included, but close monitoring of take up should follow any future implementation if the decision is taken to proceed. As with reducing charging hours, an allocation of free days for an indefinite period for account holders would reduce revenue compared to the consultation scheme which would correspondingly reduce the investment available in subsidising public and active travel compared to both the consultation scheme.

Impact on local businesses

5.23 The consultation and Business Impact Assessment has identified potential disproportionate impact of the consultation proposals on smaller business who often have a reduced ability to absorb increases in operating costs. This is particularly the case in certain sectors more reliant on goods deliveries in and out. By contrast, bigger businesses and those sectors which are more likely to be focused on the productivity and growth constraints imposed by an underperforming public transport system and its impact on their labour market catchment and ability to recruit and retain staff. There is therefore no single measure that addresses 'business' needs, which in practice vary widely.

5.24 The OAR initially tested a reduction of the charge for LGVs from £10 to £5. As technical work on the BIA progressed it suggested that this would be relatively poorly targeted, and not help those small businesses who operate larger vehicles (for example, local construction firms, local coach companies, garden centres).

5.25 A reduction in the charges for LGVs and HGVs and coaches for all businesses would be significant in revenue terms, reduce the incentive to consolidate and reduce freight movements and have a detrimental impact on the scale of bus investment. It would also be detrimental to peak time congestion, air quality and other environmental benefits.

5.26 Therefore, a variant of Scenario 1 was tested in the OBC to include a targeted SME discount, and it **is recommended that a locally-owned SME discount is included as part of the STZ scheme.** This would entail offering a discount of 50% on HGV, coach and LGV charges for vehicles registered to small, locally-owned businesses and self-employed workers. Details would be finalised in the next stage, but for the OBC it is assumed to apply to business account-holding SMEs[30], and to self-employed workers registered or resident in the Cambridge commuter area[31].

5.27 The proposed local SME discount would significantly reduce the cost to SMEs that need to operate commercial vehicles during peak charging hours, providing a further indirect benefit to the businesses that they supply. The differential in price between SMEs and other operators of LGVs and HGVs may further confer a cost advantage

[30] SME = Small and Medium Enterprises: defined by the UK Government as businesses with fewer than 250 employees and an annual turnover of less than €50m BEIS small and medium enterprises (SMEs) action plan: 2022 to 2025 (accessible webpage) - GOV.UK (www.gov.uk)

[31] Alternative geographies could be tested during development of the Full Business Case stage.

on local small businesses compared to bigger suppliers, encouraging the use of small local suppliers and strengthening the local economy.

5.28 This responds to consultation feedback from individual businesses and from groups such as the Federation for Small Business on the disparity in impact on employees who travel to work by car and those self-employed people whose work involves a van, who would have paid a higher rate under consultation proposals.

5.29 Further work in the FBC would consider specific scheme rules and how this discount would be administered.

Access to hospitals and other health appointments

5.30 The inclusion of free days in a modified scenario 1 would mean that the specific hospital exemption tested as part of scenario 1 would no longer be required, because the free days proposal goes even further.

5.31 The consultation proposal already proposed exemptions for those with complex medical needs who need to travel to hospital appointments frequently, and for A&E visitors and those giving birth. The 100% disability discount[32] and the 50% low-income discount provide further protection for disabled and low income people accessing hospital and healthcare.

5.32 Work has been undertaken based on consultation feedback, and further meetings with CUH has established that there is an existing system in place at Cambridge University Hospitals and at Royal Papworth to provide discounted or free parking to support those with a range of medical and social needs[33]. This includes people with medical conditions that need to visit hospital frequently; those who need to visit patients for a protracted period; and staff with particular personal, shift timing or travel needs that make using a car essential. **The officer recommendation is to build on this existing system of hospital parking discounts and reimbursement for those with the medical need to visit hospital frequently, or for whom public transport is too high risk, ensuring they receive equivalent discounts on STZ charges, ensuring that no additional administrative cost burden is placed on the NHS.** The decision on who qualifies for these discounts or reimbursements is, and should remain, a clinical matter for the hospitals who are best placed to assess this, rather than for the STZ scheme administrators.

5.33 The next stage of work, in partnership with Cambridge hospitals will develop the details of this, funding administration costs through STZ revenues to ensure that there is zero cost to the NHS arising from extending their administrative arrangements. This includes any potential cost of widening existing CUH and Royal Papworth schemes to include other hospital sites. The next stage of work should also consider the potential to offer similar arrangements to emergency service staff, particularly those on night shifts.

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[32] Now recommended to include those claiming the mobility component of PIP as well as blue badge holders.

[33] https://www.cuh.nhs.uk/visiting-our-hospitals/travel-and-parking/parking/discounted-parking/#:~:text=Free%20parking%20will%20be%20provided,of%20at%20least%20three%20months. https://royalpapworth.nhs.uk/our-hospital/getting-here#:~:text=Our%20patients%20and%20visitors%20have,who%20are%20a%20private%20company.

5.34 The recommended addition of free days further makes provision for account holders to travel to hospital by car for free for occasional visits, but **also to use their car for other health related appointments (such as the GP or dentist)** without imposing an administrative cost on those providers, whereas a site specific hospital exemption would not. This was an issue flagged in consultation feedback from Cambridgeshire Local Medical Committee and others.

5.35 The cost of providing a blanket exemption for all hospital patients and visitors, over and above the free days allowance, the concession for medical need, the low income discount and the disability exemption would be relatively expensive and poorly targeted in terms of need, and would come at the cost of reducing the additional bus provision possible, and less impact on reducing traffic in and around hospital sites than otherwise. Likewise, if hospital exemptions were extended to all health facilities within the zone in addition to free days, the administration and lost revenue would be significantly higher whilst providing minimal marginal benefit to vulnerable patients dependent on car.

5.36 Thinking about public health more broadly, the 'Healthy Streets' initiative is underway by the Cambridgeshire and Peterborough Health and Wellbeing Board, whose priorities include creating an environment to give people the opportunities to be as healthy as they can be. Making Connections is likely to make an important contribution to the creation of healthy streets, by reducing traffic and creating more space for active travel.

Low income discount

5.37 The consultation scheme proposed the principle of a Low Income Discount (LID) and asked for feedback on its design during the consultation.

5.38 **The primary benefit of the Making Connections proposals to those on lower incomes would be the increased provision of bus services, and the reduction of bus fares**. This bus investment disproportionately benefits those on lower incomes as set out in the EqIA.

5.39 Nevertheless, it is recognised that there are some on lower incomes who may remain reliant on cars , and it is important that they are protected.

5.40 Technical work to develop the proposals for the LID since the consultation suggests a recommended discount **of 50% on STZ car charges to protect those on low incomes who are reliant on cars**, reducing to 25% for two years if income increases to the point that they are no longer eligible for benefits (or to smooth the impact of short term fluctuations in income on eligibility for benefits). The working proposal is that this would be **available to account holders in receipt of Universal Credit (including those who are in work but on low incomes), Pension Credit (low income older people) and Carers benefit (low income unpaid carers).**

Timing of implementation

5.41 The consultation proposal was for bus investment to begin in 2023 and 2024, ramping up through the period leading up to the introduction of the charge.

5.42 This period prior to charge implementation, when no revenue is incoming, would be funded by £50m nominally set aside by GCP from City Deal funding. This would allow public transport improvements to be put in place before any STZ charge was implemented.

5.43 The consultation proposal was that implementation might be phased as follows:

- peak time charging of LGVs, HGVs and coaches only from 2025;
- peak time charging for all vehicles from 2026; and
- all day charging for all vehicles from 2027/28.

5.44 Consultation feedback received suggested limited interest in a phased approach to implementation. Organisational feedback from businesses suggested that the early introduction of the charge for commercial vehicles was perceived as unfair and detrimental to business. **It is therefore recommended that charges begin simultaneously for all vehicles, in 2026 or 2027.** The Final Business Case should make detailed consideration of the timeline for implementation and confirm whether that date is achievable**.**

Sensitivity tests

5.45 The financial dimension of the OBC includes sensitivity tests to assess the viability of the scenarios against a range of possible future outcomes including inflation and demand variability.

5.46 The financial model assumes that daily charge rates are first inflated in 2030 (with an assumed base date of 2027) and every three years thereafter. STZ operating costs are inflated every year with an assumed base date of 2022.

6 Recommendations for bus and sustainable transport investment

6.1 Discussions with stakeholders and the responses to the consultation highlighted the importance of both public transport and active travel options as alternatives to the car. Making Connections creates the opportunity to create a local funding stream that would allow the local authority partners to effectively recast the bus network alongside, measures to increase walking/cycling and wider measures to enhance the public realm.

6.2 The reduced traffic that the Sustainable Transport Zone delivers, alongside wider investment in walking and cycling and wider place-shaping and regeneration investment would help create a city fit for the future. Thus, Making Connections is a once in a generation opportunity to transform the travel choices and opportunities for people visiting, living and working in Cambridge.

Future bus network: context

6.3 The national backdrop of decline in bus use outside of London has been accelerated by Covid. Patronage in England outside of London (where the bus network was not deregulated) has been on a trajectory of long term decline since the 1970s. We are faced with a bus industry where costs are rising, and services are being cut. In the No STZ scenario, with no intervention in the bus network, there is a real risk of continued decline with the associated impacts on those dependent on buses now, let alone for those without any access due to buses not being an option[34].

Figure 4: Passenger journeys on local bus services in England, billions, 1970-2020/21[35]

6.4 Congestion in Cambridge has also impacted bus operations. For example, Whippet stated that to accommodate for "vastly increased congestion in Cambridge" it has had to scale down frequency of its Universal bus services from 10 to 8 buses during peak hours[36]. Similarly, Stagecoach has recently announced service changes to the Cambridge Citi 1 and Citi 2 services due to the impact of congestion on the highway network; the Citi 1 now runs according to a 12-minute peak frequency, instead of 10 minutes, from Monday to Saturday "to combat [the effects] of congestion"[37].

6.5 Additionally, in October 2022, Stagecoach withdrew 18 predominantly rural bus routes in Cambridgeshire. Stagecoach stated that the services were no longer financially viable due to a drop in passenger numbers to around 75% of pre-pandemic

[34] Traffic Commissioners for Great Britain annual report 2022-23 indicates that local bus route registration has declined and bus routes are being cut: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1172421/230720_TCGB_Annual_Report_23_.pdf

[35] Source: House of Commons Research Briefing: 'The National Bus Strategy: Bus Policy in England outside London', May 2022, based on data from DfT Local Bus Passenger data https://www.gov.uk/government/statistical-data-sets/bus01-local-bus-passenger-journeys#table-bus0103

[36] Whippet (2023). Revised Weekday Universal Timetable. 13th February 2023

[37] Stagecoach (2023). Routes updated across Cambridgeshire and Bedfordshire. 4th June 2023 Service Update.

levels[38]. It is expected that there are other services which are currently marginally viable which will be at risk in future if no support can be found.

6.6 Through longer hours, new services, new destinations and cheaper fares, the bus network would be transformed to be a viable alternative to the car, so that people can depend on it for their day to day needs. For those without access to cars, it would widen opportunities to education, healthcare, employment, leisure, shopping or visiting family and friends.

6.7 Separately, the Cambridgeshire and Peterborough Combined Authority (CPCA) is considering options for bus reform through enhanced partnership or franchising models, on which an update is expected in Autumn. The Making Connections and bus reform proposals are independent of one another, but there are clear potential synergies if they are both taken forward. An STZ would offer a substantial flow of revenues to allow the CPCA to invest in growing the network. Enhanced Partnership or franchising models offer the opportunity to maximise the value of that investment by improving passenger outcomes through measures such as integrated ticketing and information and potentially better planning and timing of the network to meet social need.

6.8 The reduction in the sale of the Sustainable Travel Zone described above means that less net revenue would be available for investment in bus and sustainable travel improvements. These two elements have been assumed to scale down proportionately with the overall reduction of income.

6.9 With less overall net revenue there will be difficult decisions to be made about the relative proportion of expenditure on fare subsidy compared with provision of additional services, where fare subsidy was a relatively large proportion of the total planned expenditure in the consultation package both in the short and long term.

Bus service improvements before introduction of the STZ

6.10 A guiding principle of the consultation proposal was that buses would be delivered *before* any charge is put into place. In the short term, this would be within the current deregulated bus environment using City Deal funds set aside by the GCP Executive Board, but implemented by CPCA as the Strategic Transport Authority.

6.11 The officer recommendation is for a phased programme of fares and services based around the key areas of investment shown in Figure 6 below. Sitting over and above this are proposals for reduced fares.

6.12 In the short term that package focuses on delivering tangible changes that can be implemented quickly and will build confidence in the bus network and build towards the longer term vision. A series of new provisions can be implemented every few months throughout 2024.

6.13 Officers will bring a more detailed recommendation to the Executive Board in December on the composition of the bus ramp-up package to be funded by the City

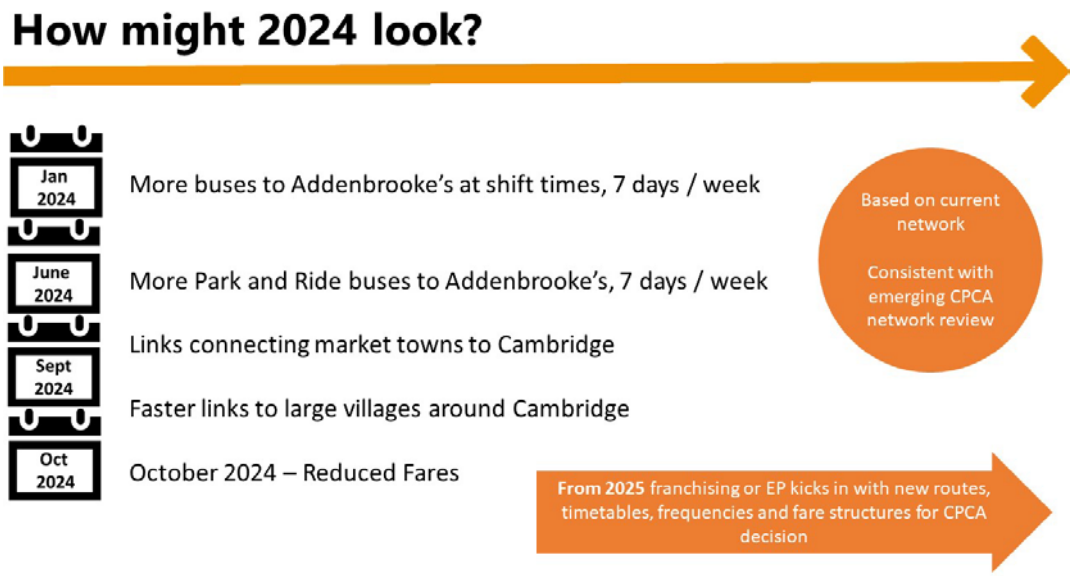
38 Stagecoach bus timetables: 18 bus routes to be cut in Cambs as they are 'no longer financially viable' - Cambridgeshire Live (cambridge-news.co.uk)

Deal £50m which has been set aside for improving bus services before a charge comes in.

6.14 The headline officer recommendations that will be elaborated in December are that early improvements should include the fare subsidies consulted upon, because of their importance in making an early, tangible difference to people's experience of the bus network. Fare subsidies can be implemented quickly and evidence from the Department for Transport's national £2 bus fare has been that it has supported people reliant on public transport in a cost of living crisis, has generated mode shift and additional public transport use, particularly among those on lowest incomes[39].

6.15 A further series of early service improvements would follow during 2024 focused on quick wins, such as adding more out of hours frequencies to key services supporting shift workers at the hospitals and the city centre, and ensuring that they have access to the park and ride services and improving daytime frequencies on routes to Cambridge from surrounding market towns.

Figure 5 – bus improvements in 2024



6.16 In the medium to long term the OBC has assessed illustrative bus packages - scaled to fit the revenue generated by the different scenarios - framed around four key areas of bus investment. The scale of funding varies under each of these scenarios and therefore the dis/benefits also vary with the scale of transformation to the bus network. Scenario 1A would generate around £26m net revenue to invest in bus services annually.

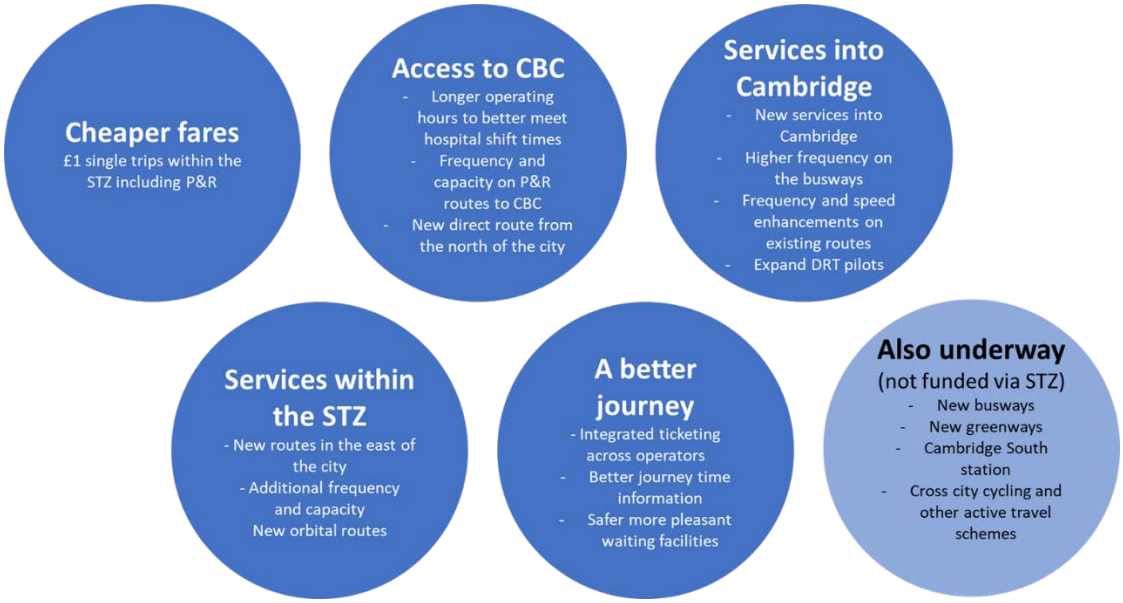
6.17 Ultimately the final package of service provision and long-term fares and ticketing policy will be for CPCA to test and consider as part of their wider responsibilities as the local transport authority.

[39] Department for Transport, £2 bus fare cap evaluation: interim report January 2023, published May 2023 https://www.gov.uk/government/publications/evaluation-of-the-2-bus-fare-cap/2-bus-fare-cap-evaluation-interim-report-january-2023#observations-from-the-first-month-of-the-2-bus-fare-cap-scheme

6.18 This would comprise provision funded through STZ revenues if a decision is taken to proceed, alongside provision funded from the range of other potential revenue sources. All of this will be considered through the CPCA's bus reform work which is considering options for enhanced partnership or franchising at various potential funding levels.

6.19 Consultation responses to Making Connections and technical work to date will be shared with CPCA to input into their wider programme of bus reform work.

Figure 6: Longer term bus investment priorities



Sustainable transport investment

6.20 Availability of funding for sustainable travel would increase over time and be administered by Cambridgeshire County Council. In line with the principle set out in the SOC in 2022, a small amount of sustainable travel seed funding would be provided annually from STZ net revenues in the early years of scheme operation, whilst other City Deal funded projects such as Greenways are in delivery.

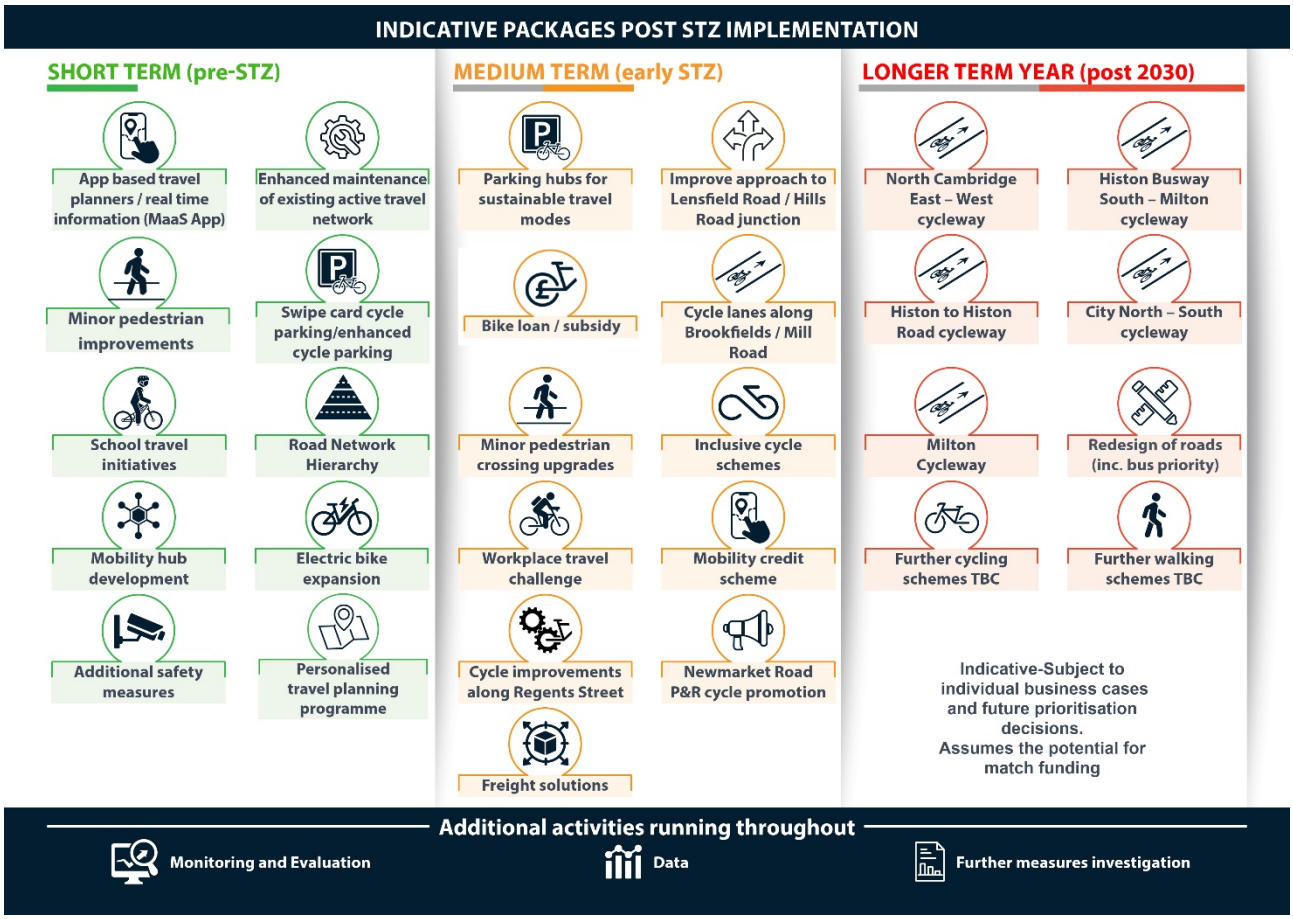
6.21 When the STZ has paid back its set up costs from surplus revenues, that surplus revenue would be allocated to investment in sustainable transport, which is forecast to be by 2030.

6.22 A Sustainable Transport Strategy is in development which outlines some illustrative packages that could be delivered comprising: active travel infrastructure; behaviour change; community projects; and 'first mile last mile' freight interventions.

6.23 A long list of potential interventions is being prioritised into a shortlist using quantitative and qualitative analysis and the highest performing schemes will be packaged into indicative delivery packages in the short and long term. These will be flexible to allow for variations in funding availability.

6.24 Further work to define specific interventions will be undertaken as part of the Full Business Case, when there is greater clarity on potential funding availability. This will ensure there is alignment between GCP and CCC committed schemes.

Figure 7 – illustrative sustainable transport investment package (details to be finalised in FBC)



7 Impacts of preferred option

7.1 A full assessment of the scenarios is provided in the Outline Business Case and associated technical documents. This section highlights the expected impacts of the recommended option in terms of traffic, revenues, business, equalities and social impact assessment.

7.2 These assessments will be further updated on the basis of a refined preferred option at Full Business Case stage.

Impact on congestion, traffic speeds, delay and bus service reliability

7.3 Bus journey time benefits presented in the OBC demonstrate the value added through average levels of day-to-day performance, including the value of vehicles being able to travel faster and of service frequency being increased, leading to reduced wait times.

7.4 However, reductions in congestion would also result in improved journey time reliability with fewer late running buses and reduced unpredictability. This means that the time from arrival at a bus stop to boarding a bus could be reduced and passengers would be able to better plan journeys, avoiding the need to aim to arrive early in the knowledge that services are likely to be delayed.

Impact on revenues

7.5 Net revenue estimates approximately £31m net annual revenue in steady state (post 2030) which allows for £26m per annum bus investment, £5m per annum sustainable travel investment.

Business Impacts

7.6 The recommended option would result in a significant improvement in public transport, and reduced congestion would improve journey time reliability for freight and service vehicles. It is also assumed that part of the STZ allocation of spend, would also mean there would be revenue available to support larger companies to transition into freight consolidation and all businesses for last mile delivery options.

7.7 However, the BIA noted that one of the most impacted business groups would be smaller business especially in sectors that are disproportionately dependent on the movement of goods. The preferred option allows deliveries and customers to make journeys by vehicles outside of peak times. The free days would also positively impact residents who may be business owners, employees and customers within the STZ. The targeted SME discount recognises that many of the most impacted businesses rely on deliveries by LGVS and HGVs and are more limited in their ability to retime these to non-peak times compared to larger businesses (who can have out of hours security to receive deliveries).

Equalities Impacts

7.8 The recommended option generates funding at a level that delivers a significant improvement in bus and sustainable transport measures. It also delivers significant enough traffic reduction to ensure journey time reliability for bus services in particular.

7.9 For children and young people who use public and active travel measures to get to work, this option provides better bus facilities and travel times in the peak hours, and less traffic to contend with as a cyclist or pedestrian. Shifting the evening peak time one hour earlier to be 3pm- 6pm will reduce the likelihood that there would be increased traffic levels during the time period that children are cycling from school.

7.10 By limiting the STZ charge to 7am to 10am and 3pm to 6pm on Monday to Friday, may enable more motorists to avoid incurring the charge by travelling into/through/out of Cambridge during the ‘inter-peak’ period. An inter-peak scenario may encourage a greater number of older people to travel for before or during the inter-peak period and provides more flexibility for informal carers or visitors. Finishing at 6pm also enables informal care around evening meal times to occur without charge.

7.11 This option could also benefit people with a disability who do not qualify for a Blue Badge DER or those people who do not qualify for a low-income DER and who can manage their travel patterns to avoid the STZ charge operating times at ‘peak’ periods.

7.12 The addition of free days will allow people who are unable to choose when to travel to still undertake travel during the peak times one day a week on average.

7.13 Although this option does not provide a specific discount for patients and visitors to hospitals this may be offset by the provision of 'free days'. This would mean that patients travelling to medical appointments, at locations other than the two main hospitals, would benefit from free travel when needed. Free days would be an account-based system, which once set up would require minimal intervention from the driver. Unlike a specific DER system where drivers who may find internet access limited, or do not have the technological skills needed to apply each time they travel, would be more of a barrier to travel.

7.14 The full Equalities Impact Assessment, which remains a live document to be updated as the project progresses, is appended to the Outline Business Case[40].

Social and Distributional Impacts Assessments

7.15 DfT's Transport Appraisal Guidance (TAG) specifies the need for both a Social Impact Appraisal (SIA) and a Distributional Impact Assessment (DIA) to understand the impacts on the human experience of a transport system and how a transport intervention may impact different social groups. This work is informed by the Equalities Impact Assessment. The assessments consider the impact of Making Connections scheme on a 7-point scale (large beneficial to large adverse) across eight appraisal indicators including accidents, severance, security and journey quality.

7.16 A detailed assessment was undertaken for Scenario 1 and high-level comparison how this scenario compares to all other scenarios has been undertaken. Based on an interim assessment, overall, Scenario 1 was considered to have moderate beneficial impacts across the core elements that formed the assessment, in terms of a reduction of accidents (due to reduced traffic flows), increased physical activity (with more accessibility to public transport stops), improved journey quality and improved accessibility.

7.17 Scenario 1 was considered to have slight benefits in terms of improved security through a range of complementary measures and reduced severance. Scenario 2 scored similarly to Scenario 1 across the categories listed above, however Scenario 3 was found to deliver slight benefits in terms of physical activity, accessibility and option and non-use value (as opposed to moderate benefits) due to the likely availability of revenue from the charging option which would be available to fund wider improvements.

7.18 The assessment also identified moderate disbenefits in terms of user benefits and personal affordability for Scenario 1. A high-level comparison found that Scenarios 2 and 3 are also likely to deliver moderate disbenefits against these categories.

7.19 The Do Minimum (no STZ) scenario is not included within the assessment in line with DfT TAG.

7.20 It should be noted that the above assessment is based on an initial assessment and outcomes are subject to change.

[40] www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-G-Making-Connections-EIA-document.pdf

Impacts of no STZ

7.21 Performance against objectives is forecast to be negative (i.e., the future situation will worsen compared to the current situation).

7.22 This has significant negative equalities implications, in particular for those on lower incomes or who for other reasons have no access to a car and are currently poorly served by the commercial bus network, which is in the process of long-term structural decline. Services will continue to be removed on the basis of commercial viability without some means of intervening to reverse this trend.

7.23 It would also have significant negative business implications, compromising the ability of employees, deliveries and customers to access the city in future.

8 Alignment with City Deal Objectives

8.1 The City Access programme is designed to improve access, reduce congestion, and deliver a step-change in public transport, cycling and walking, alongside significantly improving air quality and reducing carbon emissions in Greater Cambridge. The proposals set out in this report would support the realisation of a series of benefits, including:

- Securing the continued economic success of the area through improved access and connectivity;
- Significant improvements to air quality and enhancements to active travel, supporting a healthier population;
- Reducing carbon emissions in line with the partners' zero carbon commitments;
- Helping to address social inequalities where poor provision of transport is a contributing factor; and
- Wellbeing and productivity benefits from improving people's journeys to and from employment.

8.2 The proposals complement the GCP's corridor schemes (and the existing Cambridgeshire guided busway) by ensuring that buses can traverse the city centre more reliably and efficiently than at present. In particular, the proposals for the Newmarket Road which would see a reprioritisation of road space to favour non-motorised users would be undeliverable without a significant reduction in car traffic.

8.3 The package of proposals in the Making Connections consultation forms part of the wider city access programme, which also includes:

- **Review of Cambridge's road network classification**: the recent consultation set out the principles of a new road classification for Cambridge. The network classification was last reviewed in the 1980s and the review considers ways to improve the way that traffic and people use roads and streets to move about the city, to support more frequent and reliable public transport and create safer and more attractive environments for walking and cycling. The results of the consultation are expected to be reported to the Joint Assembly and Executive Board later this year, along with recommendations on next steps.

- **Development of an integrated parking strategy**: following the Board's approval of the vision and objectives for the integrated parking strategy, a series of more detailed recommendations have been developed by officers from GCP, County and City Councils to align with the wider proposals set out in this paper. These will now be further developed with members in County and City before being formally agreed and adopted through relevant governance mechanisms.
- **Freight consolidation pilot**: GCP is initiating technical work to understand how freight and deliveries can be consolidated to maximise the efficient use of the highways network and minimise unnecessary motorised freight movements.

9 Citizen's Assembly

9.1 The proposals consulted on were developed directly in response to the Greater Cambridge Citizens Assembly recommendations.

9.2 During the consultation, two small focus groups of former Greater Cambridge Citizens Assembly members expressed strong support for all elements of the proposal, including the Sustainable Travel Zone, commenting that they felt the proposals put forward were a good reflection of their recommendations to decision makers. Their comments are featured in Appendix B of the consultation report.

9.3 They were pleased that the proposals had been put forward to the public for consultation and urged decision makers to continue to implement the scheme, modified if necessary, depending on consultation findings.

10 Financial Implications

10.1 There are no direct financial implications of this decision for the Executive Board, however accepting the recommendations would set in train a series of decisions which themselves have financial implications.

10.2 The financial implications for the GCP relate to the £50m funding that the Executive Board has provisionally set aside £50m to support improvements in the bus network before any potential STZ charge were implemented.

10.3 This initial GCP endowment to fund bus services before the commencement of an STZ would be non-recoverable from STZ scheme revenues. The Executive Board has previously expressed the strong preference that no charging scheme should be established without bus services being in place beforehand. It has set aside a portion of the city deal funds for this purpose, without which charging would not be publicly and politically acceptable. This city deal pump-priming is intended to be used to fund the additional bus services for a short period before any STZ is implemented, which can then be sustained in perpetuity by the net revenues of the scheme itself.

10.4 The board is **not asked to release the £50m as part of this decision**, however if it agrees to recommend the establishment of a STZ and Cambridgeshire County Council agrees with the recommendation to take forward an FBC, a paper will be brought to GCP Executive Board in December 2023 to set out more detailed plans for and request approval to spend the £50m on bus improvements.

10.5 As set out in the Future Investment Strategy financial update (Agenda Item 7 section 6.5): any future budget updates will need to account for the cost of potential borrowing as we move towards 2031 and beyond. These costs are dependent on a range of factors, including some currently unknown anticipated S106 contributions. However, there is a high likelihood that borrowing will be required in advance of these funds, and this will need to be funded from GCP resources. As such officers will work with County Council colleagues to better refine these assumptions for inclusion. This needs to be identified in the coming months in order that the GCP Board are aware of this likelihood and the impact on current decisions in terms of any commitment of funds in order to ensure that funds are available to provide for this borrowing.

10.6 The attached OBC assesses various options for the implementation of a Sustainable Travel Zone and associated public and sustainable travel improvements. The financial case establishes that any of the three options are expected to generate significant net surplus revenues after assuming application of City Deal funding and reserves. Although, as paragraphs 6.8 and 6.9 note, each model returns different funding available for reinvestment in STZ and ST Investment improvement based on the fact that each model results in different income streams. The implications of this will need further assessment at FBC, with any changes to income (positive or reduced) assumed to have a corresponding impact on the amount available to spend of bus and other sustainable travel improvements.

10.7 Outline Business Cases are based on the technical concept designs. The existence of surplus net revenues has been subject to a number of assumptions and to various sensitivity tests set out in the OBC. Further review will be undertaken by other agencies as well during any FBC. These cost and spend estimates will be further developed as part of the Full Business Case, including Quantified Risk Assessments and Value engineering work to mitigate any potential cost increases.

10.8 The OBC forecasts that the setup and operating costs are able to be repaid by scheme revenues over the first few years of operation, and that an ongoing net revenue surplus is expected in all scenarios tested for investment in public and sustainable travel improvements.

Have the resource implications been cleared by Finance? Yes

Name of Financial Officer: Michael Hudson

11 Recommendation and Next Steps

11.1 The Joint Assembly is asked to comment on the Outline Business Case, and in particular to assess whether it supports a modified scenario 1 (Scenario 1A), as described in section 5, as the preferred option to achieve scheme objectives whilst responding to consultation feedback.

Respective roles of GCP, CCC, CPCA in delivering the Making Connections vision

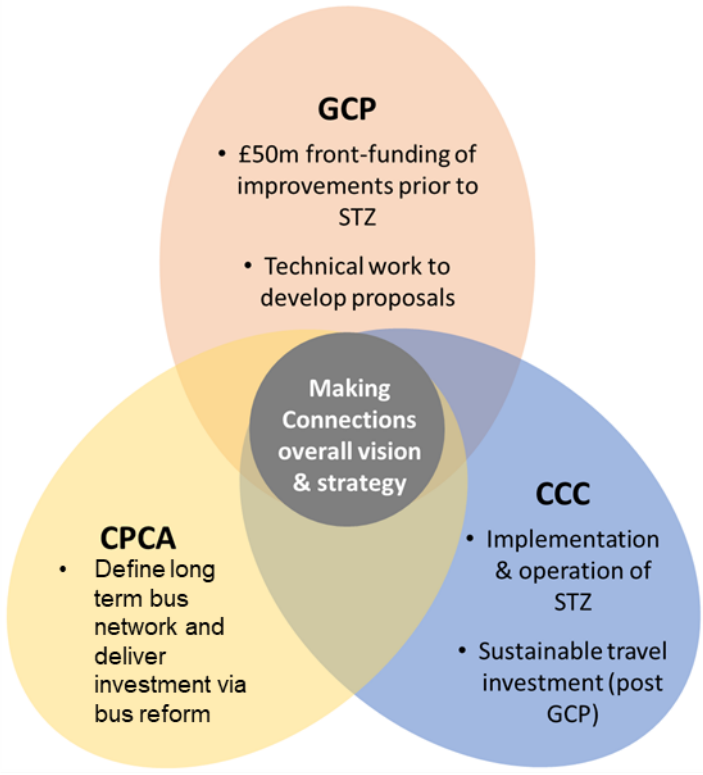
11.2 Delivering on next steps requires integrated partnership working between the Greater Cambridge Partnership, Cambridgeshire County Council and the Combined Authority who **each have a role to play in delivering on a shared vision** if the decision is to proceed.

11.3 **The Greater Cambridge Partnership's role** is to develop the technical work behind the proposals, working with CCC and CPCA, in terms of the STZ and the bus proposition respectively. It also leads on the other elements of City Access associated with the proposals outlined above.

11.4 **The County Council's role** is to take the final decision on whether or not to implement the STZ, and to then begin planning to implement and operate the zone. It would also assume responsibility for the delivery of sustainable transport improvements funded via the STZ (for shorter term investments it may choose to ask GCP to do so on its behalf)

11.5 **The Combined Authority's role** is to deliver bus network improvements as the Strategic Transport Authority, including deciding on the delivery mechanism (either via a franchised model or an enhanced partnership). The first £50m of these improvements is to be funded by a notional allocation set aside from the city deal by the GCP Executive Board. The bus network developed would include but not be limited to the proposals that can be supported by Making Connections, to ensure the sustainability of any additional services.

Figure 8 – Relative delivery roles of GCP, CCC and CPCA in Making Connections.



Timeline and related decisions

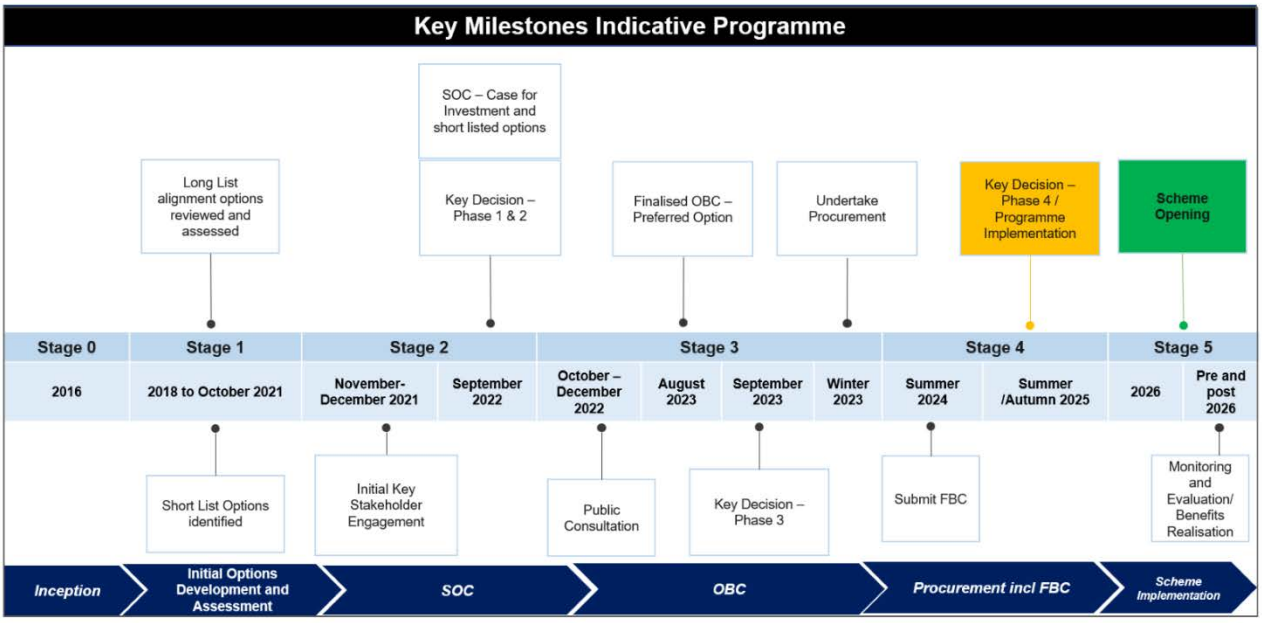
11.6 Cambridgeshire County Council's Highways & Transportation committee will consider the GCP Executive Board's recommendation whether and how to proceed with a STZ at a meeting in October 2023. This will not be a final decision to proceed; there are further decisions and flexibility beyond OBC and additional technical work to be undertaken as referenced throughout the OBC and this paper. A final decision will be based on a Full Business Case expected to be delivered in Summer 2024.

11.7 CPCA is expected to take a decision to consult on bus reform proposals towards the end of 2023.

11.8 The GCP Board will receive further advice in December on proposals to ramp up bus investment in the period from 2024-2026 before STZ charge operation based on the £50m the GCP has nominally allocated from City Deal funds in its Future Investment Strategy. GCP Board will take a decision whether to release the funding and begin delivery in light of the CCC and CPCA decisions.

11.9 Work continues on the Road Network Hierarchy Review and the Integrated Parking Strategy and the Freight Consolidation pilot. Recommendations will be substantially framed by a decision on Making Connections next steps. The next decision point on these will be in late 2023 or early 2024**.**

Figure 9 – Key milestones



List of Appendices

Timeline of consultation and engagement for Making Connections

Appendix 1	Timeline of consultation and engagement for Making Connections
Appendix 2	Summary of consultation findings
Appendix 3	How the recommended option responds to consultation feedback
Appendix 4	Making Connections Interim Outline Business Case

Background Papers

Source Documents	**Location**
Making Connections consultation findings	
Making Connections Consultation Report	https://www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/Making-Connections-22/MC22-consultation-report.pdf
Review of Making Connections consultation by the Consultation Institute (tCI)	https://www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/Making-Connections-22/MC22-independent-review.pdf
Consultation raw data & written submissions	https://www.greatercambridge.org.uk/mc-22
Making Connections consultation material	
Making Connections 2022 consultation web page	https://consultcambs.uk.engagementhq.com/making-connections-2022
Making Connections 2022 consultation brochure	https://consultcambs.uk.engagementhq.com/18150/widgets/56165/documents/32725
Making Connections 2022 easy read consultation brochure	https://consultcambs.uk.engagementhq.com/18150/widgets/56165/documents/32752
Making Connections 2022 map book	https://consultcambs.uk.engagementhq.com/18150/widgets/56165/documents/33272
Making Connections 2022 DRT explained	https://consultcambs.uk.engagementhq.com/18150/widgets/56165/documents/33505
Making Connections 2022 technical background documents	

Source Documents	Location
Interim OBC Appendix A – Options Appraisal Report	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-A-Making-Connections-Options-Appraisal-Report.pdf
Interim OBC Appendix B – Appraisal Specification Report	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-B-Making-Connections-Appraisal-Specification-Report.pdf
Interim OBC Appendix E – Socio-Distributional Impact Assessment (SDIA)	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-E-SDIA-Report-Draft-Final.pdf
Interim OBC Appendix F – Business Impact Assessment (BIA)	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-F-Making-Connections-Business-Impact-Assessments.pdf
Interim OBC Appendix G – Equalities Impact Assessment (EqIA)	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-G-Making-Connections-EIA-document.pdf
Interim OBC Appendix K – Discounts Exemptions and Reimbursements summary paper	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-K-Discounts-Exemptions-Reimbursements.pdf
Interim OBC Appendix N – Quantified Risk Assessment	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-N-Making-Connections-QRA.pdf
Interim OBC Appendix S – Supplementary Economic Tables	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-S-Making-Connections-Supplementary-Economic-Tables.pdf
Interim OBC Appendix U – Charging Boundary Update Paper	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/MCOBC/Appendix-U-Charging-Boundary-Update.pdf
Strategic Outline Business Case (SOC): Making Connections 2022 package	https://greatercambs.filecamp.com/s/nFLtx9dYaGfAAoOJ/d

Source Documents	Location
SOC Appendix A: options Appraisal Report	https://consultcambs.uk.engagementhq.com/18150/widgets/56016/documents/32502
SOC Appendix A1	https://consultcambs.uk.engagementhq.com/18150/widgets/56016/documents/32504
SOC Appendix B: Appraisal methodology	https://consultcambs.uk.engagementhq.com/18150/widgets/56016/documents/32505
SOC Appendix C: Social and Distributional Impact Assessments DRAFT report: Making Connections 2022 package	https://greatercambs.filecamp.com/s/dvxBnoyA6JiGNv6r/d
SOC Appendix D: Acoustics Technical Note	https://consultcambs.uk.engagementhq.com/18150/widgets/56016/documents/32507
SOC Appendix E: Appraisal tables	https://consultcambs.uk.engagementhq.com/18150/widgets/56016/documents/32508
Sustainable Travel Zone boundary – technical note	https://greatercambs.filecamp.com/s/DeFhywNi1sL2xRv3/d
Sustainable Travel Zone discounts, exemptions and reimbursements – technical note	https://greatercambs.filecamp.com/s/f8TVWwwlcYWxgZuw/d
Equality Impact Assessment DRAFT report: Making Connections 2022 package	https://greatercambs.filecamp.com/s/NLkkfR3VUKJZmkBe/d
Initial DRAFT Health Impact Assessment: Making Connections 2022	https://greatercambs.filecamp.com/s/HOEEWhiRxq4XkeXV/d
City Access 2022 modelling report	https://consultcambs.uk.engagementhq.com/18150/widgets/56016/documents/32500
Previous executive board reports	
Executive Board Agenda Pack (Item 10) – September 2021	https://cambridgeshire.cmis.uk.com/ccc_live/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/1571/Committee/26/SelectedTab/Documents/Default.aspx
Executive Board Agenda Pack (Items 6 and 7) – September 2022	https://cambridgeshire.cmis.uk.com/ccc_live/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/1853/Committee/26/Default.aspx
Executive Board Agenda Pack (Item 10) - June 2023	https://cambridgeshire.cmis.uk.com/ccc_live/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/2125/Committee/26/Default.aspx
Other relevant strategies and publications	

Source Documents	Location
Cambridgeshire & Peterborough draft Local Transport & Connectivity Plan May 2023	https://cambridgeshirepeterboroughcagov.cmis.uk.com/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/2223/Committee/63/SelectedTab/Documents/Default.aspx
Cambridge Local Plan 2018	https://www.cambridge.gov.uk/media/6890/local-plan-2018.pdf
South Cambridgeshire Adopted Local Plan 2018	https://www.scambs.gov.uk/media/17793/south-cambridgeshire-adopted-local-plan-2018.pdf
Technical Assessment of the impact of measures proposed as an alternative to fiscal options to address future congestion in Cambridge, 2019	https://greatercambs.filecamp.com/s/kLtJXqfboUIdzqnC/d
Cambridgeshire County Council, 'Quarterly Transport Update: Cambridge & South Cambridgeshire COVID-19 Transport Impacts & Recovery' April 2023	https://cambridgeshireinsight.org.uk/roads-transport-and-active-travel/transport-data-insights
Making Connections 2021 Consultation: Report of Consultation Findings	https://www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/GCP-Making-Connections-report-13June22.pdf

Appendix 1: Timeline of consultation and engagement for Making Connections

Appendix 2: Summary of consultation findings

Consultation Findings

A.2.1 Headline summary and analysis of the 2022 Making Connections consultation findings can be found in the Consultation Report[41] as well as the 29th June 2023 Executive Board paper[42]. An abridged version of these summarised findings follows below. Further analysis of the consultation responses has informed the OBC and will inform any future technical work.

Views on the proposed bus network improvement package

A.2.2 70% of survey respondents supported the proposals for bus improvements, with the majority of responses across the survey, the opinion polling, stakeholder responses and the targeted meetings in agreement that the bus network across Greater Cambridge is in need of improvement and were supportive of the vision set out.

A.2.3 When asked for their feedback on the package as set out, the most common comment was that buses must be more reliable and more frequent; and that improvements are much needed and should be delivered quickly. When asked the order of priority for improvements the most common response was fast, high frequency services, and the second most common was cheaper fares. It is worth noting that simply generating revenue cannot make buses more reliable and faster – reducing congestion to free up road space is also a critical element of how the STZ is proposed to deliver improvements.

A.2.4 Support for the proposed bus network was strong even among those who said they do not support the proposals for the Sustainable Travel Zone as a means of delivering it. 76% of those who oppose the STZ and 46% of those who strongly oppose the STZ nevertheless have expressed that they do still support the future bus vision. A similar pattern of support is evident for improvements to sustainable travel measures. The OBC has therefore considered revisions to the scheme which address people's concerns about the STZ but are still able to deliver at least some of the proposed bus and sustainable travel improvements that were set out in the consultation.

Views on the proposed sustainable travel improvement package

A.2.5 Consultation survey responses report upwards of 70% support for all aspects of the sustainable transport proposals. The exception to this was car clubs where 40% of respondents said they do not know whether they support proposals.

A.2.6 When asked if there are other improvements that consultation survey respondents would like to see funded, the top answer (excluding those that were already part of the proposed package of measures) was that STZ revenues should also fund improvements for drivers such as road maintenance and pothole repair. This sentiment also came across in stakeholder discussions.

[41] https://www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Sustainable-Travel-Programme/City-Access/Making-Connections/Making-Connections-22/MC22-consultation-report.pdf

[42] https://cambridgeshire.cmis.uk.com/ccc_live/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/2125/Committee/26/Default.aspx

Views on the proposed Sustainable Travel Zone

A.2.7 34% of consultation survey respondents were supportive of the STZ as the means of delivering the vision set out in Making Connections, and 58% opposed it. When compared with demographically representative polling, opinion was more muted with approximately similar levels of support, but a much higher level of 'don't know' or 'neither support nor oppose' and much less expression of strong support or oppose.

A.2.8 Younger people were much more likely to support the STZ than older people. In general, support for the STZ declined with age with the exception of over 75s, who had a higher-than-average level of support for the STZ.

A.2.9 Support for the STZ was higher among survey respondents living inside the proposed zone than outside of it.

A.2.10 The most commonly occurring comments on the STZ, other than general expressions of opposition or support, were a sense of unfairness or that exemptions don't go far enough; concerns about impact on business; the suggestion that zone residents should be exempt; concern about paying to access essential services (the hospital was frequently cited here) and the impact on access to jobs.

Summary

A.2.11 The 2022 consultation and the extensive programme of work leading up to it showed that most people, even those who oppose the STZ, understand the need for change and want better buses and improvements to active travel choices such as cycling, wheeling, and walking.

Appendix 3: How the recommended option responds to consultation feedback

A.3.1 During the 2022 Making Connection consultation, the Greater Cambridge Partnership asked for public views and feedback on the proposed package of measures. In the process of preparing the OBC, officers have been informed by analysis of the consultation results in developing measures which address the concerns voiced and suggestions made.

A.3.2 The June 2023 Executive Board paper[43], accompanied by the Consultation Report, set out a series of key feedback themes (summarised in Appendix 2).

A.3.3 This section explains how the recommended option has considered and used to inform development of the recommended option alongside further technical work.

Overall support for bus and sustainable travel investment and overall opposition to the STZ set out in the consultation proposals

A.3.4 70% of consultation survey respondents supported the proposals for bus investment, to be delivered through a Sustainable Travel Zone (STZ) in terms of revenue raised and road space created. Around 70-80% of respondents likewise supported the vision for investment in sustainable transport also to be delivered via an STZ. However, 58% of respondents opposed the proposed STZ. Even among those consultation respondents that opposed or strongly opposed the STZ, around half overall still support the bus improvements[44].

A.3.5 Support for the STZ was higher inside the zone (just under half of zone residents supported it). Younger and older people were more likely than average to support the STZ proposals.

A.3.6 Based on these findings and the steers previously given by the Executive Board and Joint Assembly, the focus of subsequent technical work has been to identify a package of measures that strikes the right balance between responding to consultation concerns and delivering against scheme objectives as far as possible.

A.3.7 Demographically representative opinion polling showed that around half of those who said they opposed the STZ as opposed might feel able to support an STZ if changes were made – suggesting they were not opposed in principle, but to the detail of the proposal. Top areas likely that polled individuals said might change their opposition to support were amended charge rates; different boundaries; changes to discounts and exemptions and changing charging hours. These have all been explored through the technical work and the OBC presents scenarios that considers aspects of each of these.

A.3.8 The recommended option sets out a range of amendments to the STZ proposals to address headline concerns expressed. It recommends changing charging hours to peak times only; reducing charge rates for SMEs and people on low incomes; offering a 100% discount to motorcycles; and adding additional discounts (free days; local SME discount)

[43] 29th June 2023 Executive Board Agenda Pack, https://cambridgeshire.cmis.uk.com/ccc_live/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/2125/Committee/26/Default.aspx

[44] 76% of those who opposed the STZ and 46% of those who strongly opposed it.

Whether Addenbrookes and other hospitals should be within the zone

A.3.9 Removing the hospitals from the STZ area would raise several practical and policy issues that may be insurmountable. The Cambridge Biomedical Campus on which the main hospitals are located is a large traffic generator in the south of the city and on the wider road network, and the site of significant future job (and travel) growth. It is not likely to be possible to remove the hospitals from the zone boundary without also excluding the wider CBC and main approaching roads. Removing the CBC would therefore mean either taking a large 'wedge' out of the proposed STZ with significant traffic implications for surrounding residential areas, or reverting to an inner ring road boundary as discussed below. Taking the CBC out of the zone would not fully address the consultation concern about paying to access the hospitals. Whilst it would mean that those living outside the zone (in Cambridgeshire and beyond) could drive to the hospitals without incurring a charge, residents of the zone (in the City of Cambridge) would still to pay to access the hospital, because their start point would be within the STZ.

A.3.10 However, the recommended scheme aims to ensure that those who need to travel by hospital by car are supported to do so, through a number of means including exemptions for those with medical or social needs to make frequent trips; 50 free days a year for account holders to cover infrequent hospital visits which can also be used for other medical trips to non-hospital locations (GP, dentist, clinics); and the low income discount and disability exemption (see Section 4).

A.3.11 Generating funding to invest in more frequent services to the hospitals, better timed to coincide with shift patterns, from more places and ensuring park and ride sites are connected to the hospital on a 20h a day basis are also important means of supporting patients, visitors and staff to be better able to access the hospital sites.

Whether the proposed zone is too large e.g., should it cover only the city centre?

A.3.12 The majority of the Local Plan committed growth sites are on the periphery of the city, near to the proposed boundary. Defining a STZ zone that excludes these means that neither current nor future congestion issues would be addressed and so the scheme would not be able to deliver on its core objectives.

A.3.13 Any alternative smaller zone would need to be defined to ensure that cars have a safe opportunity to avoid the charge by taking an alternative route.

A.3.14 Given the layout of the road network in the city the likely only alternative would be a charge that applied within (but not including) the inner ring road. At present that area accounts for approximately 15% of traffic on the city network so a zone of that scale would not address the congestion problem and would likely cause substantial displacement and worsening of congestion on key other city routes such as Coldhams Lane.

Whether residents should qualify for a discount or exemption from paying the charge

A.3.15 The proposal to offer account holders 50 free days a year indefinitely responds to the consultation feedback requesting a resident discount, but it is not recommended that it be geographically specific to residents of the zone. Cambridge city is the 'county town' and an important destination for employment, leisure, sporting and cultural activities, social connections, shopping and education for those from the rest of Cambridgeshire and other adjacent areas outside the County, such as Royston, Haverhill, Sandy and Newmarket.

Concern about the impact on businesses, especially small businesses and the self-employed reliant on goods vehicles

A.3.16 A recommendation that the STZ include a discount for locally owned SMEs is set out in Section 5.

Whether the charge for cars and vans is too high, and whether motorbikes should be liable to pay

A.3.17 The Low Income Discount and the local SME discount offer a reduction in cars (LID), LGVs and HGVs (SME discount) but technical analysis shows that a blanket reduction in charge rates is likely to significantly reduce the ability to deliver against scheme objectives, this reduction should be targeted at those who the technical work shows would be most vulnerable to the impacts of charges at the proposed consultation rate of £5 for cars, £10 for LGVs and £50 for HGVs and coaches.

A.3.18 It is recommended that there is a 100% discount for motorbikes, based on feedback that they make a relatively minimal contribution to congestion compared with cars and larger vehicles.

Whether the hours of operation are too long and should be peak(s) only

A.3.19 The recommended option reduces charging hours to peak times only (7am – 10am and 3pm – 6pm) a decrease in charging time from 12 hours in 24 to 6 hours in 24.

A.3.20 It also brings the end of the charging day forward to 6pm rather than 7pm as proposed in the consultation.

Concern about the impact on older people, those with mobility impairments or who find using public transport difficult and those on low incomes

A.3.21 The consultation scheme already set out the principle of a low income discount. The details of this have been further elaborated to clarify that those on certain low income benefits[45] should get a 50% discount for any time they are in receipt of those benefits and a 25% for two years subsequently if their income increases to the point where they are no longer in receipt of benefits.

A.3.22 The consultation proposals also set out a proposed disability exemption whereby people holding a blue badge would be eligible to nominate up to two vehicles for an exemption. Disabled tax class vehicles would also be exempt from the charge. In response to consultation feedback, it is recommended that the criteria for the disability exemption be expanded to include those in receipt of the mobility component of the Personal Independence Payment (PIP).

A.3.23 The consultation flagged that there are groups amongst whom take up of blue badges is low even where they are eligible, including those with neurodiversity or mental health concerns which make using public transport more difficult. As part of preparation for implementing any future STZ care should be taken to promote awareness of eligibility and take up of blue badges among those groups.

A.3.24 Older people who do not qualify for an exemption on grounds of disability but who claim pension credit because they are on a low income would be entitled to claim the Low Income Discount.

[45] Universal Credit including those in work on low incomes, Pension Credit, Carers Benefit

A.3.25 The reduction in charging hours offers additional flexibility for older people, and stay at home parents amongst other people to drive freely without charge outside of peak times. The provision of 50 free days offers further flexibility to make non-charged trips by car during charging hours one day a week.

Questions about how the discounts and exemptions were defined and how they would operate

A.3.26 Further technical work since the consultation has elaborated on the details of discounts, exemptions and reimbursements and how they would operate. That work will continue and be finalised with the FBC if the decision is taken to proceed.

A.3.27 Closer to the time of implementation there would need to be a full information campaign to alert people about the scheme, how they can register for accounts, and register for any discounts or exemptions they may be eligible to claim.

Concern about the impact of the scheme on informal and unpaid carers

A.3.28 The proposals set out in the consultation already recommended that registered care workers who spend their days going between multiple clients' homes would be exempt. Through the consultation we heard concerns from those giving informal and/or unpaid care and whether the STZ charge would prevent or deter them supporting elderly relatives, friends or neighbours.

A.3.29 One of the challenges in supporting informal or unpaid carers is that it is difficult to identify and define them for the purposes of exemption or discount. However, there are a number of protections in place which should support some if not all of those who provide informal care and are reliant on cars to do so.

A.3.30 The blue badge exemption proposes that people with disabilities that qualify them for a blue badge, or the mobility component of PIP can nominate up to two vehicles to receive an exemption. The intention is that one or more of these vehicles could belong to someone who is an unpaid carer for a disabled person when making trips with them.

A.3.31 Based on consultation feedback we have recommended that unpaid carers claiming Carers Allowance would be eligible for the Low Income discount. This would not apply to all informal carers, but should capture those who are on the lowest incomes.

A.3.32 The reduction in charging hours to peak hours only and finishing charging an hour earlier at 6pm rather than 7pm offers further flexibility for those offering informal care to use a car to make visits or run errands do so free of charge outside of peak times. Likewise, account holder free days offer flexibility for those that need to make car trips for caring purposes during rush hour or to support a relative or neighbour running errands to do so once a week without charge.

A.3.33 Charity exemptions would include schemes for community transport schemes to take elderly or vulnerable people to medical or social appointments. For those vehicles not registered with DVLA for a disabled tax class exemption (which would in any case already be exempt), voluntary car schemes and dial-a-ride schemes would be eligible for a 100% discount on STZ charges.

Whether electric vehicles should be exempt from the charge, or receive a discounted rate

A.3.34 It is not recommended that exemptions or discounts be offered for electric vehicles (other than taxis) for a number of reasons.

A.3.35 The overarching objective of the scheme is providing viable alternatives to private car use which means reducing congestion (to allow alternatives to be faster, more reliable and safer than they currently are) and generating an ongoing sustainable revenue stream to support bus service provision beyond what is currently commercially viable and to invest in sustainable travel infrastructure and maintenance. It is expected and hoped that this leads to positive impacts on reduced carbon emissions and air pollution as well as social inclusion, public health, noise and other environmental indicators. There is significant national policy framework incentivising the shift to cleaner vehicles which is expected to mean that by the time of implementation of the STZ.

A.3.36 Moreover, charging more on the basis of more polluting vehicles would be broadly regressive as in general the most polluting cars tend to be older and owned by households on lower incomes. Whereas charging less or even exempting those with zero emission vehicles would disproportionately benefit those on the highest incomes who are more likely to own ZEVs.

A.3.37 The proposed scheme would have significant positive impacts on Carbon and Air Quality by increasing the disincentive to use any type of car including, but not limited to, the most polluting.

Concerns about the difficulty of 'trip chaining' on public transport for example childcare drop-off on the way to work.

A.3.38 These concerns are recognised and highlighted in the Equalities Impact Assessment and consultation report. Ultimately it is not recommended that any specific concessions or discounts to the STZ are feasible to address this concern.

A.3.39 Investment in higher quality, higher frequency and faster buses (by implementing a STZ in peak hours, reducing congestion and generating funding to invest in more frequent and more services) would support those who need to do multi-stop trips in peak hours. For those that can travel outside peak hours, or after 6pm the reduction in charging hours offers some support. Upgrading the network to offer more orbital services, more services to multiple locations (not just the city centre) from the park and rides and other such improvements would also make these types of trips easier on public transport.

A.3.40 GCP is exploring options around Mobility as a Service (MaaS) provision which offers coordinated public, private and active transport information and ticketing in a single integrated system to further improve the public transport passenger experience.

A.3.41 The sustainable travel fund would invest in measures such as cargo bikes pilots as well as safe segregated walking and cycling infrastructure such as the Greenways and Cross City Cycling routes will help parents to use active travel to access their children's schools and nurseries safely.

A.3.42 Further support to parents undertaking linked trips should be considered through wider policy for example locating childcare facilities on or near to travel hubs to facilitate multi-stop journeys.

Whether alternative means of funding some or all the proposed improvements might be considered.

A.3.43 Previous technical work has found that alternative means of funding improved bus services would generate lower benefits in terms of revenue raised and traffic reduction (necessary for improved bus journey times and reliability) than a STZ. Other options have also been less preferred in previous rounds of public consultation and a Citizens Assembly.

A.3.44 There is the option to look at other funding sources in addition to a proposed STZ. This will be considered by the CPCA as part of their wider work on bus reform (enhanced partnership or franchising) which will look at number of funding scenarios and consider the range of potential funding sources including but not limited to a Cambridge STZ.

A.3.45 However, alternative funding sources would not free up road space to allow buses to be quicker and more reliable, which the evidence tells us is the primary motivating factor in mode shift from car to bus.

Whether there should be an exemption for out-commuters living near to the STZ boundary

A.3.46 This has been raised as an issue in broader public discourse since the consultation, but was not a theme heard strongly in response to the public survey.

A.3.47 There are some who live towards the edge of the proposed zone and work outside of it who feel it unfair that they would be liable to be charged for driving a relatively short distance out of the zone in the opposite direction to peak hour traffic. This would be the case in any scheme where there are inevitably people just inside and just outside a defined boundary some of whom may feel their situation is unfair.

A.3.48 However, an exemption or discount for out-commuters is not recommended because all vehicles on the road contribute to traffic in and around the strategic road network and the key junctions such as Milton Interchange or the M11 and A14 junctions on which all car trips take up capacity irrespective of direction.

A.3.49 Just as investment in public transport services and infrastructure would give those commuting into the zone a viable alternative for out-commuting, those services would run in two directions, and it would also be easier to commute out of the zone for work with greater investment proposed by the scheme.

A.3.50 It would also be technically challenging to define an exemption or discount for out-commuters that is fair and enforceable without being administratively costly and complex.

Appendix 4 Interim Outline Business Case

Member of the SNC-Lavalin Group

Greater Cambridge Partnership

Outline Business Case

Making Connections

Greater Cambridge Partnership

Outline Business Case

Making Connections

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WSP

WSP House
70 Chancery Lane
London
WC2A 1AF

Phone: +44 20 7314 5000

WSP.com

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This version of the Outline Business Case is an interim document, as it is awaiting further analysis on traffic modelling outputs for some of the scenarios.

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Executive summary

Making Connections

The Greater Cambridge Partnership (GCP) is the local delivery body for a "City Deal" with central government, bringing powers and investment worth up to £500 million to 2030 for infrastructure improvements to boost economic growth. Complemented by wider investment and policy interventions with other local authorities the GCP is now delivering a £1bn programme of public and private investment in, primarily in transport infrastructure, to support the growth vision set out by the current Local Plan.

Making Connections, part of the broader "City Access"[1] programme, comprises three elements, each targeting a different challenge and facilitating the delivery of the next:

- Transforming the bus network: Adding new routes, additional services, cheaper fares and longer operating hours. This bus network would be forward-funded by the City Deal during a ramp-up period so that public transport improvements were in place before any charge;
- Investing in sustainable travel schemes: Alongside bus improvements, it is proposed to set aside part of the scheme revenues to invest in new sustainable travel schemes, such as better walking and cycling links; and
- To facilitate the investment in sustainable transport and reduce traffic, the Sustainable Travel Zone (STZ) would introduce a daily charge to drive during certain hours of the day.

The aim is to improve the way that people and vehicles move around the city whilst reducing congestion and improving air quality. The STZ would reduce traffic to create more space for buses and people walking and cycling. Cars and goods that need to travel would do so more reliably, no longer having to add in extra time to allow for uncertain traffic conditions. The STZ would provide a sustainable, locally derived funding stream to allow for investment in the bus services and wider sustainable transport measures.

The combined impact of the three elements would allow more people to move around Cambridge, whilst supporting the transition to a net-zero carbon city.

Context: Transport

Congestion

Road congestion is bad for everyone. It makes journey longer, it results in more harmful emissions, it causes more collisions, hinders productivity and restricts growth. The average driver in the UK lost 80 hours due to traffic congestion in 2022[2], which can be valued at over

[1] Greater Cambridge Partnership. *City Access Programme*
[2] INRIX (2022). *Global Traffic Scorecard (Accessed: Aug 2023)*

£700 per driver. Furthermore, people and businesses allow additional time for their journeys, to allow for the variation in journey times. This means that there are even greater time savings offered by a network that allows more certain and reliable travelling conditions.

Car use and low income

A lack of viable and affordable public transport options, particularly in rural areas, mean households suffer from 'transport poverty' and have no practical alternative but to buy a car. For those on low incomes, this is known as 'forced car ownership' which, according to academic research[3], may result in households foregoing expenditure on other important necessities and having to carry the burden of debt.

ONS data[4] shows that those on lower incomes are much less likely to have access to a car. 35% of houses in the lowest income decile have access to at least one car or van, compared to 83% in the fifth (middle) income decile and 93% in the decile with the highest incomes. Whilst this dataset is not available at subnational level, it demonstrates a clear correlation between car ownership and income overall.

Declining bus services

Bus use has been in decline in Cambridge for over a decade[5]. The situation during and after the pandemic, has seen industry costs continue to rise and further services cut. Whilst some services have been temporarily saved through additional funding from the Cambridgeshire and Peterborough Combined Authority (CPCA), the medium-term outlook for the bus network is looking bleak, with the risk of a spiral of decline as less services lead to lower confidence and use, this in turn further undermines the financial stability of the commercial bus network.

Reversing the trend

Making connections provides a once in a generation opportunity to reverse this trend: it is an evidence-led approach that shows it is possible to transform public transport in Greater Cambridge so that buses run where people want, when they want and for fares that are affordable. The changes go beyond what any commercial organisation could be expected to provide, moving Cambridge to a more typical European city model where there is greater public sector funding for public transport.

Revenues generated by the STZ charge are committed to be spent on bus improvements that may predominantly benefit lower-income households that cannot afford a car, who rely more on public transport.

Through longer hours, new services, new destinations and cheaper fares, the bus network would be transformed to be the natural choice of travel, that people can depend upon for

[3] Mattioli (2017). *Forced Car Ownership in the UK and Germany: Socio-Spatial Patterns and Potential Economic Stress Impacts,* Social Inclusion
[4] ONS (January, 2019). *Percentage of households with cars by income group, tenure and household composition: Table A47*
[5] Department for Transport (2023). *Bus Statistics Table BUS01e*

their day to day needs. For those without access to cars, it would widen opportunities to education, healthcare, employment, leisure, shopping or visiting family and friends.

For those visiting, living and working in Cambridge, the changes would provide a 'turn up and go' London-style bus network, enhanced walking, cycling and interchange opportunities, complemented by expanding car clubs, e-scooter and other new transport modes. This offers the opportunity to live without the significant costs and burden of owning a car, or could reduce the need for a second or third car.

Through this programme, the Cambridge City Region would show leadership to other cities that fairer, cleaner and more inclusive growth can be achieved if the powers available to local authorities are used.

Wider Context

Cambridge is not a typical UK city. It is consistently recognised as being a unique contributor to the UK economy and most recently as "one of the intellectual centres of the world for eight centuries...the birthplace of generations of innovation"[6]. In 2022, Gross Value Added (GVA) per head was £44k in Cambridge and £38k in Greater Cambridge, against an England average of £30k[7]. Unemployment is below the UK average and there are skill shortages in hi-tech industries. Cambridge has the highest number of patent applications per person in any UK city, twice as high as the next city[8]. Its innovative economy is crucial to the UK's strategy to 'Build Back Better'.

The population in Greater Cambridge increased 29% between 2001 and 2021 compared to 14% across the UK and is expected to continue to grow above the UK average[9].

The flip side of this is that the growth trajectory is increasing the demand for affordable housing. Property prices in Cambridge were over 35% higher than the UK average in 2023[10]. It is also exacerbating traffic congestion: analysis presented in Section 2.6 of this business case shows the number of vehicles travelling into Cambridge and the amount of time lost due to traffic has been growing and is likely to increase significantly over the next 20 years.

In 2004, an Air Quality Management Area (AQMA) was established in the city centre due to high levels of Nitrogen Dioxide (NO2). The 2023 Air Quality Annual Status Report published by Cambridge City Council says that air quality has continued to improve in Cambridge since the (AQMA) was established and Making Connections would support further air quality improvements and reduce other health implications of traffic and congestion.

[6] Rt Hon Michael Gove MP (2023). *Long-term plan for housing: Secretary of State's speech*
[7] ONS (Accessed March 2022). *Regional Gross Value Added per head*
[8] Centre for Cities (2017). *Cities Outlook 2017*
[9] ONS Census (2001, 2021).
[10] Rightmove Website (Accessed August 2023).

In Greater Cambridge 38% of people with lower levels of personal mobility, whose day-to-day activity is limited by a long-term illness or health problem, do not own a car[11].

In addition, the population classed as obese is rising: nearly a third of children aged 2 to 15 are overweight or obese and younger generations are becoming obese at earlier ages and staying obese for longer. According to Public Health England, physical inactivity is a main risk factor for obesity[12].

Increasing car dependency and reducing levels of physical activity, the related rise in obesity, coupled with unequal access to car travel for those with lower personal mobility, means that investing in transport is a much broader public health and equity issue.

Scenarios in the Outline Business Case

Proposals for Making Connections were presented in September 2022 in a Strategic Outline Case (SOC) document suite, which informed a statutory public consultation in Autumn 2022. The findings from this and subsequent technical work, have informed the options ("scenarios") set out in this Outline Business Case (OBC): the consultation scheme, plus four new scenarios to address concerns and issues raised in the consultation and identified in the impact assessments.

The scenarios assessed in the OBC are deliberately neither exhaustive nor final: the intention is that it includes a range of scenarios, sensitivity tests and 'add-ons' to help decision-makers understand the traffic, revenue and other wider impacts of further refinements that could be made, such as amending discounts or the scale of bus improvement measures. The OBC therefore provides a technical foundation and evidence base on the impacts of a range of weekday charging scenarios, allowing some flexibility to develop a consensus on a preferred option.

Table 1 – Scenarios for Outline Business Case

Scenario	Charge	Time	Implementation date	Additional Discounts (to those in consultation scheme)
Consultation Scheme	£5 for cars £10 LGV £50 HGV	7am-7pm weekdays	AM only 2026	
Scenario 1	£5 for cars £10 LGV £50 HGV	AM / PM weekdays	2027	Hospitals (patients and visitors) Vans as cars
Scenario 1A	£5 for cars £10 LGV £50 HGV	AM / PM weekdays	2027	SME business discount 50 Free days (Indefinitely)
Scenario 2	£5 for cars £10 LGV £50 HGV	7am-7pm weekdays	AM only 2026	180 Free days 2026, 2027 100 Free days 2028 50 Free days 2029

[11] ONS Census (2021). *Car or Van Availability by Long-Term Health Problem*
[12] Public Health England (2017). *Health Matters: obesity and the food environment*

Scenario 3	£3 for cars £10 LGV £50 HGV	AM / PM weekdays	2027	Hospitals (patients and visitors) 100 Free days 2027 100 Free days 2028
Do minimum	Ref Case			

A note on Scenario 1A

This Scenario was developed as a response to the conclusions emerging from the Business Impact Assessment and the desire to understand the impact of keeping free days indefinitely. Given the wide range of scenarios under consideration, this Scenario has only been financially assessed to keep the appraisal proportionate, in line with GCP's assurance framework.

OBC sensitivity tests

- Inflation (+/- 1%)
- Behaviour change:
    - Account take up (- 10% and +20%)
    - Use of free days
    - Trip volume (+/- 10%)
- Scheme capital costs (+/- 10%)

OBC 'add-ons'

Alongside the scenarios, a range of add-ons have been identified in response to the consultation. These are all in addition to the extensive range of discounts, exemptions and reimbursements consulted on in 2022 that included, disability; care workers; community transport vehicles; medical emergency; immunocompromised; chronic medical conditions; public & school bus services; emergency services; ZEV and wheelchair accessible taxis.

These add-ons are considered in more detail in the report; the most significant of which and their impacts are set out below.

- **Free days** – providing a number of days to charging scheme account holders on which they can travel without charge. This offers a relatively flexible and administratively simple way to address many of the concerns raised through the consultation but is not targeted to those most in need. We have tested time-limited free days as well as costs and benefits of extending this indefinitely in one scenario (1A). It is ultimately a trade-off in terms of the reduced revenue for buses and sustainable transport against the benefits that free days offer. Given the scale of concerns raised through the consultation, there is merit in including an ongoing level of free days to allow for free car travel for journeys which are difficult to make by alternative means. It is assumed free days would apply on a per household basis, with the allowance being able to be shared in the case of households in multiple occupation. Further consideration of the scale and duration, as

well as the administration 'scheme rules' of free days could continue to take place in developing a Full Business Case for Making Connections.

- **Freight charges** – lower charges for Light Goods Vehicles (£5) or Heavy Goods Vehicles (£25), either through a blanket reduction in the charge or via a more targeted discount applied to local Small and Medium-sized Enterprises (SMEs) has been considered in response to business concerns. The recommendation is that a **local SME discount** is a far more financially efficient way of targeting support to smaller businesses and offers a response to the concerns and potential impacts on local businesses that were identified in the consultation and Business Impact Assessment work.
- **Low-income discount** – this was proposed in the consultation, and respondents and stakeholders were asked for feedback on its design. Using that input, subsequent work proposes that those on certain low-income state benefits should get a 50% discount whilst they are in receipt of those benefits. If a recipient's income increases to the point where they are no longer in receipt of benefits, the STZ charge discount would drop to 25% for two years subsequently. The low-income discount would apply to all scenarios.
- **Earlier finish at 6pm** – Moving the finish time from 7pm has been considered in the OBC and would bring the proposal in line with the current London scheme. This would be beneficial in terms of early evening travel for those needing to use a car and is effective at mitigating against some of the concerns raised during the consultation, for example, access to after-work clubs and societies or evening visits by carers. It is recommended that a 6pm finish is included within any proposals taken forward for either peak hour or all-day charging.
- **Access to hospitals and healthcare** – this was a key issue raised in the consultation and so there has been a lot of further consideration of what measures, additional to those included within the consultation, are required to support access to hospitals and healthcare. These would be in addition to those with 100% discount or reimbursement due to disability, medical emergency, immunocompromised or chronic medical conditions. They would also be in addition to the low-income discount.

Further refinement to the mix of discounts, exemptions and reimbursements is recommended beyond the Outline Business Case, particularly as there would be an interplay between them. For example: the addition of free days would assist access to health care; an earlier finish may help those working in the night-time economy who are more likely to be on low incomes or less able to use public transport.

Sensitivity Tests

Stress testing has been used to test the sensitivity of the scheme to variables including inflation and demand. These tests add confidence to the core analysis and demonstrate that Making Connections would be viable and affordable under a range of pessimistic and optimistic alternative future scenarios. This Treasury 'Green Book' and Department for Transport (DfT)-compliant work is reported in more detail in the Financial Dimension.

Bus Improvement and Sustainable Transport Measures

Given the degree in variability of the scenarios under consideration, and crucially the forecast revenues that each could generate, there needs to be a corresponding flexibility in the bus improvements and sustainable transport measures (STMs). To this end, illustrative packages have been put together to give decision-makers an indication of the type and scale of improvements that are possible under different scenarios.

Bus measures include cheaper fares, new routes, longer operating hours, integrated ticketing and better facilities for waiting and interchange. STMs include enhanced cycle parking, school travel initiatives, e-bike rental, car clubs and digital travel planning applications.

Timing of Implementation

A commitment was made that the STZ charging scheme would not 'go live' until bus and sustainable travel improvements are already in place. Hence, there is an initial period, assumed to start in 2024, where these improvements ramp up in scope and scale, which would need to be funded by a mix of GCP grant and loan. 'Go live' would occur no earlier than 2026 and is proposed to be simultaneous for all vehicles, i.e. not bringing in an early goods vehicle charge, which was an option proposed in the consultation.

OBC Findings

All Making Connections scenarios considered in this OBC are expected to deliver material behavioural changes that shift travel demand to sustainable transport modes and provide ongoing net revenue to invest.

Table 2 – Headline Figures for Making Connections Scenarios

Scenario	£ Net Revenue in Opening Year (2027)	£ Operating Income in Steady State (2031)	% Increase in PT / Active Travel Journeys	Average speed kmph in Cambridge (2026), 12.6 without scheme
Consultation Scheme	67.8m	82.5m	16%	17.4
Scenario 1	33.4m	43.5m	8%	16.2
Scenario 1A	24.1m	30.1m		
Scenario 2	39.5m	83.0m	16%	17.2
Scenario 3	17.9m	35.2m	6%	15.4

Consultation Scenario – Overview

This scenario achieved the most against stated objectives, but the consultation process identified a number of drawbacks that needed to be addressed. Hence, this scenario is considered unlikely to be publicly and politically acceptable but remains as part of the analysis to allow comparison of the new scenarios against the consultation proposition.

Scenario 1 – Overview

Scenario 1 (£5 peak charge) appears to offer a more balanced outcome compared with the other scenarios. The potential positive behaviour change is not as high as Scenario 2, but still very substantial. Compared with Scenario 3, it would generate higher ongoing net revenue to invest in public transport and other sustainable transport measures which would facilitate and safeguard the behaviour change. It is also able to offer the possibility of more DERs to address concerns from the consultation.

Scenario 1A – Overview

Scenario 1A, as a variant of this, provides 50 free days to support use of the car when needed. This is more flexible than the hospital discount which is confined to supporting one specific trip purpose. The addition of the SME discount would further address some of the concerns from local businesses about the impact of the STZ charge on their operations.

Scenario 2 – Overview

Technical evidence suggests that Scenario 2 (£5 all day charge) is the best performing against the established scheme objectives, particularly in terms of the desired behaviour change. However, the Business Impact Assessment work suggests that, of the four scenarios, this would have the highest negative impact on small businesses in particular. It is also recognised that this scenario does not fully address wider concerns from the Autumn 2022 consultation, particularly once the free days are phased out.

Scenario 3 – Overview

Scenario 3 (£3 peak charge) goes furthest in modifying the STZ proposition in response to the 58% of those who oppose the consultation version of the STZ. Due to the scale of changes, the scenario is weakest in terms of lowering traffic and raising revenue particularly in the early years. If free days and/or a business discount were to be continued indefinitely (as in scenario 1A) then there would be insufficient funding available to make transformational changes to the bus and wider sustainable transport offer, with available funding estimated to be less than £20m a year. Reductions in funding would be detrimental in terms of equalities impact and wider social and distributional impacts.

Similarly, the carbon and air quality impacts would be reduced. The forecast behavioural changes, although material, are also the lowest out of all scenarios assessed. This is the result of the lower charge proposed but is also constrained by the limited headroom in the net revenue available to fund more substantial improvements in public transport and active mode measures, which encourage higher modal shift.

Do-Minimum – Overview

This option is not recommended as it would not achieve the stated objectives of the programme nor the City Deal. As congestion and bus services are likely to worsen, this means other policy options, to achieve similar outcomes, would need to be rapidly

progressed. However, previous technical work has demonstrated that other policy approaches such as a workplace parking levy would deliver less against objectives than a STZ.

OBC Recommendations

The recommendation of this OBC is that two of the scenarios have the potential to balance concerns and issues raised during the consultation with the aspiration to achieve the stated objectives.

Scenario 2 would offer the highest performing option against the objectives. Further add-ons, such as ongoing free days and/or business discounts would strengthen acceptability, albeit this is likely to be lower than for a peak hour scheme. **Scenario 2 is recommended as a viable option to take forward beyond OBC.**

Scenario 1A addresses many of the issues raised in the consultation including reducing the STZ hours of operation to 6 hours a day from the 12 originally proposed. It goes yet further in terms of providing an ongoing allowance of 50 free days to households for trips they need to make by car and addresses business concerns through shorter charging hours and a targeted business discount. On this basis, **Scenario 1A is recommend as a viable option to take beyond OBC.**

Both options include the substantial package of discounts, exemptions and reimbursements as set out in the 2022 consultation including those with a disability; care workers; community transport vehicles; medical emergency; immunocompromised; chronic medical conditions; public & school bus services; emergency services; zero emission vehicles and accessible taxis. **For both options a 6pm finish is recommended.**

Conclusion

This business case demonstrates that significant outcomes can be achieved through two recommended options that consider different ways of addressing the concerns and issues raised during the consultation. This business case demonstrates that both options are viable to take forward.

The decision as to whether to pursue an all-day scheme or peak hour only scheme to develop into a full business case will need to balance considerations of the relative ability of each option to both address the consultation in terms of concerns, but also in terms of the strong support for providing a new bus network fit for the future.

OBC Five Dimensions: Summary

The following sections provide a short summary of each of the five dimensions of the business case.

Strategic Dimension

The Making Connections programme is pivotal to the GCP's plans for fostering sustainable growth. The planned transformation of the bus network and introduction of a Sustainable Travel Zone would enhance accessibility, alleviate traffic congestion, support planned growth, improve local air quality, and curtail greenhouse gas emissions.

Without Making Connections, highway network delay in Greater Cambridge is predicted to increase by 30% in the AM Peak and 75% in the PM peak by 2041. To counter this consequence of inaction, a significant modal shift is required.

The potential impact of Making Connections on travel choices is shown below.

The Strategic Dimension demonstrates that Making Connections has a compelling strategic fit with pertinent national, regional, and local policies and strategies, and highlights the existing and forthcoming challenges which Making Connections addresses.

Section 2.6 of the Strategic Dimension outlines the impact of doing nothing to address worsening congestion and poor local air quality, which are predicted to erode the quality of life of local people, whilst reducing Greater Cambridge's economic competitiveness. The Strategic Dimension lays out clear objectives for the scheme to rectify these issues in harmony with the broader strategic framework. The scheme's objectives inform a comprehensive evaluation of a diverse range of potential solutions, culminating in the identification of a preferred way forward.

Economic Dimension

The programme is forecast to bring significant benefits from time and operating cost savings for transport users, increased physical activities, enhanced reliability and would reduce collisions alongside reductions in noise, carbon and other emissions. These benefits were estimated to be of the same level of magnitude to the user costs attributed to the proposed charge. This shows that the balance is broadly right between the impact on transport users and the generation of revenue, which would be used to fund the bus, walking and cycling improvements: the programme of investment.

The combined impact of the transformed bus network, sustainable transport measures and Sustainable Travel Zone means that the Greater Cambridge area can continue to grow in a more sustainable manner. It is forecast that the economy can continue to grow, unconstrained by sub-standard transport networks and services.

Financial Dimension

The Financial Dimension outlines the expected costs, funding arrangements and overall affordability of the Making Connections programme.

It demonstrates that the proposed bus improvement and sustainable transport measures in all five scenarios can be funded from a combination of the GCP City Deal funding and the financial proceeds of the Sustainable Transport Zone (net of expenditure in respect of the Sustainable Charging Zone), whilst balancing the affordability challenges of road users, particularly during the early (implementation) years of the scheme.

A non-recoverable £50m would be invested in the programme of improvements upfront by GCP. Any additional money required to cover forward funding of upfront bus service improvements and fares reductions is proposed to be recovered via charging scheme net revenues by 2029, allowing the funding to be used for wider GCP City Deal commitments. The programme is considered to be affordable at this stage.

Commercial Dimension

Each element of the Making Connections programme has been assessed and is commercially viable.

An initial delivery model assessment for the charging scheme and sustainable transport measures has identified outsourcing as the most appropriate model to deliver the schemes. With outsourcing in mind, the case explores the procurement models, commercial delivery models, routes to market and work packaging strategies available to procure and commercialise these schemes. These would be explored further at the next stage of the project.

The options available for procurement of the bus improvement measures include bus service tendering; enhanced partnerships, and franchising, all of which are commercially feasible and would be explored at further detail at the next stage of work.

Management Dimension

The Management Dimension sets out that the GCP is responsible for the development of the Making Connections programme, and that Cambridgeshire County Council (CCC), as the local highway authority, would fulfil the role of programme delivery body.

CCC would thus be responsible for procuring and delivering the proposed charging element of the STZ, and the delivery of the proposed sustainable transport measures with the support of appointed contractors and partners where appropriate. The Management Dimension also acknowledges the CPCA, as the local transport authority, are responsible for overseeing the delivery of the proposed bus enhancements. Further detail pertaining to programme implementation is set out in Section 6.4.

The Management Dimension considers the governance structures, resources, programme management processes and assurance arrangements of GCP and CCC and concludes that they are sufficiently capable of delivering Making Connections on time, to budget and in accordance with the programme specifications. Detailed management and governance arrangements, across and between the three partner organisations, would be set out in the Full Business Case.

A final decision to proceed with the programme is expected in summer/autumn 2025 following submission of the Full Business Case in summer 2024. The STZ could be operational from 2026.

1 Introduction

1.1.1. This Outline Business Case is a continuation of the SOC which was submitted to the GCP board in September 2022. It predominantly focuses on the STZ element of the Making Connections proposals, examining four scenarios that have potential merit in terms of their strategic impact. The OBC presents the strengths and corresponding trade-offs for each scenario and compares against a do-minimum scenario.

1.1.2. This document and accompanying Appendices are intended to assist the GCP and its Local Authority Partners to assess the relative merits of a range of scenarios for an STZ in Cambridge. It would inform GCP's Joint Assembly and Executive Board and assist in making a recommendation to Cambridgeshire County Council's Highways and Transportation Committee and thereon to a meeting of the Full Council at which a decision would be taken on whether to proceed to the next level of design of the STZ.

1.1.3. If approval is gained, the next stage would be to proceed to detailed design of the charging scheme, and to determine how it would operate and interface with the bus and sustainable travel measures. There would need to be engagement with potential suppliers in the market to facilitate finalisation of a commercial structure and to obtain final quotes and agree a procurement route. This would be presented in a FBC to seek final investment approval.

1.2 Context and Overview of the Proposal

City Access Strategy and The Greater Cambridge Partnership

1.2.1. The Greater Cambridge Partnership (GCP) is the local delivery body for a City Deal with central Government, bringing powers and investment, worth up to £1bn over 15 years, to vital improvements in infrastructure, supporting and accelerating the creation of 44,000 new jobs, 33,500 new homes and 420 additional apprenticeships.

1.2.2. The Greater Cambridge area is growing fast, between 2011 and 2021 the population increased by 13% to 307,000[13]. By 2031 it is expected to be 30% higher than in 2011. Even with more flexible working than pre-pandemic, pressure on the transport network would grow[14].

1.2.3. Planning for, and accommodating, the needs of both existing and future residents and businesses requires a greater focus on making better use of the transport network, whilst maximising the opportunities to influence travel demand. GCP is therefore developing a number of large-scale transformational projects, designed both to support the needs of existing residents and businesses and to accommodate growth through a substantial modal shift to public transport, cycling and walking.

[13] ONS Census (2001, 2021). *Usual Resident Population*
[14] Cambridgeshire Insight (2021). *Population Forecast*

1.2.4. The City Access Programme has explored ways to deliver better, more competitive sustainable transport, particularly within the constrained city environment including the narrow historic streets in the city centre. The Programme comprises the following:

- The Making Connections programme – focusing on transformational improvements to the bus network, improving the city's active travel environment, and reducing congestion and pollution – which is the focus of this OBC;
- Development of an Integrated Parking Strategy, including Residents' Parking Schemes;
- Making best use of the city's road network, through a Road Network Hierarchy Review; and
- Exploring ways to reduce commercially-generated congestion through freight consolidation.

Key Challenges

1.2.5. An overview of some of the key challenges facing Greater Cambridge is provided below:

- **Continued growth of traffic and congestion**
  - The number of motor vehicles entering Cambridge each day increased by 8% between October 2011 and October 2019[15].
  - Although the pandemic resulted in significant adjustments to travel behaviours, including traffic flow volumes, data from key roads within Cambridge shows that traffic levels are now approaching their pre-pandemic peak[16].
  - Between 2026 and 2041 the Cambridge Sub-Regional Model (CSRM) forecasts that the number of vehicles travelling into Cambridge would increase by 4% in the AM peak, the number of vehicles leaving Cambridge would increase by 8% in the PM peak, and the number of vehicles entering or exiting Cambridge in the interpeak would increase by 18%.
  - The relatively small percentage increases in the peak hours is, in part, due to Cambridge's local road network already operating near to its functional capacity[17].
  - CSRM model data also suggests that by 2041 total network delay across Greater Cambridge could increase by 30% in the morning peak, 75% in the evening peak and 50% in the interpeak. This demonstrates that in a heavily congested network, a relatively small increase in traffic leads to a disproportionate increase in delays.
- **A shortage of available and affordable housing** within a reasonable journey time of where people work.
  - This is in part due to the imbalance in the demand for travel versus the supply, but also the quality of public transport provision and level of delay on the highway network.

[15] Cambridgeshire County Council (2021). *Traffic Monitoring Report - Changes in daily movements crossing the Cambridge Radial Cordon*
[16] Cambridgeshire County Council (2023). *Transport Update: COVID-19 transport impacts and recovery (April 2023)*
[17] Cambridgeshire County Council (2020). *Greater Cambridge Local Plan Transport Existing Transport Conditions Report*

  - This, in turn, prevents the 'unlocking' of the required strategic growth in the predominately rural areas of Greater Cambridge.

- **Limited public transport choices**
  - Greater Cambridge residents prioritise investment in public transport and active travel over cars. For example, a Sustrans Report showed that residents want more Government money spent on public transport (69%), cycling (62%), walking (49%) and driving (24%)[18].
  - Greater Cambridge's bus network provides less frequent and extensive services than it did prior to the COVID-19 pandemic. This has been influenced by falling patronage, a lack of funding, increasing congestion and a network that is not sufficiently tailored to Cambridge's polycentric growth pattern[19].
  - Both Whippet and Stagecoach have reduced the frequency of peak-time services due to "vastly increased congestion"[20] and Stagecoach withdrew from 18 predominately rural bus routes, stating they were not commercially viable[21].
- **Poor local air quality in Cambridge**
  - In 2004 an Air Quality Management Area (AQMA) encompassing Cambridge's inner ring road, and all the land within it, was established due to exceedances of Nitrogen Dioxide (NO2)[22].
  - The number of days Cambridge spent in poor air quality was 28 days in 2022. Only 3 other cities (London, Southend and Norwich) recorded more poor air quality days than Cambridge in 2022[23].
  - A study by the Committee on the Medical Effects of Air Pollution (COMEAP) sets out that there is "no clear evidence of a safe level of exposure below which there is no risk of adverse health effects"[24].
- **High levels of greenhouse gas emissions from road traffic**
  - Road transport emissions in Greater Cambridge equate to approximately 34% of all greenhouse gas emissions in the area[25]; this is despite transport-related CO2 emissions declining by 31% in Cambridge between 2010 and 2020[26].

[18] Sustrans (2021). *Greater Cambridge Walking and Cycling Index Statistics*
[19] Cambridgeshire & Peterborough Combined Authority (2021). *Bus Service Improvement Plan for Cambridgeshire and Peterborough*
[20] Whippet (2023). *Revised Weekday Universal Timetable. 13th February 2023*
[21] Stagecoach (2023). *Routes updated across Cambridgeshire and Bedfordshire. 4th June Service Update.*
[22] Department for Business, Energy and Industrial Strategy (2022). *UK local authority and regional greenhouse gas emissions*
[23] Centre for Cities (2023). *Cities Outlook Report*
[24] Committee on the Medical Effects of Air Pollutants/Public Health England (2018). *Heath matters: air pollution*
[25] Department for Transport (2022). *Transport and Environment Statistics*
[26] Department for Business, Energy and Industrial Strategy (2022). *UK local authority and regional greenhouse gas emissions*

- **A city environment dominated by the car,** which discourages some people from walking and cycling and makes public spaces less attractive:
  - 66% of Greater Cambridge residents think that their streets are dominated by moving or parked motor vehicles[27].
  - The reliance on private vehicles to carry out short-distance trips, which could be carried out by active modes, has contributed to the rising cost of ill health in the UK. Morbidities caused by physical inactivity are associated with 1 in 6 deaths in the UK and are estimated to cost the UK economy £7.4 billion annually[28].
- **High Levels of Road Traffic Collisions**
  - Despite a reduction in the number and severity of road traffic casualties in Greater Cambridge, due to collisions falling by 34%, casualties remain high. In 2022, there were 449 collisions, including 42 pedestrian casualties and 163 cyclist casualties[29].
  - Research shows that road traffic collisions typically respond proportionally to traffic flows. Therefore, further interventions are needed to meet the 'Vision Zero' strategy, supported by CCC, which aims to eliminate all traffic fatalities and severe injuries, whilst increasing safe, healthy and equitable mobility for all.
- **Difficulty accessing employment opportunities** for people who rely on public transport:
  - In 2021, 34% of households in Cambridge did not own a car[30] and 26% of semi-skilled / unskilled or unemployed people did not own cars[31].

[27] Cambridge City Council (2022). *Air Quality Annual Status Report* based on data from Office for Health, Improvement and Disparities
[28] Office for Health Improvement and Disparities (2022). *Physical activity: applying All Our Health*
[29] Cambridgeshire Insight (2023). *Open Data Portal – Road Traffic Collision Data*
[30] ONS (2021). *Car or Van Availability*
[31] ONS (2022). *Employment and Labour Market – Annual Survey of Hours and Earnings*

1.3 Background and Context

Evolution of Making Connections Prior to OBC

1.3.1. Figure 1-1 shows how the proposals in the 2022 Making Connections public consultation exercise were arrived at. It shows the evolution of technical proposals from 2015 - when GCP was created - that have been refined by five formal consultation exercises (denoted in light green in Figure 1-1.

Figure 1-1 – Timeline of consultation and engagement for Making Connections

1.3.2. The start of Making Connections dates to the commencement of the GCP in 2015, when it initiated option exploration to reduce congestion in Cambridge. Between 2016 and 2021 a series of technical work and wide-ranging public engagements have taken place. This led to the GCP Executive Board's agreement to develop a final package of options for improving bus services, expand the cycling-plus network and manage road space in Cambridge.

1.3.3. GCP Making Connections public consultation was launched in late 2021. It focused on the central proposition of a transformed bus network and wider sustainable transport measures, funded through either a Workplace Parking Levy / increased parking charges, a pollution charge or a flexible area charge. These priced demand management options were also the potential mechanisms for reducing traffic, reducing congestion, and creating the space for more walking, cycling and reliable public transport that is necessary if the outcomes are to be achieved.

Updating the SOC

1.3.4. SYSTRA were commissioned by GCP to undertake a review of the SOC and provided a report in which they put forward recommendations for the OBC. These recommendations have been incorporated and SYSTRA have been retained by GCP and provided input and advise during this OBC development.

The Options Appraisal Report

1.3.5. Findings from the 2021 consultation and previous work informed the first iteration of the option assessment completed and documented in 2022. Version 1 of the Options Appraisal Report (OAR) informed the SOC and the subsequent recommendations to the GCP Joint Assembly held in September 2022. A core option of road user charge of £5 applied 7am-7pm on weekdays was recommended to and accepted by the Joint Assembly and Executive Board in 2022. This is a Sustainable Travel Zone (STZ) comprising network wide public transport improvements, complementary measures and a road user charge, which is based on the STZ charge consulted on in 2021.

1.3.6. The chosen STZ option informed the subsequent Making Connections Consultation which was undertaken between October to December 2022. Nearly 24,000 responses were received to this consultation.

1.3.7. Further refinement of Making Connections options took place in the first half of 2023 incorporating insights from the consultation and new technical evidence developed from early 2023.

1.3.8. Multiple options remained under consideration for much of 2023. It was ultimately agreed that a further options appraisal process be undertaken and presented in an updated OAR with the intention of narrowing down options for more detailed analysis in the OBC.

1.3.9. Using a Multi Criteria Assessment Framework (MCAF), the updated OAR assessed three new scenarios, in addition to the consultation scenario. The analysis demonstrates that all the scenarios have positive impacts in terms of congestion and environmental benefits, and they all deliver funding to facilitate transformation of the bus network and sustainable travel

measures. On this basis, all the scenarios have potential merit in terms of their strategic impact and were taken forward for more detailed assessment in the OBC.

1.3.10. Option development in 2023 has refined the core option (road user charge of £5 applied 7am-7pm on weekdays) assessed in the SOC through the consideration of a range of scheme parameters based on findings from the new consultation and additional assessment undertaken. This includes values of charge at different times of day and further determination of those who may be eligible for discounts. Once the revised scheme options were established, qualitative assessments based on an MCA were carried out to assess the extent to which that the updated scheme options can meet the scheme objectives and address potential issues raised in the consultation.

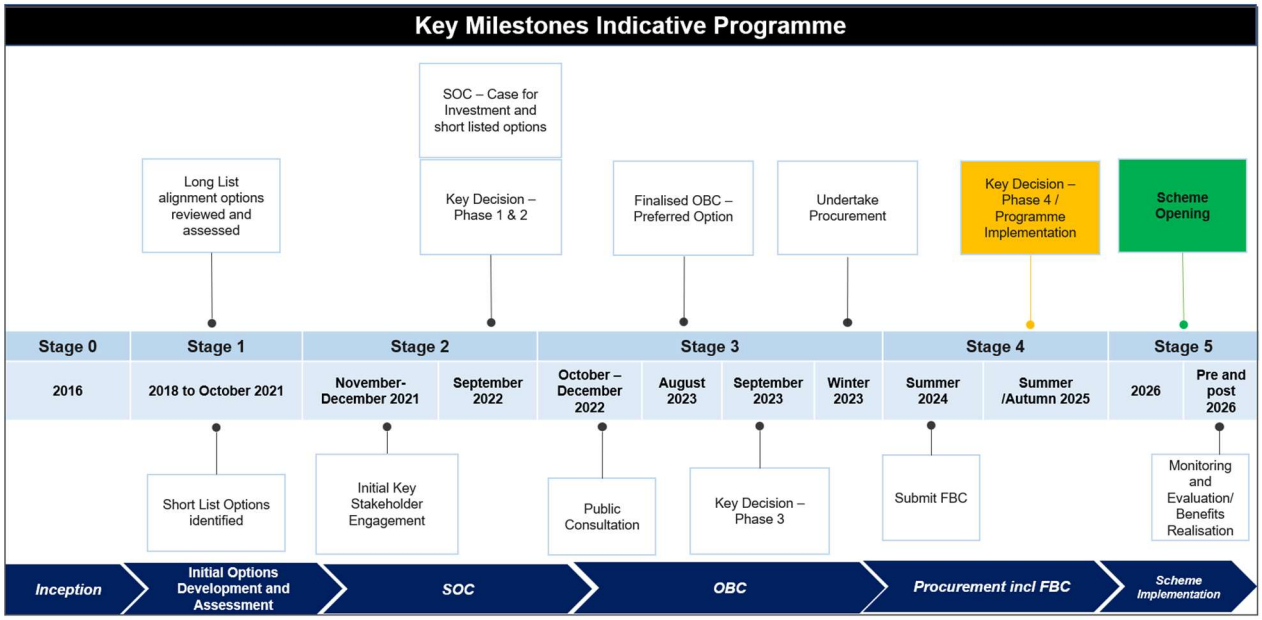
1.3.11. Outcomes from the refinement are three formulated scenarios for Making Connections along with the consultation proposal and 'do minimum', which form the basis of further assessment in the development of the OBC. These were documented in the updated OAR (Version 2) and have been incorporated into the update of this report in August 2023.

1.3.12. A full record of the option assessment process outlined above can be found in OAR Version 2 (Appendix A).

Programme Timescales

1.3.13. An overview of the key Making Connections project milestones is presented in Figure 1-2.

Figure 1-2 – Key Project Milestones and Indicative Programme



2 Strategic Dimension

2.1 Introduction

2.1.1. This strategic dimension describes how the Making Connections programme would contribute to achieving the vision and objectives of the Greater Cambridge City Deal and how it aligns with wider UK Government objectives and policies. It also provides an evidence-based case that there is a need for intervention and that the proposed Making Connections scheme addresses this need.

2.1.2. Since the SOC, significant work has been undertaken to assess the expected impact of the proposed options on the transport network. An Options Appraisal Report (OAR) has been prepared in advance of this OBC which presents this analysis and is included as Appendix A. The options that are considered further in this OBC are described in Section 0 of this Strategic Dimension and their economic impacts are analysed further in the Economic Dimension.

2.2 Contents of the Strategic Dimension

2.2.1. The Department for Transport's *'Transport Business Case Guidance'*[32] outlines topics that should be covered in the Strategic Dimension. The following table indicates where these requirements are met in this document.

Table 2-1 – Contents of the Strategic Dimension

Content	DfT Requirements	Section
Organisation overview	An outline of the strategic priorities and responsibilities of the organisation(s) responsible for the proposal (for example DfT, Highways England, or the Local Authority)	2.3
Business strategy and wider strategies	Determine the strategic fit of the proposal to the priorities of relevant organisations, the government and the regional, combined and local authorities in scope	2.4
Interdependencies	Set out the strategic portfolios, programmes and projects that the investment may interact with or link to: do they contribute towards achieving the same outcomes? Where does the intervention sit within this hierarchy?	2.5
Existing arrangements and the impacts of not changing	Provide a clear picture of the current service model that serves as the baseline from which to measure future improvements. If applicable, set out the geographical scope of the investment and the economic, social and environmental context of the area: what is the impact of not intervening?	2.7
Business needs and service gaps	Determine the organisation's business needs: these are internal and external factors that are needed for the transport intervention to fulfil its objectives	2.6
Problem identification	Describe the problem(s) identified to determine the rationale: what is the evidence base underpinning the problem? Does it justify the need for a transport intervention?	2.6

[32] Department for Transport (2022). *Transport Business Case Guidance*

Content	DfT Requirements	Section
SMART spending objectives	Establish SMART objectives for what the investment sets out to achieve: these should be specific, measurable, achievable, relevant and time constrained. SMART objectives should align to the strategic priorities identified and provide clear measures of success	2.6
Scope	Explain the scope of the intervention: What would it deliver? What is out-of-scope?	2.7
Measures of success and planning for delivery	Set out what constitutes a successful delivery of the SMART spending objectives and determine the delivery arrangements. This can be conducted via workshops as per the HM Treasury business case guidance	2.8
Strategic benefits	Describe, using evidence, the strategic benefits this proposal would provide through achieving the SMART spending objectives. Identify a clear theory of change that provides a comprehensive description of how the transport investment would result in those outcomes and impacts	2.8
Strategic assessment of investment options	Evaluate the longlist and shortlist of options against the SMART objectives and assess their impact on wider strategic priorities: options that do not contribute to achieving these priorities should be discounted	2.9
Risks and constraints	Specify the main risks to achieving the SMART objectives: how would risks be mitigated and managed? Outline the constraints that could impact the successful delivery of the proposal including any relevant legislation and legal obligations that the investment engages with	2.10
Stakeholders' views and requirements	Outline the main stakeholder groups and their contribution to the development of the proposal, including their views and any conflicts between groups	2.11

2.3 Organisation Overview

2.3.1. The following section sets out the strategic priorities and responsibilities of the GCP, as the organisation responsible for the Making Connections proposal.

The Greater Cambridge City Deal and the GCP

2.3.2. The GCP is the local delivery body for a City Deal with central Government, named the Greater Cambridge City Deal (henceforth, City Deal). The GCP was formed to deliver the aims and objectives of the City Deal negotiated with Central Government in 2014.

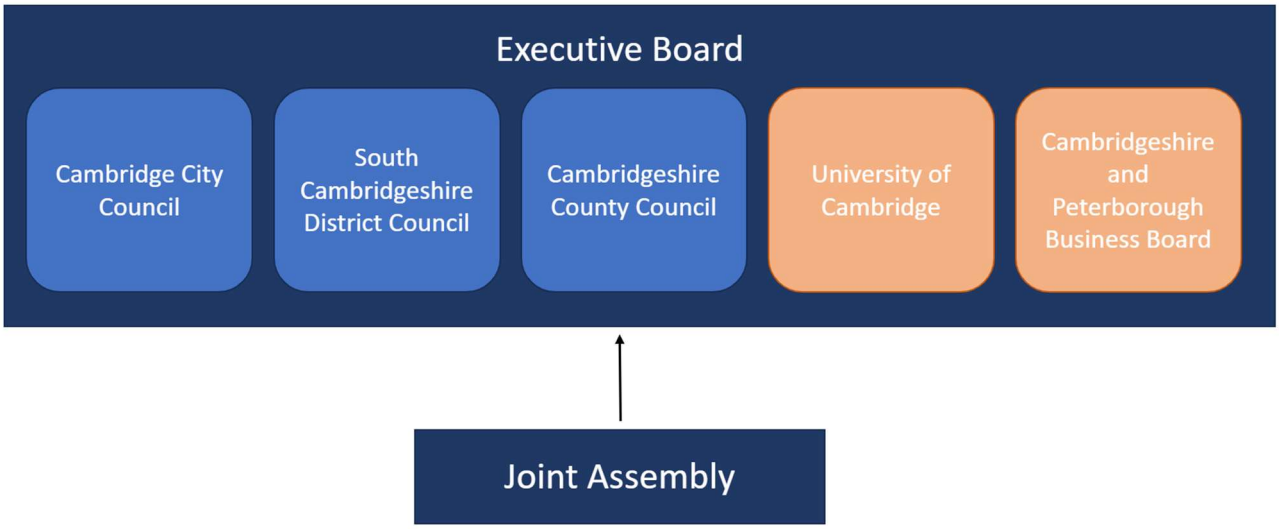
2.3.3. The City Deal, signed in June 2014, is an agreement between central government and the three local authorities (Cambridgeshire County Council, Cambridge City Council and South Cambridgeshire District Council) to invest in Greater Cambridge to encourage economic growth, benefiting the UK economy and wider society.[33]

2.3.4. The City Deal aims to enable a new wave of innovation-led growth by investing in infrastructure, housing and skills in order to facilitate continued growth. It acknowledges the area's strong track record in delivering growth and seeks to support existing and new businesses in achieving their full potential. To achieve this, the City Deal creates:

- A governance arrangement for joint decision making between the local councils; and,
- An infrastructure investment fund worth up to £500 million over 15 years up to 2030.

[33] UK Gov (2014). *Greater Cambridge City Deal Press Release*

Figure 2-1 – Structure and responsibilities of the GCP



2.3.5. The GCP is governed by an Executive Board with three voting members, supported by a Joint Assembly with 15 members. Further details are included in the Management Dimension of this OBC.

Statutory Responsibilities

2.3.6. The GCP has no statutory powers of its own; these are held by its local authority partners:

- Cambridgeshire and Peterborough Combined Authority (CPCA) is the local transport authority (LTA);
- Cambridgeshire County Council (CCC) is the local highway and traffic authority; and,
- South Cambridgeshire District Council (SCDC) and Cambridge City Council (CCC) are the local planning authorities (LPAs) for their respective areas.

GCP's Strategic Vision and Objectives

2.3.7. The GCP's strategic vision is 'Working together to create wider prosperity and improve quality of life now and into the future'. Its wider strategy is set out in its Future Investment Strategy (2019). The GCP has set four strategic objectives against which City Deal projects are prioritised:

- To nurture the conditions necessary to unlock the potential of Greater Cambridge to create and retain the international high-tech businesses of the future;
- To better target investment to the needs of our economy by ensuring those decisions are informed by the needs of businesses and other key stakeholders such as the universities;
- To markedly improve connectivity and networks between clusters and labour markets so that the right conditions are in place to drive further growth; and,
- To ease the labour market by investing in transport and housing, in turn allowing a long-term increase in jobs emerging from our internationally competitive clusters and more university spin-offs.

How the Making Connections programme fits with the GCP's strategic vision and objectives.

The Making Connections programme is being developed to contribute to the GCP's strategic objectives by:

- Tackling the problems which inhibit growth: traffic congestion and poor access from rural areas.
- Improving connectivity between employment clusters and labour markets in order to drive further growth; and,
- Providing a sustainable source of revenue for supporting investment in public and sustainable transport measures to enhance accessibility and support a long-term increase in jobs.

2.4 Strategic Fit

2.4.1. This section demonstrates the extent to which the Making Connections programme provides synergy and fit with other projects and programmes. It also considers the strategic fit of the programme to the strategic priorities of relevant organisations and the Government.

2.4.2. The strategic fit of the following documents is summarised in Table 2-3 and is considered in detail in Appendix R. The following plans and policies have been reviewed as part of this exercise:

- Local Plan Framework
  - Cambridge Local Plan (adopted 2018).
  - South Cambridgeshire Local Plan (adopted 2018).
  - Emerging Greater Cambridge Local Plan (First Proposals, 2021).
- The Greater Cambridge Partnership
  - Strategic vision and objectives.
  - Transport vision and objectives.
  - Transport strategy.
- Cambridgeshire and Peterborough Combined Authority
  - Overarching ambitions.
  - Local Transport Plan (2020).
  - Emerging Local Transport and Connectivity Plan (consultation draft, 2022).
  - Strategic Spatial Framework.
  - Bus Service Improvement Plan (2021).
  - Net Zero Target for Carbon Emissions by 2030.
  - Local Industrial Strategy (2019).
  - Cambridgeshire Active Travel Strategy.
  - Cambridgeshire Local Cycling and Walking Infrastructure Plan.

- Cambridgeshire County Council
  - Local Transport Plan (2017).
- England's Economic Heartland: the sub-national transport body (STB)
  - EEH Transport Strategy (2021).
- The Government
  - DfT Outcome Delivery Plan (2022).
  - Net Zero Target for Greenhouse Gas Emissions by 2050 (2019).
  - Decarbonising Transport (2021).
  - National Infrastructure Strategy (2020).
  - Bus Back Better (2021).
  - Gear Change (2020).
  - Build Back Better: Our Plan for Growth (2021).
  - Levelling Up (2022).
  - Cambridge 2040 (2023).

Strategic Fit - Summary

2.4.3. Table 2-2 shows the scoring system used to assess how well the Making Connections programme strategically fits with the national, regional, and local policy documents listed above. The outcome of this assessment is shown visually in a simple RAG assessment, scored as in Table 2-3 below.

Table 2-2 – RAG Assessment Criteria

Indicator	Degree of Fit	Description
Dark Green	Very strong fit	The programme is a key component or strong enabler of this policy/priority
Green	Strong fit	The programme helps deliver important aspects of this policy/priority
Yellow	Moderate fit	The programme supports some aspects of this policy/priority
Grey	No fit	The programme does not contribute or negatively impact the fulfilment of this policy
Red	Adverse fit	The programme could negatively impact the fulfilment of this policy/priority

2.4.4. The degree to which the Making Connections programme strategically fits with the listed policies and priorities has been determined by qualitative analysis and professional judgement. The Case for Change (Section 2.6) includes a logic map and causal chain analysis that contextualises how the Programme would contribute to the outcomes of these priorities and policies.

Table 2-3 – Strategic Fit

Organisation	Strategy	How the Making Connections Programme Fits with the Policy	Strength of Strategic Fit	Indicator
GCP	Strategic Vision and Objectives	The programme would tackle congestion and improve connectivity between employment clusters and employees. Doing so would help to facilitate future growth in Greater Cambridge.	**Very strong** – The Programme's outcomes directly align with the GCP's vision and objectives.	Dark Green
GCP	Transport Vision and Objectives	A faster, further reaching, more frequent and more reliable bus network would connect people living in rural towns and villages with centres of employment. Lower levels of congestion would facilitate the reallocation of road space to active travel modes to engender further modal shift.	**Very strong** – The Programme's SMART objectives all relate to the GCP's strategic objectives.	Dark Green
GCP	Transport Strategy	The Making Connections programme should reduce congestion in Cambridge through road user charging. The revenue generated should, in turn, fund a significantly improved bus network, whilst reduced traffic flows should facilitate the future reallocation of road space in favour of walking and cycling.	**Very strong** – The Programme is a key component and enabler of the strategy.	Dark Green
CPCA	Overarching ambitions	The Making Connections programme would significantly enhance the connectedness, in transport terms, of the Greater Cambridge area. The facilitation of flows of capital and labour should, in turn, support the CPCA's ambitious economic growth plans.	**Strong** – The Programme's improvements to the transport network would engender the economic growth targeted by the devolution deal.	Green
CPCA	Local Transport Plan	The Making Connections programme contributes to all relevant LTP objectives; notably by reducing congestion, improving bus services, supporting growth, improving air quality, and reducing carbon emissions.	**Very strong** – The Programme would help to deliver key objectives of the LTP.	Dark Green
CPCA	Emerging Local Transport and Connectivity Plan	The Making Connections programme aligns with the LTCP vision. It would connect contribute to the plan objectives by connecting rural communities to employment opportunities, reducing congestion, encouraging a shift to sustainable modes of transport, reducing GHG emissions and improving air quality	**Very strong** – The Programme is a key enabler of the vision.	Dark Green
CPCA	Strategic Spatial Framework	The Making Connections programme tackles key transport challenges by improving accessibility to public transport, especially for rural communities; reducing congestion, to allow growth and development; cutting GHG emissions; and improving local air quality.	**Strong** – The Programme helps deliver important aspects of the spatial framework.	Green

Organisation	Strategy	How the Making Connections Programme Fits with the Policy	Strength of Strategic Fit	Indicator
CPCA	Bus Service Improvement Plan and Bus Strategy	The Making Connections programme should provide better and more affordable services in rural areas; these improvements would increase the attractiveness of bus travel and facilitate modal shift, in turn reducing GHG emissions and improving air quality.	**Very strong** – The Programme would help to deliver key BSIP and Bus Strategy objectives.	● Dark Green
CPCA	**Net zero target for 2030** (for CPCA's own operations)	The Programme would reduce car use and encourage sustainable travel. Hence, the Programme should reduce carbon emissions, including some related to CPCA's own operations.	**Strong** – the Programme strongly aligns with the principles of the policy.	● Green
CPCA	Local Industrial Strategy	The Programme supports the Strategy by reducing congestion and addressing disparities in public transport provision; these factors act as barriers to economic growth and development. Reducing congestion also complements the wider portfolio of public transport and active travel schemes delivered through the City Deal.	**Strong** – the Programme contributes to future growth and development by tackling congestion and enhancing connectivity.	● Green
Cambridge City Council	Cambridge Local Plan	The Programme could enable planned growth and development by reducing congestion, encouraging uptake of sustainable modes of transport and delivering improvements to public transport services.	**Strong** – the Programme supports key objectives and enables planned growth and development.	● Green
South Cambridgeshire District Council	South Cambridgeshire Local Plan	The Programme could enable planned growth and development by reducing congestion on radial routes that connect South Cambridgeshire with Cambridge. Access to services, employment and leisure opportunities in the District would also be improved by enhancing public transport connectivity between key employment clusters and service centres, and villages and market towns.	**Strong** – the Programme supports key objectives and enables planned growth and development.	● Green
Cambridge City Council and SCDC	Emerging Greater Cambridge Local Plan First Proposals	The programme is included as an assumed scheme in the transport evidence supporting the emerging Joint Local Plan. It complements the existing and proposed public transport infrastructure on which the emerging spatial strategy depends. It supports the proposed pattern of development in the emerging Joint Local Plan, reduces carbon emissions, and helps deliver the key aim of enabling sustainable development.	**Very strong** – the Programme is a key component and enabler of the strategy.	● Dark Green
England's Economic Heartland	EEH Transport Strategy	Making Connections makes a clear move away from "business as usual" by using a charging mechanism to reduce private car traffic and fund bus services. It would reduce congestion and carbon emissions, improve rural connectivity and support Cambridge as a regionally significant economic hub.	**Strong** – the Programme helps deliver important aspects of the strategy at a local level.	● Green

Organisation	Strategy	How the Making Connections Programme Fits with the Policy	Strength of Strategic Fit	Indicator
Government – Department for Transport	DfT Outcome Delivery Plan	The Programme would help deliver, at a local level, the DfT's priority outcomes, by improving connectivity, confidence in the network, lowering greenhouse gas emissions and improving local air quality.	**Strong** – the Programme helps deliver important aspects of the plan at a local level.	Green
Government – Department for Transport	Transport Decarbonisation Plan	The Programme would significantly reduce car use and support and encourage sustainable transport modes, including walking, cycling and public transport. This would directly reduce carbon emissions and improve local air quality.	**Very strong** – the Programme acts as a key enabler of the 2050 target and strategy at a local level.	Dark Green
Government – HM Treasury	National Infrastructure Strategy	The Programme would support a key element of the strategy by reducing carbon emissions from transport and providing sustainable funding for better public transport services. It would increase the share of journeys undertaken by public transport, cycling and walking in Greater Cambridge.	**Strong** – the Programme helps deliver important aspects of the Plan at a local level.	Green
Government – Department for Transport	Bus Back Better	The programme directly tackles the question of how new and improved bus services should be funded. The sustainable travel zone would provide a sustainable source of revenue for public transport, enhancing the impacts of recent and ongoing capital investment. There would be fewer trips by car and more by bus.	**Strong** – the Programme helps deliver important aspects of the Plan at a local level.	Green
Government – Department for Transport	Gear Change	The STZ would incentivise people to choose alternatives to the car, including cycling and walking, though its main purpose is to encourage bus use. Reductions in traffic and potential reallocation of road space would create more attractive conditions for pedestrians and cyclists. The programme also plans to deliver walking and cycling infrastructure improvements through road user charging.	**Strong** – the Programme supports the Government's vision for increasing walking and cycling trips.	Green
Government – HM Treasury	Build Back Better	The Programme is designed to support Greater Cambridge's position as a globally competitive hub for knowledge intensive industries, by creating conditions in which growth can continue without placing unacceptable demands on transport systems and the environment. The Programme aims to effectively address the problem of congestion, which would otherwise constrain growth, and delivers a step change in the public transport connectivity, enabling more people, especially those in rural areas, to access jobs and opportunities. Hence, the programme would enable green growth and help achieve Government's Net Zero ambition.	**Strong** – the Programme enables future growth and development by tackling congestion and enhancing connectivity.	Green

Organisation	Strategy	How the Making Connections Programme Fits with the Policy	Strength of Strategic Fit	Indicator
Government - Department for Levelling Up, Housing and Communities	Levelling Up White Paper	The Programme aims to distribute the benefits of growth and development more equitably in Greater Cambridge. It should deliver significant and sustainably funded improvements in public transport connectivity, especially for rural communities in South Cambridgeshire. It would deliver higher bus frequencies, lower fares, and provide better links to Cambridge and the area's high-tech employment clusters. Reducing the cost and improving the level of service of bus travel, would make it easier for people on lower incomes and those without cars to access jobs and services.	**Strong** – the Programme strongly supports the principles of Levelling Up by delivering a transport system that is affordable and accessible for all; this would help address transport poverty and inequalities of access.	● Green

2.5 Programme Interdependencies

2.5.1. The GCP is developing a number of large-scale transformational projects, designed both to support the needs of existing residents and businesses and to accommodate growth through a substantial modal shift to public transport, cycling and walking.

2.5.2. The Making Connections programme is part of a wider City Access Strategy which includes measures such as the development of an integrated parking strategy for Cambridge and a review of the city's road network classification. The delivery and success of the Programme is thus linked to this wider strategic portfolio.

2.5.3. This section summarises the strategic portfolios, programmes and projects with which Making Connections may interact and where it sits within this hierarchy of schemes and programmes. Furthermore the Management Dimension sets out a longlist of potential dependencies and the extent of their relationship with the Making Connections programme.

GCP's Transport Programme

2.5.4. The GCP's transport programme is a development of the Transport Strategy for Cambridge and South Cambridgeshire[34], which was adopted in 2014 and was prepared to accompany the now-adopted Local Plans for Cambridge and South Cambridgeshire.

2.5.5. To deliver its transport objectives, the GCP is seeking to implement an ambitious programme of strategic infrastructure improvements. The schemes below have been developed in accordance with the GCP's strategic objectives and therefore are considered to contribute towards achieving the same outcomes as the Making Connections programme:

- Four new high-quality public transport corridors to the north, south, east and west of the Cambridge that link key growth areas with the city centre. These would include new dedicated bus routes bypassing traffic congestion, new interchanges and stops, and facilities for pedestrians and cyclists;
- New travel hubs, linked to the above public transport corridors, where people can park outside the city and continue their journey by public transport;
- Twelve new Greenways for walkers, cyclists, horse riders and other non-motorised users, linking communities in South Cambridgeshire to Cambridge, plus the Chisholm Trail, a north-south route linking Cambridge North to Cambridge Station;
- Key corridor schemes within Cambridge to improve active travel and public transport, including on (Milton Road and Histon Road) or with a particular focus on active travel (Hills Road, Madingley Road and Mill Road); and,
- Waterbeach Railway Station.

2.5.6. For the Making Connections programme to succeed in helping to reducing traffic in Cambridge, a citywide approach to making sustainable transport the natural and easy

[34] Cambridgeshire County Council (2014). *Transport Strategy for Cambridge and South Cambridgeshire*

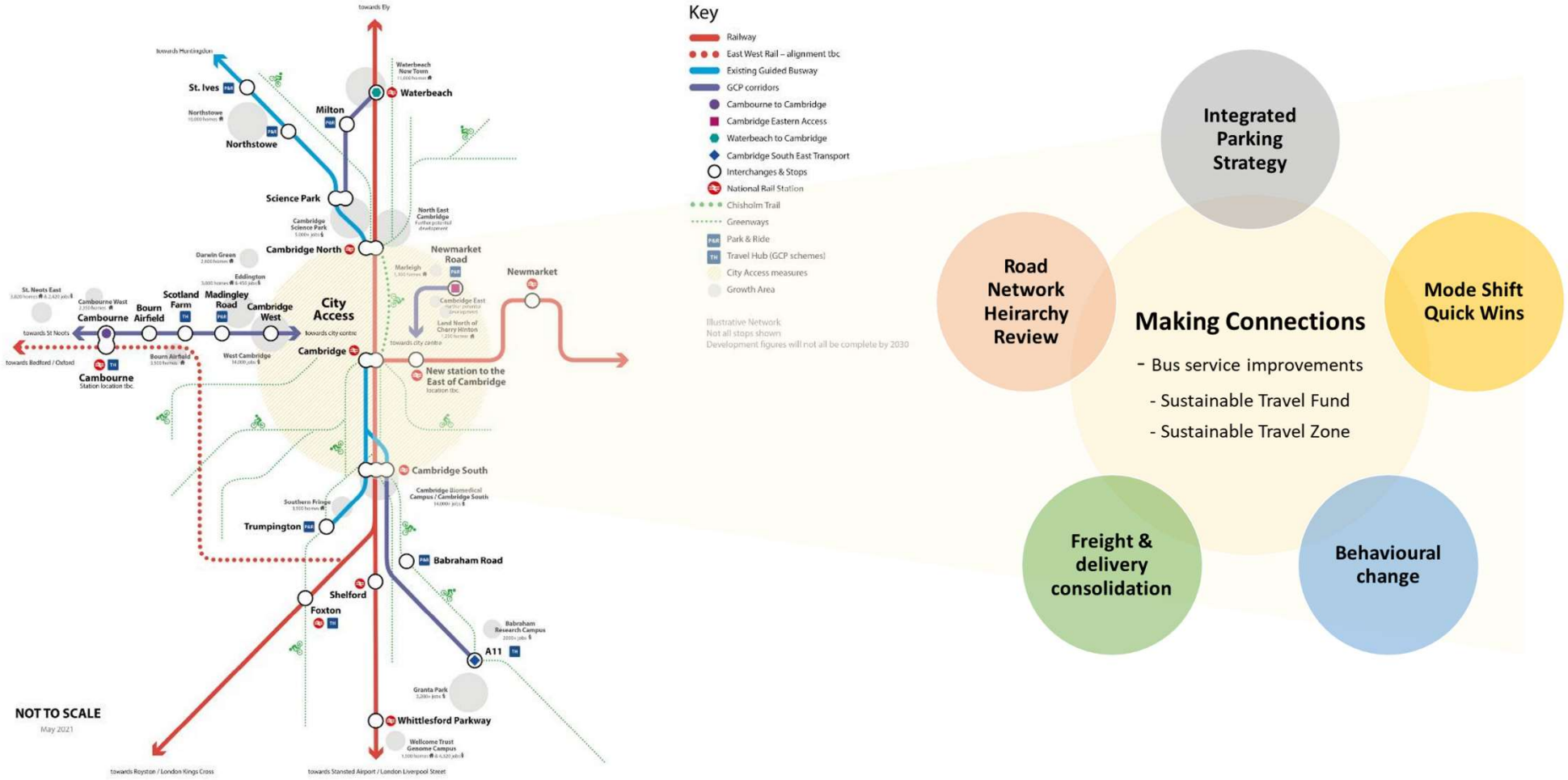
choice for journeys. The schemes listed above contribute to this by making interchange easier, providing buses with priority and enhancing active routes within Greater Cambridge.

2.5.7. Alongside the above strategic improvements, the GCP is aiming to tackle congestion and improve conditions for sustainable transport users though the ‘City Access’ project, which comprises:

- The ‘Making Connections’ scheme;
- Experimental traffic schemes comprising modal filters to help active travel;
- Addressing parking issues in Cambridge through residents parking zones;
- Cycling Plus (targeted cycling improvements, for example at Addenbrooke’s roundabout as part of wider A1134 improvements); and,
- Developing a new road classification for Cambridge

2.5.8. The GCP’s transport programme is illustrated diagrammatically in Figure 2-2.

Figure 2-2 – GCP Transport Programme - Future Network



City Access

2.5.9. City Access is a sustainable transport strategy that sits at the heart of the Greater Cambridge City Deal. Making Connections forms part of the 'City Access' element of the GCP's transport programme.

2.5.10. City Access aims to address some of the major pressures on the local economy by reducing congestion and pollution, and by providing people with better, healthier, more sustainable options for their journeys.

2.5.11. Specifically, the 'City Access' project[35] was conceived and developed to:

- Reduce traffic by 15% from the 2011 baseline, freeing up road space for more public transport services, and other sustainable transport modes.
- Ensure public transport is more affordable, accessible and connects to where people want to travel, both now and in the future.
- Raise the money needed to fund the delivery of transformational bus network changes, fares reductions and improved walking and cycling routes.
- Make it safe and attractive to walk and cycle for everyday journeys.
- Support decarbonisation of transport and improvements to air quality; and,
- Make Greater Cambridge a more pleasant place to live, work, travel or just be.

2.5.12. In addition to the GCP's transport programme, the investments included within Table 2-4 are being promoted by other organisations in the Greater Cambridge area.

[35] Greater Cambridge Partnership (2018). *Cambridge City Access*

Table 2-4 – The Alignment of the Making Connections Programmes with Potential Transport Schemes

Scheme (Delivery Body)	Description	Fit with the Making Connections Programme
Cambridge South (Network Rail)	A new railway station at the Cambridge Biomedical Campus	**Enhanced Connectivity:** Cambridge South Station would improve connectivity in the southern part of Cambridge by providing a direct rail connection to the Cambridge Biomedical Campus, Papworth Hospital and Addenbrooke's Hospital. As a new transport hub, the project would facilitate easier access to high quality public transport services for commuters, residents, and visitors. **Sustainable Transportation:** The project supports the promotion of sustainable transportation options over private vehicles, potentially reducing congestion and carbon emissions; this supports the vision of the Making Connections programme. **Integrated Transport Network:** Cambridge South Station would contribute to the development of an integrated transport network within Greater Cambridge. It would connect with existing rail infrastructure and bus services, allowing for seamless travel between different parts of Greater Cambridge. **Economic Development:** Cambridge South Station also supports the GCP's objective of promoting economic development in the area. The station could serve as a catalyst for growth, attracting investment, businesses, and employment opportunities to the area. It would enhance the accessibility of the Cambridge Biomedical Campus, a significant hub for medical research, and provide better connectivity to other commercial centres in the area.

Scheme (Delivery Body)	Description	Fit with the Making Connections Programme
East West Rail (Network Rail)	A new east-west rail route between Bedford and Cambridge	**Enhanced Connectivity:** The East West Rail project would improve transportation options for residents, students and businesses, allowing for easier travel and commuting via rail. It would also facilitate better access to employment, education, and leisure opportunities, supporting economic growth and improving overall connectivity within Greater Cambridge. **Reduced Congestion:** By providing an alternative mode of transportation, East West Rail has the potential to reduce road congestion. If more people opt for rail travel, especially for longer distances, it has the potential to alleviate the pressure on roads and highways within Greater Cambridge. This aligns with the objective of the Making Connections programme to address the transportation challenges and reduce congestion in the Greater Cambridge area. **Sustainable Transport:** The proposed high-speed connections between Oxford and Cambridge would likely lead to a modal shift away from private cars; thus supporting the GCP's objective of reducing carbon emissions and promoting sustainable transport options. **Economic Growth:** East West Rail would improve connectivity between the key economic hubs of Cambridge and Oxford; thus facilitating the movement of people, goods, and services. This enhanced connectivity has the potential to attract businesses investment and talent to Greater Cambridge, potentially fostering innovation, job creation, and economic development. The project aligns with the aim of Making Connection to support economic growth and ensure the area remains competitive and prosperous.
A428 (National Highways) and A10 Improvements (CPCA)	Major highway improvements to the A428 and the A10.	**Enhancing Connectivity:** The A10 and A428 improvement schemes would help facilitate smoother and more efficient travel for both commuters and businesses in Greater Cambridge. Hence, the schemes aligns with the GCP's objective of enhancing connectivity between key economic centres, residential areas, and transport hubs. **Sustainable Transport:** The Making Connections programme emphasises the promotion of sustainable transport options, such as cycling, walking, and public transportation. The A10 scheme could contribute to this objective by improving public transport provision and the incorporation of dedicated cycling and pedestrian infrastructure. **Road Safety:** The A10 and A428 schemes could improve road safety, by creating a more pleasant and safer environment for all road users at key junctions in particular. **Transport Interchange:** the proposed major highway improvements on the A428 and A10 could make the use of park and ride services at Madingley Road and Milton more attractive to commuters.

The Making Connections programme fits with other strategic portfolios, programmes, and projects.

The Making Connections programme would complement the other elements of the GCP's transport programme, helping to enhance the value of the infrastructure investment they provide. The proposed charging scheme would generate a sustainable source of revenue to support a greatly improved bus network reaching out into rural areas and enhancing connectivity to key employment sites. At the same time, it would reduce congestion, enabling road space to be reallocated for cycling, walking and high-quality public space. Reducing congestion would also help to make bus journeys quicker and more reliable.

The development of Cambridge South station and the proposed East West Rail line would enhance public transport accessibility for people travelling to Cambridge and discourage the use of the private car.

Wider improvements to the Strategic and Local Road Network and Cambridge's forecast growth trajectory, may result in some in increase in the demand to drive to Cambridge. This could further enhance the importance of bus-based Park and Ride. The proposed improvements to the bus network under Making Connections would help to make bus travel and park and ride services more attractive to potential users.

2.6 The Case for Change: Problem Identification

2.6.1. This section of this Strategic Dimension revisits the case for change for the proposed Making Connections programme presented previously in the Strategic Outline Case (SOC). The case for change forms the rationale for an investment. The Department for Transport's (DfT) Business Case Guidance[36] states that a robust case for change requires a clear understanding of:

- What an organisation is seeking to achieve (the investment or spending objectives)
- What is currently happening (existing arrangements); and,
- What is required to close the gap between where we are now (existing arrangements) and where we need to be in the future (business needs).

2.6.2. Analysing a proposal in this way, helps to establish a compelling case for intervention based on real needs, rather than the contention that it is just 'a good thing to do'.

2.6.3. This case for change thus sets out how the existing and evolving problems and opportunities facing the Greater Cambridge area need to be addressed to bridge existing service gaps, limit negative socio-economic outcomes and, ultimately, help Greater Cambridge fulfil its growth potential in an equitable and sustainable way.

[36] Department for Transport (2022). *Transport Business Case Guidance*

2.6.4. To ensure the Making Connections case for change is robust, careful consideration has been given to the following factors:

- The Greater Cambridge context and the area's growth trajectory;
- The impact of COVID-19;
- Future context and external factors, dependencies, risks, and constraints; and
- The impact of doing nothing.

What is the GCP Seeking to Achieve: Strategy, Aims and Objectives

Vision

2.6.5. The GCP's vision for transport is: *"Creating better and greener transport networks, connecting people to homes, jobs, study and opportunity"*.

2.6.6. The GCP, therefore, aims to develop a sustainable transport network for Greater Cambridge that keeps people, businesses and ideas connected as the area continues to grow, making it easier to access Cambridge by public transport, cycle and on foot. Through a range of projects, it would create a transport network fit for a small, compact city served by a growing network of rural towns and villages.

Objectives

2.6.7. Making a robust case for change first involves setting out the rationale, drivers, and objectives for a spending proposal, which must be made SMART – Specific, Measurable, Achievable, Relevant and Time constrained – for the purposes of quantitatively appraising options and post-evaluation.

2.6.8. The SMART objectives for the Making Connections programme were developed through consideration of the following:

- GCP's initial concepts for the programme
- National, Regional, and Local Policies and Plans (reviewed in Appendix R).
- Current and Forecast Problems (see the Case for Change, Section 2.6); and,
- Opportunities for Improvement (see the Case for Change, Section 2.6).

Strategic Objectives

2.6.9. The GCP's strategic objectives for the Making Connections programme were approved by the GCP Executive Board as part of their review, and subsequent approval of the Strategic Outline Case (SOC) for the Programme. These objectives are set out below:

- To contribute to the GCP target to reduce traffic by 15% from the 2011 baseline, freeing up road space for more public transport services, and other sustainable transport modes.
- To ensure public transport is more affordable, accessible and connects to where people want to travel, both now and in the future.
- To raise the money needed to fund the delivery of transformational bus network changes, fares reductions and improved walking and cycling routes.
- To make it safe and attractive to walk and cycle for everyday journeys.

- To support the decarbonisation of transport and improvements to air quality.
- To make Greater Cambridge a more pleasant place to live, work travel or just be.

Specific Objectives

2.6.10. Specific SMART objectives for the Making Connections programme were developed in the SOC and further refined in the Options Appraisal Report (OAR). They are summarised as follows:

- To reduce carbon emissions from transport.
- To improve access to jobs and education for people, especially those living in rural areas.
- To improve air quality in the city centre.
- To contribute to the GCP target to reduce traffic by 15% from the 2011 baseline.
- To reduce congestion in Cambridge.
- To reduce journey times and improve journey reliability.
- To enable the re-allocation of road space to buses, pedestrians, and cyclists.
- To increase the number of trips by bus.
- To increase the number of trips by cycle.
- To increase the number of trips on foot.
- To reduce the number of road accident casualties.
- To raise sufficient net revenue to fund the transformation of the bus network and wider Sustainable Transport Measures.

2.6.11. Section 2.9.3 of the Strategic Dimension sets out the Multicriteria Assessment Framework (MCAF) for Making Connections.

How the Making Connections programme fits with GCP's transport vision and objectives.

The programme would build upon planned capital investment in sustainable transport corridors by delivering a step change in the quality of bus services and by extending these services to connect more homes in Greater Cambridge with places of work, study and leisure. As well as generating revenue to support better bus services, the programme would reduce congestion and create opportunities to reallocate road space for pedestrians and cyclists.

Existing Arrangements and Why Change is Required?

2.6.12. The Making Connections case for change is driven by the issues with the current situation within Greater Cambridge outlined in the table below, which are explored and evidenced in the proceeding sections of this report.

Greater Cambridge

2.6.13. Greater Cambridge is formed of South Cambridgeshire District and the City of Cambridge; area profiles of Cambridge and South Cambridge are provided in Appendix R. The location

of Greater Cambridge, in the context of the county of Cambridgeshire, and adjacent Council areas, is shown in Figure 2-3.

Figure 2-3 – Greater Cambridge Location Plan with Surrounding Districts[37]

2.6.14. At the time of the 2021 Census, Greater Cambridge had a population of 307,700, made up of 145,700 people in Cambridge and 162,000 people in South Cambridgeshire. Although 2021 Census data was affected by COVID-19, Greater Cambridge was a net 'importer' of employees with approximately 50,000 non-residents being employed in the area; approximately 26,000 people commute into Cambridge and 24,000 into South Cambridgeshire for work[38].

2.6.15. The resident population, number of households and number of jobs in the Greater Cambridge area has grown significantly in the past two decades. Data from a Centre for Cities[39] paper has shown that population growth in Cambridge of 18% between 2011 and 2021 was, proportionally, the highest of any city in the UK. The table below compares

[37] Greater Cambridge Shared Planning (2021). *Emerging Greater Cambridge Local Plan*
[38] ONS Census (2021). *Population Estimates*
[39] Centre for Cities (2023). *City Outlook 2023*

growth rates in Greater Cambridge with UK averages between 2001 and 2021. Table 2-5 shows the percentage growth in the number of people living and the number of jobs in Greater Cambridge are more than double the national average. Comparatively, the growth in the number of households is more in line with the national average.

2.6.16. This suggests a trend towards larger average household sizes including more shared accommodation which is a response to the housing supply and affordability challenges that the Local Plans are seeking to address. Making Connections is one of a number of transport measures being developed to support the Local Plans and so can, indirectly, contribute to addressing this.

Table 2-5 – Growth in Greater Cambridge's Population, Households and Jobs[40]

Metric	Absolute Growth Between 2001 & 2021 in Greater Cambridge	Greater Cambridge Percentage Growth	UK Percentage Growth
Population Growth	+68,821 people	29%	14%
Household Growth	+24,631 households	26%	29%
Job Growth	+53,000 jobs	33%	16%

2.6.17. The significant growth in population and employment in Greater Cambridge has contributed to rising traffic levels on an already struggling transport system. Between 2010 and 2019 the number of motor vehicles entering and leaving Cambridge's radial cordon increased by 9%. The number of cars increased by 10% and the number of HGVs increased by 38%, whilst bus and coach trips in 2019 fell to 79% of 2010 levels[41].

2.6.18. In terms of future population growth, Cambridgeshire Insight forecasts that the population of Greater Cambridge is expected to grow to 355,215 by 2031[42]. Population data from the 2021 Census shows that recent growth is ahead of this trajectory.

2.6.19. In terms of future job growth, the Greater Cambridge Employment and Housing Evidence Update forecast that there would be between 66,000 (central growth scenario) and 76,700 (high growth scenario) additional jobs in the area by 2041. This represented an increase of 8,000 jobs when compared to the 2020 forecasts. Hence, unless action is taken, congestion and car dependency would continue to threaten the area's social, economic, and environmental wellbeing.

2.6.20. The Department for Levelling Up, Housing and Communities announced high-level proposals in July 2023 for Cambridge 2040 include a new urban quarter to the city and the delivery of up to 250,000 new homes to support Cambridge's position in the technology and life sciences sector. The Programme is designed to support Greater Cambridge's position in these industries, by creating conditions in which growth can continue without placing

[40] ONS Census (2001, 2021).
[41] Cambridgeshire County Council (2020). *Traffic Monitoring Report.*
[42] Cambridgeshire Insight (2021). *Population Forecast*

unacceptable demands on transport systems and the environment. The Programme aims to support growth.

2.6.21. The Greater Cambridge area has two adopted Local Plans (for Cambridge and South Cambridgeshire) which set out the growth in housing, employment and population within the Greater Cambridge area over the plan period, to 2031. An emerging joint Local Plan for Greater Cambridge is currently being developed, which would set out planned growth for the combined area up until 2041.

2.6.22. The adopted Cambridge and South Cambridgeshire Local Plans identify a need for 33,500 new homes and 44,100 new jobs by the end of the plan period (2031). The emerging Greater Cambridge Local Plan has objectively assessed the needs of Greater Cambridge and currently projects a need for 44,400 new homes and 58,500 new jobs between 2020 and 2041[43].

Context to the Success Story of Greater Cambridge

2.6.23. Greater Cambridge's economic success to date is the story of a networked and highly connected city region, characterised by world-leading innovation. Greater Cambridge has become one of the most successful and fastest growing economies in the UK, which is driven to a large extent by its knowledge intensive industries, including its thriving high-tech and biotech clusters.

2.6.24. Greater Cambridge has a diverse local economy with strengths across a broad base of sectors: professional, scientific, bio-medical, clean-tech, technology, and advanced manufacturing[44]. It is host to some of the most productive and innovative parts of the UK economy, competing on a global stage, and attracting inward investment into its knowledge intensive industries.

2.6.25. Appendix R provides detailed context on the success story of Greater Cambridge, which includes the impact of the COVID-19 pandemic and the area's ongoing recovery from it.

Supercharging Cambridge 2040 – A Summary of the Government's Housing Plan for Greater Cambridge

2.6.26. On Monday 24th July 2023, Housing Secretary Michael Gove made an announcement on the Government's Housing Plan aim of *"supercharging Europe's science capital [Cambridge]"*[45] which could lead to significant new development in Greater Cambridge, in addition to that set out in the Cambridge and South Cambridgeshire Local Plans, by 2040.

2.6.27. The vision of the Housing Plan is to turn Cambridge into an area rivalling Silicon Valley, with the possibility of building 200,000 to 250,000 new homes by 2040. The government intends to create a new urban quarter in Cambridge with a significant proportion of affordable

[43] Greater Cambridge (2022). *Emerging Greater Cambridge Local Plan First Proposals*
[44] CPIER (2018). *The Cambridgeshire and Peterborough Independent Economic Review*
[45] Rt Hon Michael Gove MP (2023). *Long-term plan for housing: Secretary of State's speech*

homes, a sustainable transport network and substantial green spaces. Additionally, the Plan references an aim to establish new nature reserves and potentially a new National Park in the wider region.

2.6.28. The announcement highlighted the current limitations on Cambridge's growth due to a lack of new space for research and lab capacity, a lack of transport connectivity, housing constraints and difficulties in attracting talent.

2.6.29. The planned level of growth would likely put significant additional pressure on existing transportation infrastructure and exacerbate congestion issues in Greater Cambridge. However, the Housing Plan's emphasis on creating a sustainable transport network aligns with the Making Connections programme's goal of improving the bus and active travel network. This suggests that the government recognises the importance of enhancing transportation options to accommodate the expected increase in population and reduce congestion.

Key Drivers for Change

2.6.30. The Making Connections case for change is driven by the issues outlined in the table below, which are explored and evidenced in the proceeding sections of this report.

Table 2-6 – Making Connections Key Drivers

Key Driver Topic	Why is this a key driver?	Internal or External
High levels of traffic congestion	The number of motor vehicles entering Cambridge per day increased by 9% between October 2010 and October 2019[46]. The impact of a greater number of motor vehicle trips is demonstrated by the significant extension of Cambridge's AM and PM peaks, by 60 and 90 minutes respectively, between 2000 and 2019. Data from Cambridgeshire demonstrates that local road traffic had recovered to 93% of 2019 levels in March 2023[46]. Although the pandemic resulted in a significant reduction in vehicle use and traffic congestion, monitoring data suggests that traffic volumes and congestion are now recovering to close to pre-pandemic levels[46]. The traffic modelling undertaken for Making Connections suggests there would be a significant deterioration in future highway conditions if nothing is done. The model forecasts that total peak period network delay would increase by between 30% and 75% by 2041 across Greater Cambridge. High levels of delay and congestion would lead to: • Further journey time delays, including impacts on bus travel times and reliability, as well as for drivers; • Reduced opportunities for people to access work, services, and social and leisure activities; • Consequent impacts on Greater Cambridge's high levels of productivity, which are essential to maintaining the area's position as a strategically important high-tech and bio-tech cluster; and, • Increased carbon emissions from transport, and impacts on local air quality. In terms of current perceptions, 66% of Greater Cambridge residents also think that their streets are dominated by moving or parked motor vehicles[47].	Internal and External

[46] Cambridgeshire County Council (2020). *Traffic Monitoring Report Changes in daily movements crossing the Cambridge Radial Cordon*
[47] Sustrans (2021). *Greater Cambridge Walking and Cycling Index Statistics*

Key Driver Topic	Why is this a key driver?	Internal or External
A bus network that is not sufficiently affordable, reliable or extensive	Bus reliability data demonstrates that delays to bus services have increased, and the proportion of buses arriving and departing on time has decreased, in the last decade. A bus network which is not sufficiently affordable, reliable or extensive, results in: • Reduced patronage, impacting viability and leading to routes being cut; • Communities and destinations becoming isolated and less integrated; • Higher levels of car dependency due to limited public transport connections, resulting in further reliance on private cars for those who can afford them; • More congestion; and, • Isolation for those without access to other modes.	Internal and External
An unbalanced road network that is dominated by the private car	Creates an imbalance in transport mobility, reducing access to jobs and services by excluding households who do not own a private car – totalling 21% of households in Greater Cambridge. Contributes to high levels of congestion, creating a circular problem through impacting the attractiveness of other modes. A more balanced transport network with high quality public transport and active travel provision, alongside demand management measures, would help to unlock required strategic growth in homes and jobs in Greater Cambridge.	Internal
Inequalities in car ownership and accessibility	Many Greater Cambridge residents, particularly in rural areas, have limited travel choices due to the absence of frequent, reliable and affordable public transport services. This particularly impacts those people who do not have access to a car. As a result, many lower income households are 'forced' into buying a car to access employment opportunities and services and escape potential social isolation. Forced car ownership is more prevalent in the rural areas of South Cambridgeshire where public transport and active travel connectivity is less extensive.	Internal
The commitment to make the Greater Cambridge area 'Net Zero' by 2030	Transport emissions are responsible for 35% of total emissions in Greater Cambridge. The commitment to make the Greater Cambridge area 'Net Zero' by 2030 thus requires significant reductions in greenhouse gas emissions from transport.	Internal
The need to reduce road traffic collisions and achieve Vision Zero	Road safety data for Greater Cambridge shows that the number and severity of casualties arising from collisions on the highway network has reduced by 34% over the last six years. Despite this, the number of casualties remains high. In 2022, there were 449 collisions which resulted in casualties, including 42 pedestrian casualties and 163 cyclist casualties in Greater Cambridge. Therefore, further interventions are needed to meet 'Vision Zero, which is a strategy, supported by CCC, to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.	Internal

Transport Issues and Opportunities

2.6.31. As required by DfT guidance, the following section provides a detailed analysis of the issues and opportunities that the Making Connections programme is seeking to address. Hence, the analysis considers the gaps between existing conditions and the programme objectives.

2.6.32. Please note that data collected after March 2020 has been affected by the COVID-19 pandemic. For example, the data derived from the 2021 Census was impacted by periods of national lockdown due to the COVID-19 pandemic and is not considered to be wholly representative of normal conditions.

2.6.33. The recovery from the effects of the COVID-19 pandemic on business and travel is ongoing and there is uncertainty about the long-term impacts. Therefore, the analysis presented in this section frequently uses data collected in 2019, or early 2020, as the latest available pre-pandemic baseline.

2.6.34. At the time of writing, in summer 2023, post-pandemic recovery coincides with war in the Ukraine, supply chain disruptions, a food and energy crisis and historically high levels of inflation. Therefore, the stable conditions required to define the 'new normal' are arguably not established; emerging datasets from 2022 and 2023 would be kept under review to strengthen the conclusion of the OBC.

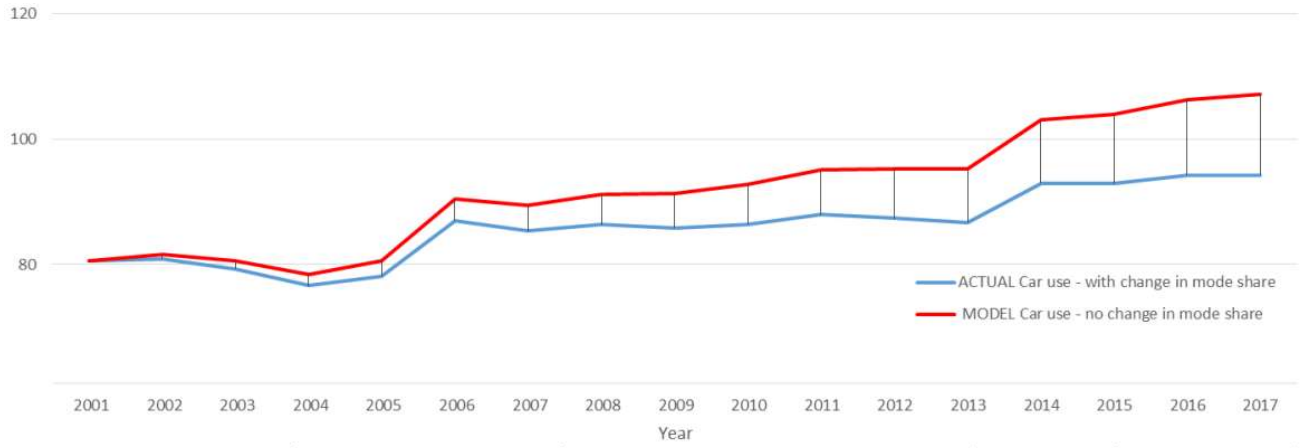
Rising Transport Demand and Highway Congestion

2.6.35. In the last 20 years, the proportion of people who commute in private cars has decreased in Greater Cambridge; however, the impact of this positive modal shift has been offset by the net growth in car trips due to housing, job and population growth.

2.6.36. Figure 2-4 demonstrates that through modal switching, although actual car use for commuting has increased through time (blue line), this is at a significantly lower rate than might be expected given projections for employment growth in Greater Cambridge and assumption of no modal change (red line).

2.6.37. Despite this suggesting some decoupling between employment growth and car use, the trend demonstrates that a more comprehensive policy intervention would be required to provide viable alternatives to private cars and, ultimately, to more fully decouple the relationship between car travel and growth.

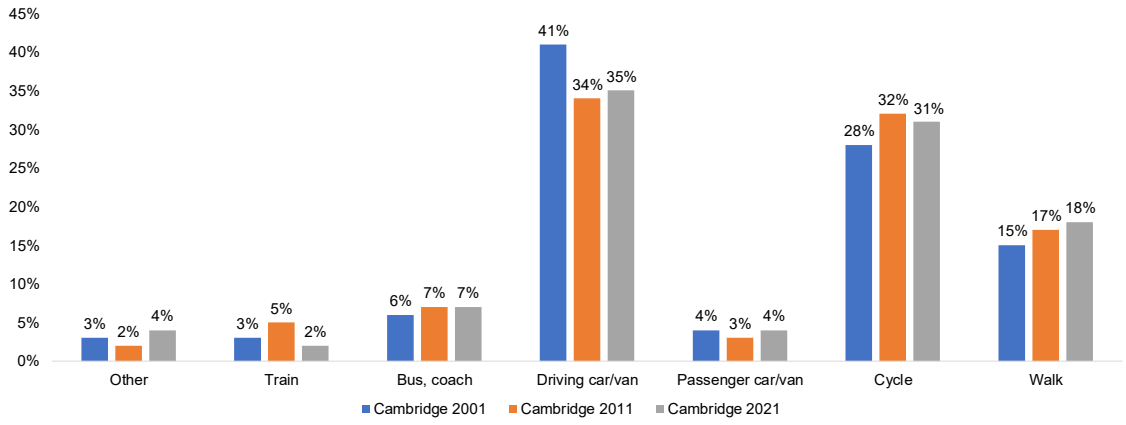
Figure 2-4 – Jobs (000s) in the Greater Cambridge Area Supported by Travel to Work by Car[48]



15.5% of commuters switched away from using the car between 2001 and 2017 (Source: travel for Cambridgeshire).
33% growth in jobs between 2001 and 2017 (Source: East of England Forecasting Model).
Actual growth of 14,000 two way car journeys against possible growth of 27,000 with no change in mode of transport.

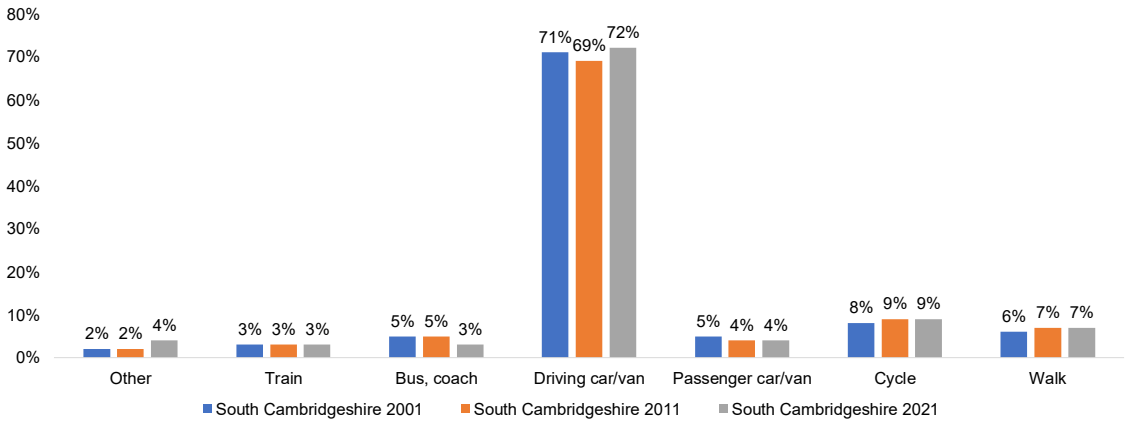
2.6.38. Figure 2-5 and Figure 2-6 below provide a more detailed breakdown of how commuting mode share has changed since 2001 for residents of Cambridge and South Cambridgeshire[49].

Figure 2-5 – Cambridge: Trends in Commuting Mode Choice[49]



[48] Greater Cambridge Partnership (2019). *Technical Assessment of the impact of measures proposed as an alternative to fiscal options to address future congestion in Cambridge*
[49] ONS Census (2001, 2011, 2021). *Method of Travel to Work*

Figure 2-6 – South Cambridgeshire: Trends in Commuting Mode Choice[49]



2.6.39. Figure 2-5 and Figure 2-6 show that the proportion of people driving to work in Greater Cambridge decreased from 54% to 51% between 2001 and 2011, despite overall increases in traffic volumes, and relatively small increases in the levels of cycling, walking and bus modal share. Bus trips increased marginally as a proportion of total commuting trips for both districts between 2001 and 2011, growing from 4% to 5%, but subsequently fell to 3% in 2021.

2.6.40. The 2021 commuting data is significantly different to 2001 and 2011 due to the impact of the COVID-19 pandemic and associated periods of national and local 'lockdowns', which advised or mandated people to work from home (WFH). As a result, there was a significant increase in WFH during 2021.

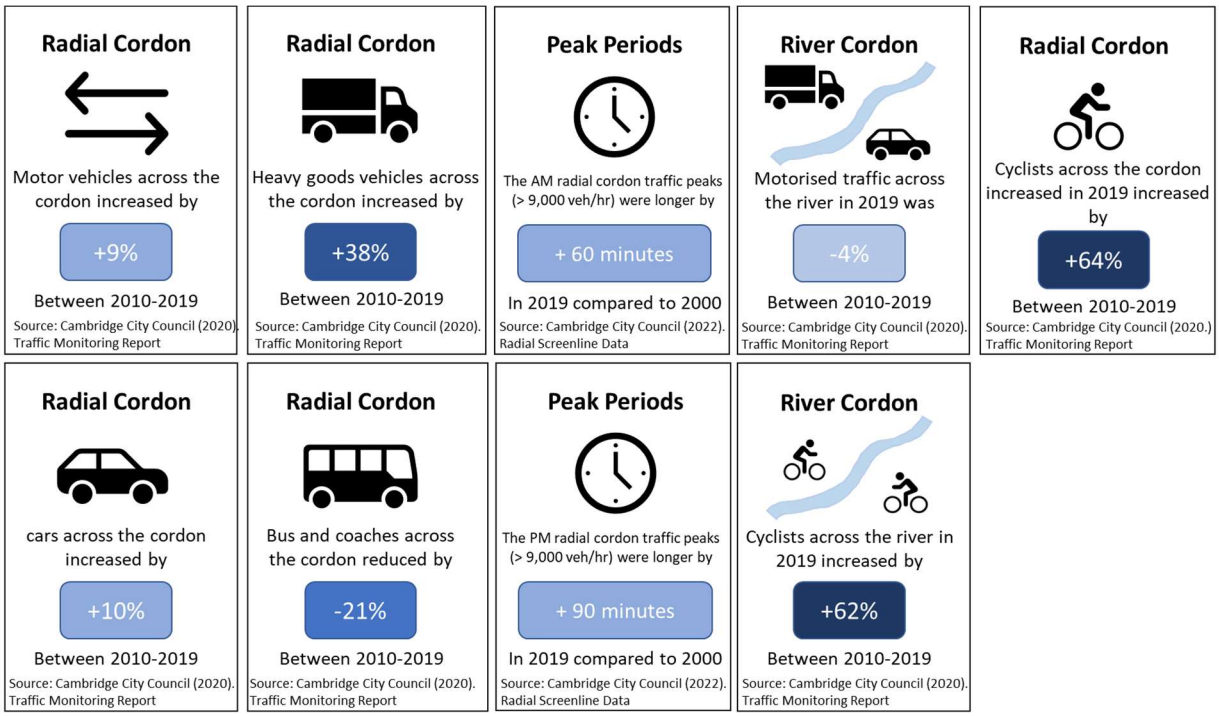
2.6.41. As noted above, the prevalence of WFH has reduced since the 2021 Census but is still significantly higher than in 2011. A recent ONS study into working from home, using data from September 2022 to January 2023, shows that in the East of England 45% of the population identified as home or hybrid workers (of which 14% indicated that they solely work from home) and 55% of the population do not work from home at all[50]. Given the high variability in working from home trends over the last few years, it is difficult to predict the long-term balance, however it is likely that increased levels of hybrid working has been cemented.

Trends in Traffic Flows

2.6.42. Over the past 20 years, there has been significant vehicular traffic growth in Greater Cambridge; the consequences of which have been rising congestion and increased journey times. Figure 2-7 illustrates the severity and extent of growing congestion in and around Cambridge by comparing 2010 and 2019 data; this dataset provides the latest available longitudinal comparison that is undistorted by the impacts of the COVID-19 pandemic.

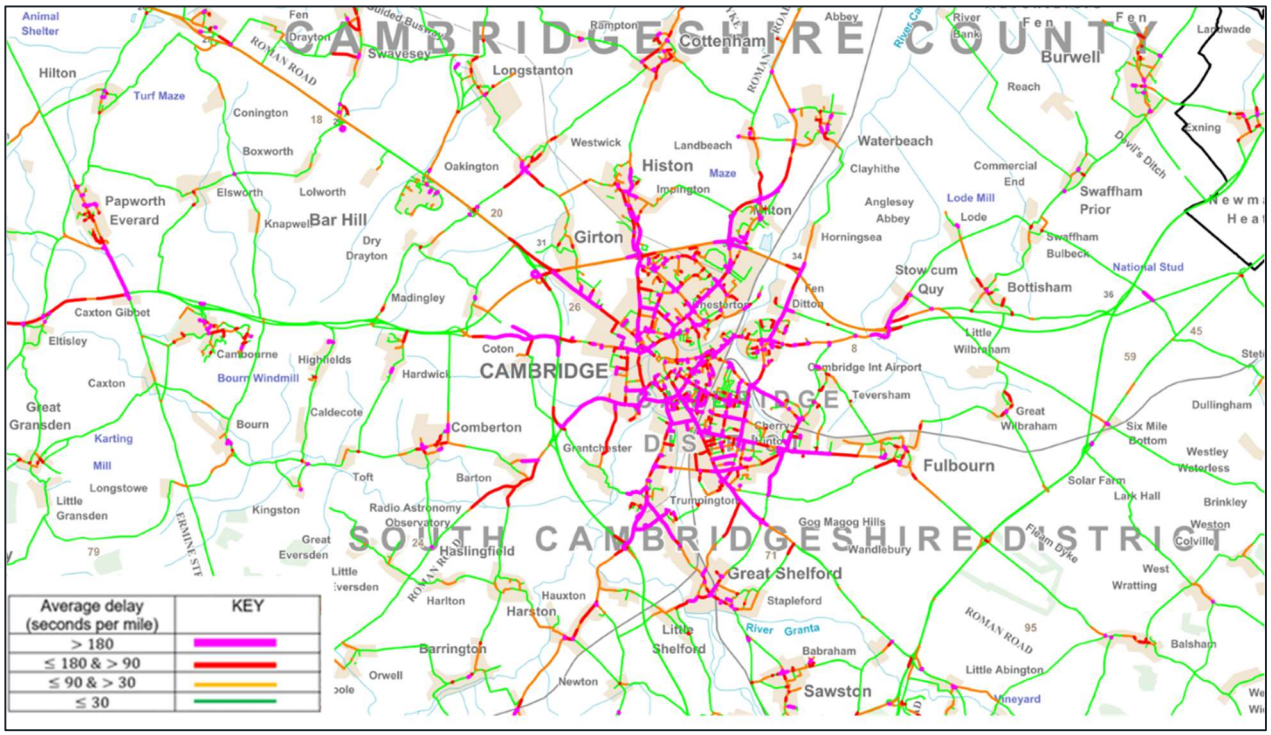
[50] ONS (2023). *Characteristics of homeworkers: September 2022 to January 2023*

Figure 2-7 – Key Traffic Flow Trends



2.6.43. The impact of increasing traffic flows is shown by the high levels of delay on the highway network in and around Cambridge. Figure 2-8 shows that, prior to the COVID-19 pandemic, delays of more than three minutes for every mile travelled are seen throughout Cambridge's built-up area and on a number of approach roads.

Figure 2-8 – Congestion (AM peak) Indicated by Delay (sec/mile)[51]



The Impact of the Pandemic

2.6.44. Despite the observed long-term increases in traffic flows in Greater Cambridge, the periods of national lockdowns and social distancing measures associated with the COVID-19 pandemic, and their legacy impact on travel behaviours, have had a significant impact on travel demand.

2.6.45. A GCP report[52] on the transport impacts of COVID-19 showed that, during the first national lockdown (April to May 2020), when travel and personal contact restrictions were most stringent, daily traffic flows across monitored sites within Cambridge reduced by 56% compared to pre-pandemic levels[52].

2.6.46. In terms of traffic volumes by mode, the monitored sites recorded a reduction in goods vehicle flows by 33% and an average reduction in bus flows of 41%. Trips by cycle and on foot also decreased by 39% and 26% respectively[52].

2.6.47. Due to lower volumes of road traffic, bus and car journey times were shorter. For example, across all the monitored corridors in Cambridge, there was an estimated overall reduction in bus journey times of 27%. The reduction in general traffic across the city also meant that air quality improved by an average of 33% across all monitored locations[52].

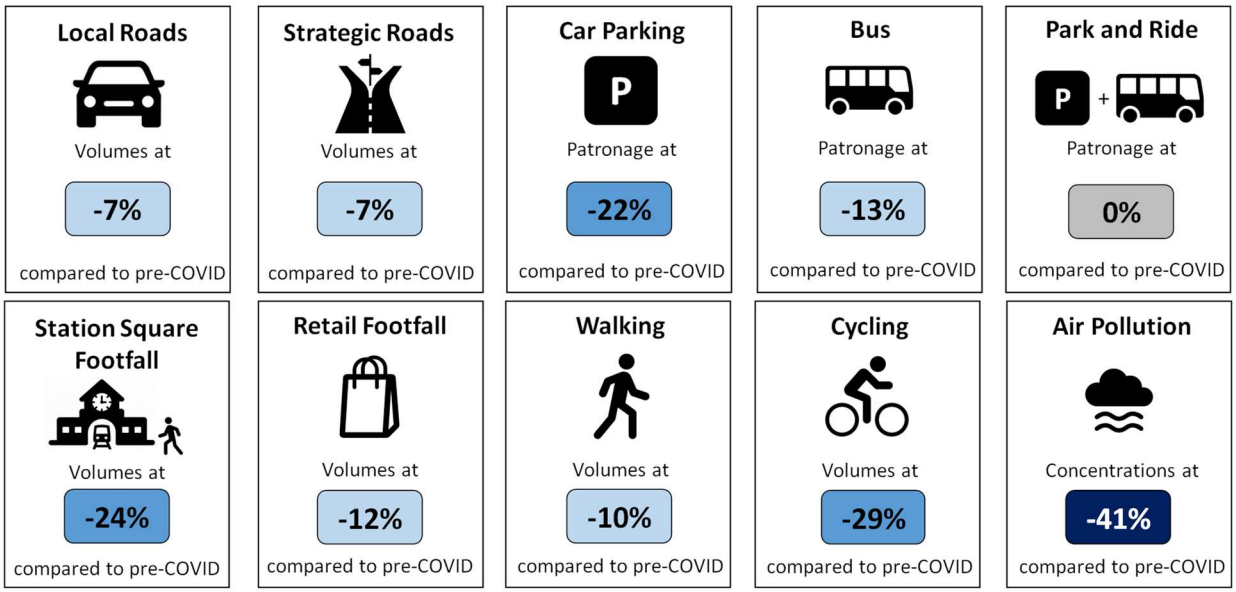
[51] Cambridgeshire Insight (2014-15). *Congestion Map of Cambridgeshire*
[52] Greater Cambridge Partnership (2020). *Initial COVID-19 Impact Report*

2.6.48. Although the long-term impact of the COVID-19 pandemic upon travel choices is still emerging, CCC's quarterly COVID-19 transport impacts: data and monitoring report[53] for the Greater Cambridge area provides a helpful insight into current travel behaviours.

2.6.49. The quarterly updates use data collected by the Council and local partner organisations to provide an indication of how travel has changed as a result of the COVID-19 pandemic and whether travel patterns are continuing to change. The latest publication highlights changes in key indicators by comparing March 2023 data with the pre-pandemic baseline (December 2019).

2.6.50. For walking and cycling, the analysis is based on traffic sensors, with comparable data for most months and years, at Coldham's Lane, Coleridge Road, Hills Road, Milton Road (North) and Tenison Road. Therefore, the observed data provides a useful 'snapshot' into active travel demand at key locations on the network. A broader view of active travel trip making, across the wider network, is considered in the proceeding sections.

Figure 2-9 – Headline Changes in Transport Related Metrics (Comparing data from the months prior to COVID-19 up until end of March 2023)[53]



Recovering Vehicle Traffic Volumes

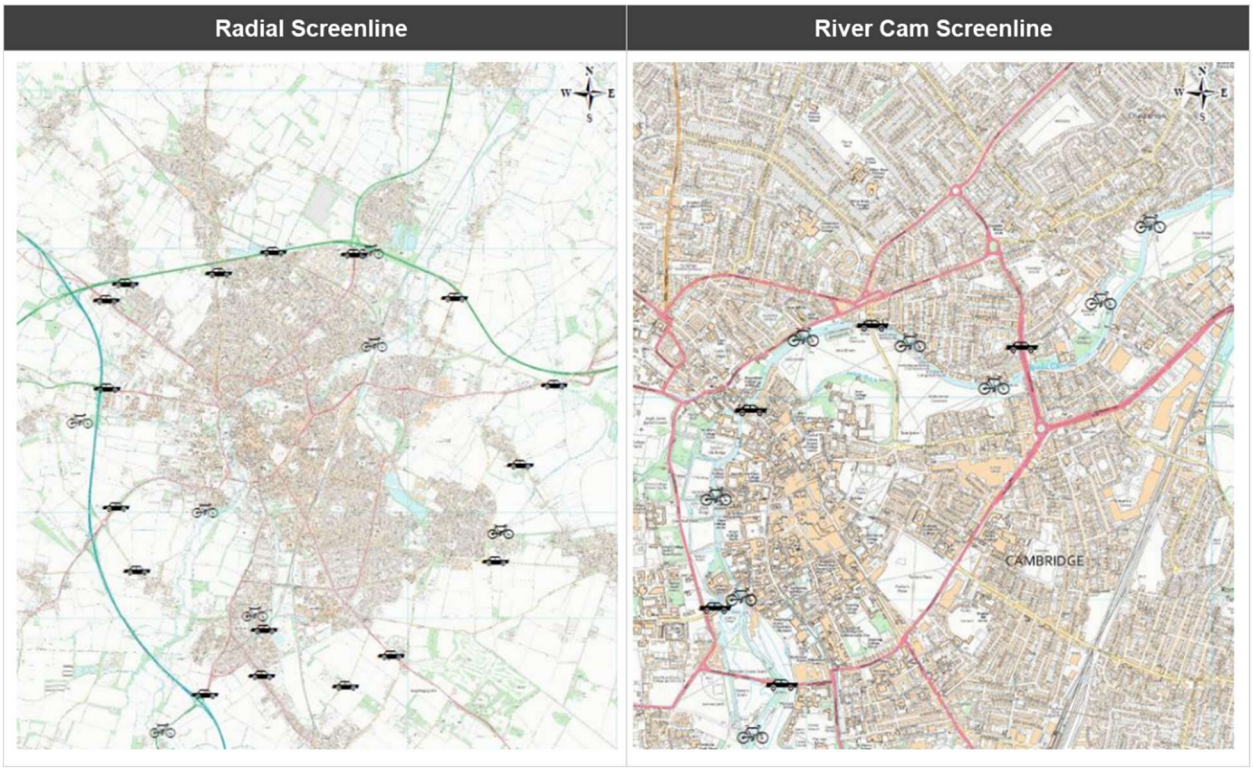
2.6.51. The level of traffic recovery varies by location in Cambridge, but, at a wider level, traffic volumes on the Strategic Road Network in Cambridgeshire and Peterborough were 27% lower than 2019 levels in 2020, 15% lower in 2021, 6% lower in 2022 and 7% lower in 2023.

2.6.52. Overall, traffic flows on local roads in Cambridge are also recovering. Traffic flows are monitored in Cambridge using two 'screenlines'. The first screenline runs along the River Cam where all vehicles, pedestrians and cyclists that cross bridges over the Cam in

[53] Cambridgeshire County Council (2023). *COVID-19 Transport Impacts: Data and Monitoring Report (April 2023)*

Cambridge are counted in the spring of each year. The second screenline is a radial cordon, with vehicles, pedestrians and cyclists on every access route into Cambridge (broadly based on the City boundary with South Cambridgeshire) being counted in the autumn. The most recently available data for the screenlines is from April/October 2021.The count points of both screenlines are shown in the figure below[54].

Figure 2-10 – Cambridge Screen line Count Points



2.6.53. Data from the first screenline (River Cam) showed that motorised vehicle crossings were 15% lower in April 2021 than April 2019.

2.6.54. The second screenline (radial cordon at the City boundary) showed that motorised vehicles were 16% lower in October 2021, in comparison to October 2019.

2.6.55. For context, the latest data for the local road network in Cambridge shows that in March 2023 flows were 7% lower than February 2020 levels[55].

Problem Identification: The Impact of Doing Nothing

2.6.56. A key reason for advocating for change, is a consideration of the consequences of doing nothing, in addition to those already committed actions to address the issues facing Greater Cambridge. The analysis in the following sections demonstrates the impact of doing nothing.

[54] Cambridgeshire County Council (2020). *Traffic Monitoring Report*
[55] Cambridgeshire County Council (March 2023). *Traffic Update*

Traffic Modelling Summary

2.6.57. The Cambridge Sub Regional Model (CSRM)[56] has been used to understand the future performance of the transport network in the absence of the proposed Making Connections programme for 2026 ('do minimum') and 2041 ('future baseline scenario').

2.6.58. CSRM is an established land use and transportation model, which incorporates housing, employment, transport demand and transport infrastructure. Testing with the model allows the outcomes of differing scenarios to be assessed, to identify which perform best across a range of criteria.

2.6.59. As noted above, model runs have been undertaken for a 2026 'do-minimum' scenario and for a 2041 future baseline scenario, which assumes First Proposals Local Plan growth and the implementation of a number of committed transport schemes, but not Making Connections.

2.6.60. The 2026 model run can be used as a proxy for present day conditions and, by comparing data from 2041 and 2026, it is possible to gain an understanding of how traffic conditions might change in the future in the absence of Making Connections. Alongside this, stress testing has been undertaken in the Financial Dimension to test the impact of alternative traffic growth assumptions on potential STZ revenues and spend on bus enhancements and sustainable transport initiatives. Uncertainties surrounding post-COVID recovery have also been recognised in the sensitivity test in the Economic Dimensions following the approach proposed in the accompanying ASR.

The Impact on Total Travel Distances

2.6.61. The modelling suggests that, for Greater Cambridge as a whole, total PCU-km ('passenger car unit kilometres') could increase by 12% and 14% during the AM and PM peak periods respectively to 2041. Total PCU-km is a measure of total aggregate travel demand on the highway network. This is due to a combination of factors including the general growth in population and employment, increases in journey lengths for some residents and employees as they are forced to live further from their workplace, and continued car use for many journeys.

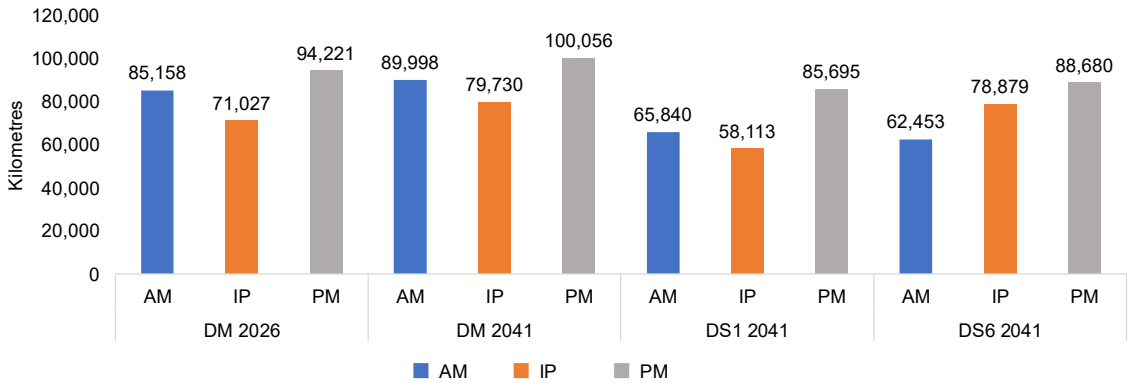
2.6.62. During the interpeak, greater growth is forecast (+21%); this reflects so-called 'peak spreading' outside of the traditional 'rush hours'. Peak spreading is a behavioural response: some motorists may shift their travel departure times to slightly before or after the peak period in response to increasing traffic congestion. As a result, the length of the congested period may grow.

2.6.63. Within the area of the proposed STZ, lower levels of growth are forecast. A growth in travel distances of 6% is forecast in the AM and PM peaks, compared to around 12% in the interpeak period. This is due to a number of factors, including those summarised below:

[56] Cambridge Sub-Regional Model – Data provided by Atkins

- The largest Local Plan growth would take place outside of Cambridge;
- The highway network is already constrained in Cambridge, so there is less scope for traffic growth;
- Modal choice is greater in Cambridge, meaning the 'threshold' (in terms of delay) at which people shift modes is lower.

Figure 2-11 – Total Travel Distance (PCU Kms) in the Charge Area[56]



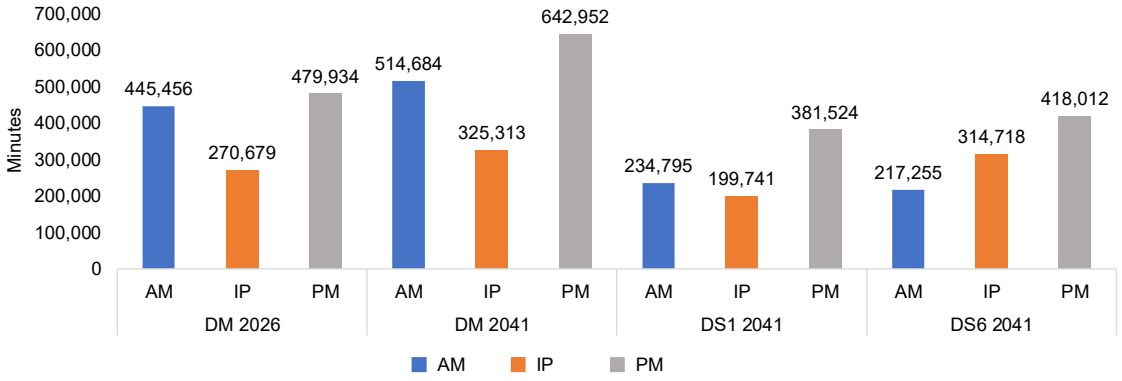
The Impact on Total Travel Time

2.6.64. The data also tells us that travel times would increase. For Greater Cambridge as a whole, total PCU-minutes ('passenger car unit minutes') could increase by 19% and 39% during the AM and PM peak periods respectively to 2041. Total PCU-minutes is a measure of the total aggregate time spent travelling on the highway network.

2.6.65. Total travel times are predicted to increase at a faster rate than PCU-km, reflecting increased levels of congestion (see discussion below on average speeds and network delay). This is because, when a network is congested, any increase in demand leads to a disproportionately greater increase in delay and hence a decline in speeds.

2.6.66. Within the area of the proposed STZ, lesser levels of growth are forecast (16% and 34% growth in the AM and PM peak periods respectively). However, these rates of growth in total travel time in the STZ are significantly greater than those in total travel distance, when compared to Greater Cambridge as a whole. Here, speeds are already much slower than outside the STZ and the network is operating inefficiently. Significant further traffic growth is therefore constrained but, that growth which does occur, results in disproportionately bigger increases in delay and overall travel time. In effect, each additional vehicle travelling in the area of the proposed STZ contributes disproportionately to further delays.

Figure 2-12 – Total Travel Time (PCU Minutes) in the Charge Area[56]



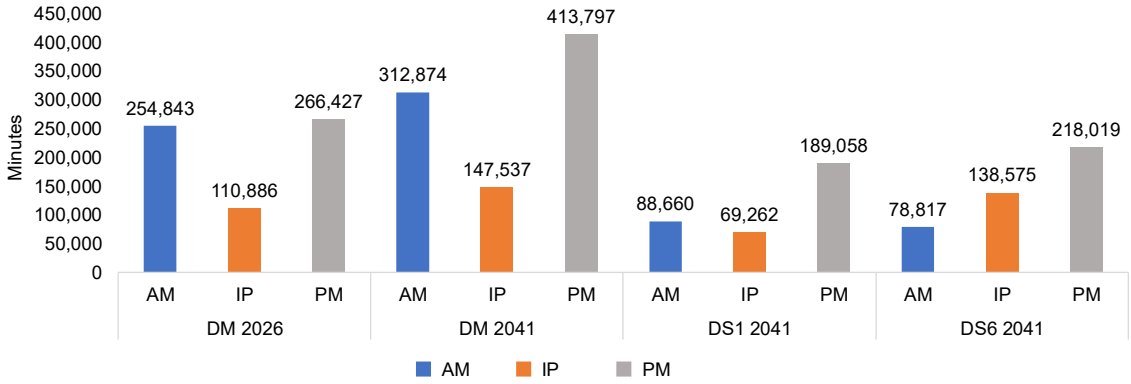
The Impact on Network Delay and Average Travel Speeds

2.6.67. Network delay is a measure of the excess travel time incurred on the network when compared to uncongested travel times.

2.6.68. Here, model data suggests that total network delay across Greater Cambridge as a whole, could increase by 30% in the morning peak, and 75% in the evening peak, by 2041. Comparatively, interpeak network delay is predicted to increase by almost 50%.

2.6.69. The impact of increasing network delay is likely to exacerbate the existing the observed patterns of 'peak-spreading' between 2000 and 2019, which is evidenced in Figure 2-7.

Figure 2-13 – Network Delay (PCU Minutes) in the Charge Area[56]



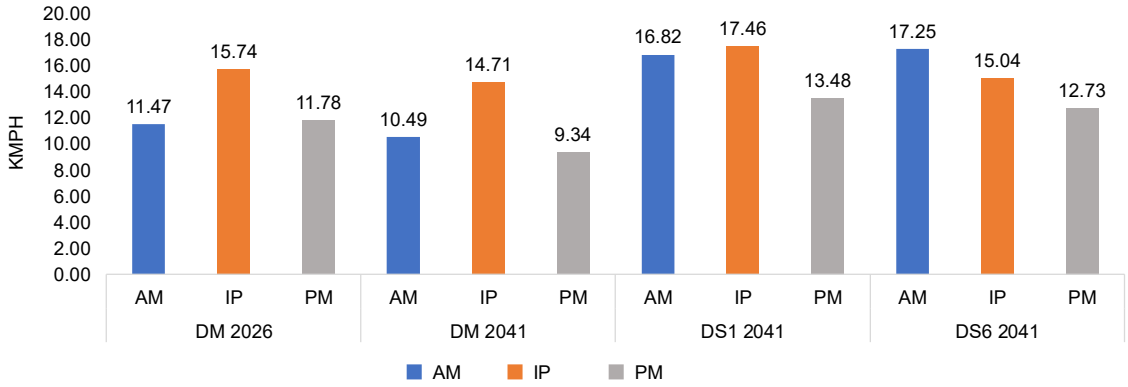
2.6.70. Average network speed is an indicator of the overall level of service provided by a highway network. It represents the interaction between demand and supply such that, under high levels of demand, average speeds decline indicating a prevalence of congestion.

2.6.71. Model data suggests that, across Greater Cambridge as a whole, average speeds in the AM peak period could decline from around 32km/h to around 30km/h (i.e. a reduction of 6%) with PM peak period speeds declining from around 33km/h to 27km/h (i.e. a reduction of 18%).

2.6.72. Within the area of the proposed STZ, average speeds are much lower than those across Greater Cambridge as a whole. The model suggests that AM peak period average speeds

in the STZ area could decline from around 11.5km/h in 2026 to around 10.5km/h by 2041 (i.e. a reduction of 9%), with PM peak period speeds declining from around 11.8km/h to 9.3km/h (i.e. a reduction of more than 20%).

Figure 2-14 – Journey Speed (kmph) in the Charge Area[56]



Summary

2.6.73. Demand for travel on the highway network is forecast to increase across Greater Cambridge. With rising demand, the model suggests a further deterioration in highway conditions, with total peak period network delay forecast to increase by between 30% and 75% by 2041 across Greater Cambridge as a whole.

What is the potential traffic impact of not implementing Making Connections?

The number of motorised vehicles that enter and exit Cambridge increased by 9% between 2010 and 2019, whilst the capacity of the highway network remained largely unchanged. This growth in traffic flows resulted in increased congestion and longer journey times for both car drivers and bus users.

Although COVID-19, and the associated periods of national lockdowns, resulted in significantly reduced traffic flows in 2020 and 2021, observed traffic flows are increasing and had recovered to only 7% lower than 2019 levels as of March 2023. Comparatively, bus trips have recovered more slowly, with bus patronage in March 2023 being 13% lower than in 2019.

The CSRM model forecasts significant increases in network delay and journey times and significant decreases in journey average speeds up to 2041 if nothing is done to address the causes; namely:

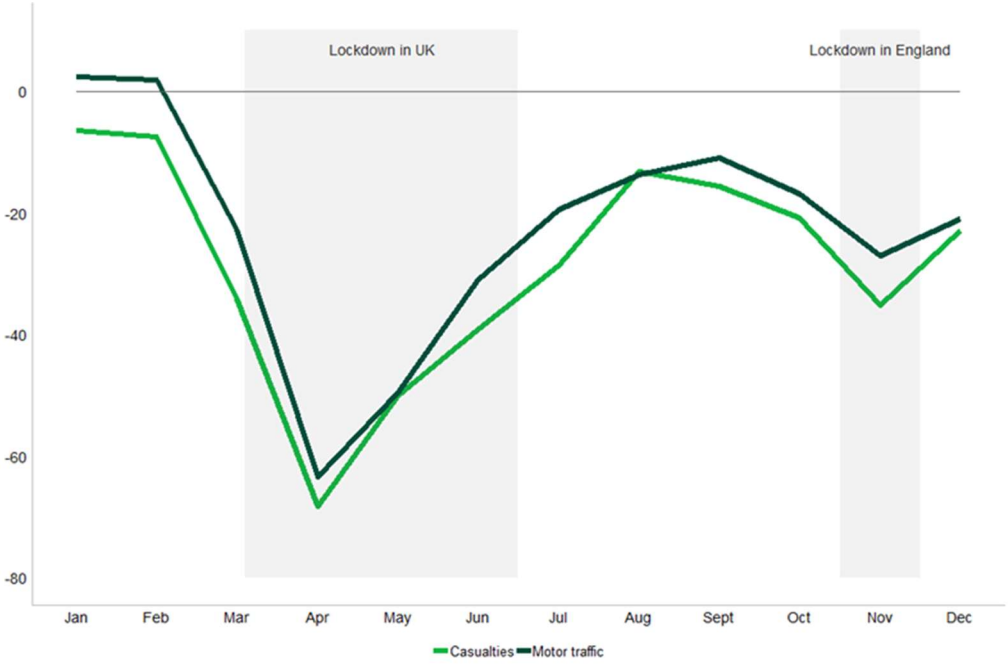
- Journey times would increase by 19% (AM Peak) and 39% (PM peak) in Greater Cambridge;
- Network delay would increase by 30% (AM Peak) and 75% (PM peak) in Greater Cambridge; and,
- Average speeds would decrease by 9% (AM Peak) and 20% (PM peak) in the STZ area.

High Levels of Road Traffic Collisions

2.6.74. Research shows that road traffic collisions typically respond proportionally to traffic flows; this was evidenced by DfT analysis[57] on how traffic volumes impacted the number of reported traffic collisions in 2020, during which the COVID-19 pandemic began. The relationship between motor traffic volumes and road traffic casualties is shown in Figure 2-15.

[57] Department for Transport (2021). *The impact of lockdown on reported road casualties Great Britain*

Figure 2-15 – Percentage change of casualties of all severities and motor traffic, compared to 3-year average for 2017 to 2019, Great Britain, 2020



2.6.75. Road safety data for Greater Cambridge shows that the number and severity of casualties arising from collisions on the highway network has reduced by 34% over the last six years. Despite this, the number of casualties remains high. In 2022, there were 449 collisions which resulted in casualties, including 42 pedestrian casualties and 163 cyclist casualties in Greater Cambridge[58]. In order to be included in the recorded dataset, collisions must result in injury to a person on a sliding scale from slight injury – serious injury – fatal injury.

2.6.76. In Greater Cambridge, in 2022, there was one collision which resulted in a pedestrian fatality and two which resulted in cyclist fatalities. Over the last five years, there have been eight collisions which resulted in a pedestrian fatality and nine which resulted in a cyclist fatality. The DfT estimate that, in addition to human loss and suffering, the average societal cost of collisions which result in fatalities is approximately £1.65 million[59]; hence, based on DfT estimates, the 17 pedestrian and cyclist fatalities that occurred in Greater Cambridge would have cost the UK economy approximately £28m[60].

[58] Cambridgeshire Insight (2023). *Open Data Portal – Road Traffic Collision Data*
[59] Department for Transport (2023). *TAG Databook – Average Value of Prevention Pre-Casualty*
[60] Values are presented in Department for Transport's Base Year of 2010

What impact could Making Connections have on road traffic collisions?

The traffic modelling work undertaken for Making Connections suggests that, under all options, overall traffic flows are forecast to decline within the Sustainable Travel Zone and, therefore, traffic collisions are also anticipated to decline. These traffic reductions provide an opportunity to reallocate road space to the benefit of active travel and public transport and hence further reduce casualties related to those modes.

Unattractive Bus Services with Decreasing Commercial Viability

2.6.77. The majority of bus routes within Greater Cambridge are provided on a commercial basis by two operators; Stagecoach East and Whippet. A number of smaller operators provide other supported services.

2.6.78. The local bus network comprises a range of different types of service, including city, park and ride, local provision and a pilot demand responsive transport (DRT) service. Although the current bus network provides a base on which to build, for those without a car the combination of high cost and poor-quality public transport reduces access to opportunities.

2.6.79. Overall, Greater Cambridge's bus network now provides less frequent and extensive services than it did prior to the COVID-19 pandemic. This has had the effect of increasing isolation and reducing transport connectivity for those without access to a car, particularly impacting rural communities with fewer transport options. Analysis of daytime bus frequencies, on those routes with an hourly or more frequent service to Cambridge, indicates that total buses per hour declined by around 19% over the period from immediately prior to the pandemic to August 2023. CPCA have also indicated that the bus network is now around 20% smaller than prior to the pandemic.

2.6.80. Congestion in Cambridge has also impacted bus operations. For example, a news release from the Whippet website from February 2023[61] stated that to accommodate for "vastly increased congestion in Cambridge", it has had to scale down frequency of its Universal bus services from 10 to 8 buses during peak hours. Similarly, on 4th June 2023, Stagecoach announced service changes to the Cambridge Citi 1 and Citi 2 services due to the impact of congestion on the highway network; the Citi 1 now runs according to a 12-minute peak frequency, instead of 10 minutes, from Monday to Saturday "to combat [the effects] of congestion"[62].

2.6.81. Additionally, in October 2022, Stagecoach withdrew 18 predominantly rural bus routes in Cambridgeshire. Stagecoach stated that the services were no longer financially viable due to a drop in passenger numbers to around 75% of pre-pandemic levels.

[61] Whippet (2023). *Revised Weekday Universal Timetable. 13th February 2023*
[62] Stagecoach (2023). *Routes updated across Cambridgeshire and Bedfordshire. 4th June Service Update.*

2.6.82. The low levels of observed patronage provide evidence that rural bus services in the County are not attractive in their current form and demonstrate the need for the frequent, faster, cheaper and more reliable bus network proposed under Making Connections.

2.6.83. A lack of affordable, reliable public transport also encourages car use, which can increase congestion and, in turn, makes services slower and less attractive.

2.6.84. The issues with the current bus network can be summarised as follows:

- Bus patronage has been falling[63], despite some successful services such as the Cambridgeshire Guided Busway, for the past decade;
- Congestion is the main issue that impacts bus services, making bus operations inefficient, services unreliable and journey times slow for passengers;
- Journey time reliability is a key issue, particularly for services that connect into Cambridge;
- The frequency and connectivity of bus services is a significant issue, particularly to people living in rural areas of South Cambridgeshire; and,
- Fares and the cost of travelling by public transport are also a barrier to increased bus use.

2.6.85. These issues were borne out during the 2021 Making Connections consultation in which respondents shared their priorities for spending on the bus network. The most popular priorities were more frequent bus services (27%), cheaper fares (19%), longer operating hours (16%), and more direct services to locations across the city (15%). Introducing flat-fares (32%) or lower fares for everyone across the region (31%) were the most popular choices if money was spent on reducing fares.

2.6.86. Overall bus patronage levels have been falling in Greater Cambridge in the past decade. The exceptions to this trend are the Cambridgeshire Guided Busway (CGB) and Cambridge Park and Ride services. The CPCA Bus Service Improvement Plan (BSIP) states that these services are notably less impacted by congestion due to the use of existing infrastructure to segregate buses.

2.6.87. Evidence of the impact of fast and reliable bus services is shown by an analysis of bus modal share for commuters. In the GCP's 'Our Big Conversation' (2017) survey, findings revealed that bus use as a method of travel to work in most postcode districts around Cambridge was 5-8%. By comparison, for St. Ives, which is located at the northern end of the CGB track, it was 35%; this demonstrates the impact of the CGB on local travel choices.

2.6.88. With regard to the perceived value for money of bus services, initial evidence collated by passenger watchdog Transport Focus, suggests that, in the UK, 11% of people are now using the bus more as a result of the UK Government scheme that caps the price of single bus journeys at £2.

[63] Department for Transport (2023). *Bus Statistics Table* BUS01e

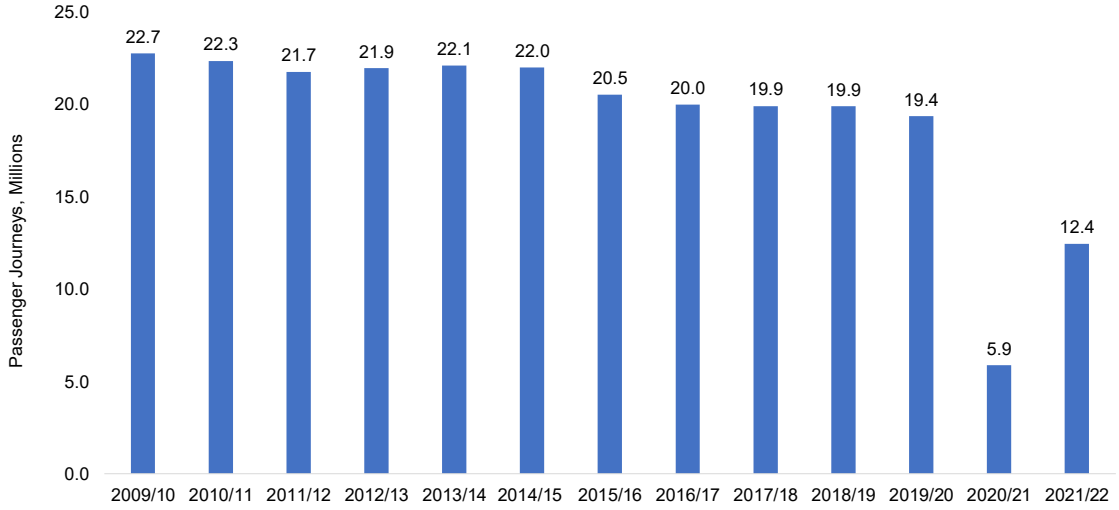
Falling Patronage[63]

2.6.89. Data from the Department for Transport showed that Patronage decreased in Cambridgeshire by 12% between 2009 and 2019;

2.6.90. In September 2021, due to the impact of COVID-19 on travel behaviours, bus patronage in Cambridge was 62% of the patronage level recorded in September 2019:

- By December 2022, bus patronage in Cambridge had recovered, but was still 27% lower than in 2019.
- The latest available data from March 2023 demonstrates that bus patronage has recovered more quickly since December 2022; it was only 13% lower than 2019 levels. This increase in bus patronage coincides with the introduction of the UK Government scheme that caps the price of a single bus fare to £2 until 31st October 2023.

Figure 2-16 – Passenger Journeys on Local Bus Services – Cambridge[63]



2.6.91. In summary, bus travel, as a modal choice, is significantly less attractive than it was a decade ago. Moreover, the recovery of bus patronage, between the end of Government imposed lockdowns and December 2022 was lower than any other mode of transport in Greater Cambridge. The introduction of the £2 bus fare cap has seen patronage recover, but, as of March 2023, is still 13% lower than 2019 levels.

2.6.92. The net reduction in patronage, despite the aforementioned population growth, may be attributable to the relative dissatisfaction of passengers with the punctuality and value for money of bus services. Here, 2019 customer satisfaction surveys showed that, for the wider CPCA area, 26% of people were not satisfied with the punctuality of bus services and 40% of people did not think the services provided value for money, which increased to 44% for 16-34 year olds. A wider consideration of customer satisfaction is considered below.

2.6.93. Research undertaken by the DfT in 2021[64] also showed that anxiety about catching COVID-19, of journeys being disrupted due to changing timetables or vehicles being at full capacity amid social distancing, has had a significant influence on public transport patronage. However, this research took place whilst social distancing measures were in place.

2.6.94. Notably the research showed that the perceived threat of confrontation between those who were coughing or sneezing, non-mask wearers, and those most worried about catching the virus, was a common reason people gave for avoiding public transport. Given social distancing measures have now been withdrawn, and that mask wearing is not commonplace in public spaces, it is likely that the impact of COVID-19 anxiety on travel behaviours would have reduced.

Journey Times and Reliability

2.6.95. The GCP undertook an extensive travel behaviour study within Greater Cambridge in 2017 as part of its 'Big Conversation'[65]. The outcomes of this study acted as a catalyst for the City Access programme.

2.6.96. 40% of respondents to the study identified the lack of public transport services and the reliability of existing services as a 'big challenge' that impacted their modal choice. Furthermore, 40% of respondents from Cambridge and 56% of respondents from South Cambridgeshire indicated that 'significantly improving the public transport network in terms of availability, capacity, reliability and, as far as possible, affordability would be of great benefit to them[65].

2.6.97. There are a number of potential causal factors that explain the punctuality and reliability issues of bus services in Greater Cambridge. One significant factor is the lack of bus priority. For example, within Cambridge city, buses primarily share the carriageway with general traffic (with the exception of bus lanes on some radial routes and in the city centre, which are not feasible to implement on all routes). As a result, traffic congestion affects bus journey times, with these delays then being factored into timetables.

2.6.98. Vehicle tracking data on routes accessing Cambridge City Centre indicates that only 79% of buses departed from their origin stop on time in 2019[66]. Subsequent delays and uncertainty around the bus timetables thus affects the popularity and potentially viability of bus routes. Data is also available on a longer timescale which demonstrates that the average excess waiting time for frequent services in Cambridgeshire (excluding Peterborough) has been steadily rising in the decade preceding 2020 with 0.7 minutes of excess waiting time in 2008/2009, rising to 2.1 minutes of excess waiting time in 2018/2019[67].

2.6.99. With regard to the perceived value for money of bus services, initial evidence collated by passenger watchdog Transport Focus suggests that, in the UK, 11% of people are now

[64] DfT (2022). *Confidence in Public Transport*
[65] Greater Cambridge Partnership (2017). *Our Big Conversation: Key Findings*
[66] Cambridgeshire and Peterborough Combined Authority (2021). *Bus Service Improvement Plan*
[67] Department for Transport (2023). *Bus reliability and punctuality (BUS09b)*

using the bus more as a result of the UK Government scheme that caps the price of a single bus fare to £2 until June 2023. The emerging evidence on the impact of the national fare cap provides 'real life' behavioural evidence of the potential impact that the proposed Making Connections bus fare cap could have on modal shift.

Rural Urban Divide

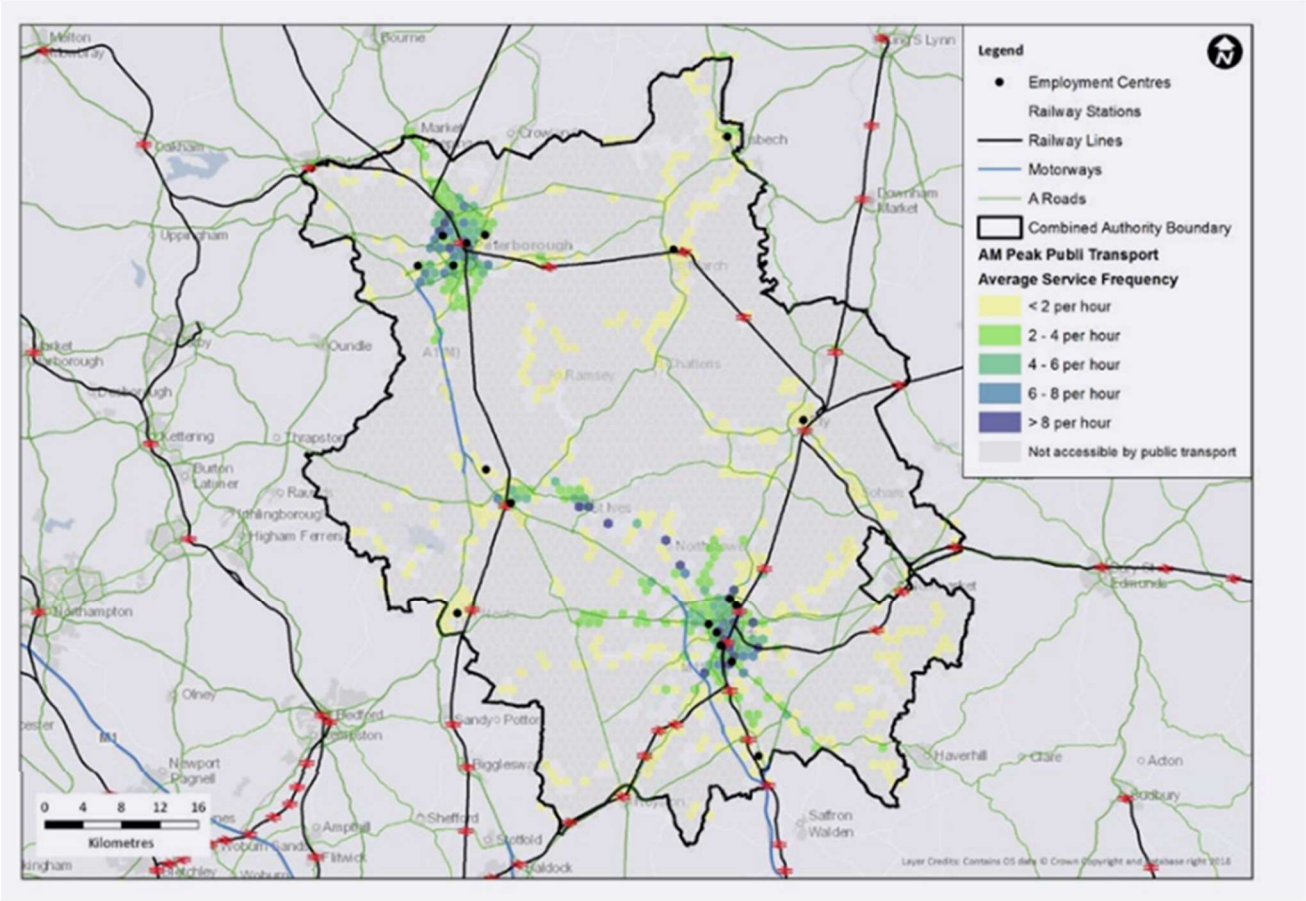
2.6.100. A key objective of the Programme is to ensure public transport is more accessible and connects to where people want to travel. At present, people in the more rural areas of Greater Cambridge typically experience a relatively poor level of public transport service. The stark difference in public transport frequency and accessibility between rural and urban areas is illustrated in Figure 2-17, Figure 2-18, and Figure 2-19, which show (for the CPCA area) the frequency of bus services and the accessibility by public transport to major employment sites in 2018.

2.6.101. The figures also demonstrate that the evolution of the bus network in Greater Cambridge has not kept pace with the polycentric growth of Cambridge. Consequently, many jobs at Cambridge fringe employment sites, such as the Biomedical Campus, Science Park and West Cambridge are, relatively speaking, not as well served by public transport links. For example, the CPCA's BSIP identified a lack of connectivity, and in particular a lack of direct services, between the aforementioned sites and residential areas, leading to a reliance on private car.

2.6.102. Whilst the city centre and most of the City of Cambridge is relatively well served, levels of service (and hence accessibility) reduce significantly in villages and rural areas, with many rural areas having little or no access to public transport. For example, in South Cambridgeshire, only 22% of residents are within 30 minutes public transport or walking access of a town centre[68]; this results in high levels of car dependency[69].

[68] Cambridgeshire and Peterborough Combined Authority (2021). *Bus Service Improvement Plan – using data from Department for Transport (2023) Bus Statistics Table BUS01e*
[69] Arup (2018). *City Access Price-based Demand Management Options Assessment Report*

Figure 2-17 – Public Transport Frequency (CPCA, 2018)[70]



[70] Cambridgeshire and Peterborough Combined Authority (2018). *Local Transport Plan*

Figure 2-18 – Public Transport Accessibility to Major Employment Sites (CPCA, 2018)[70]

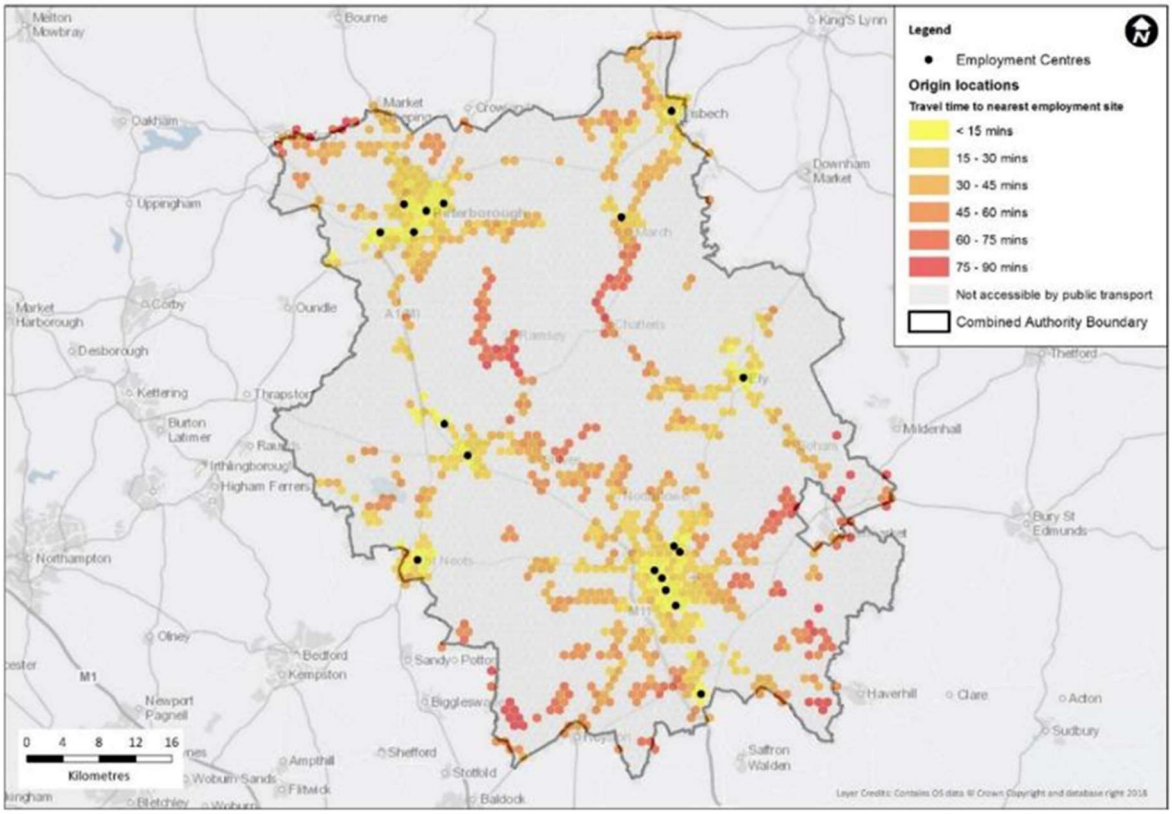
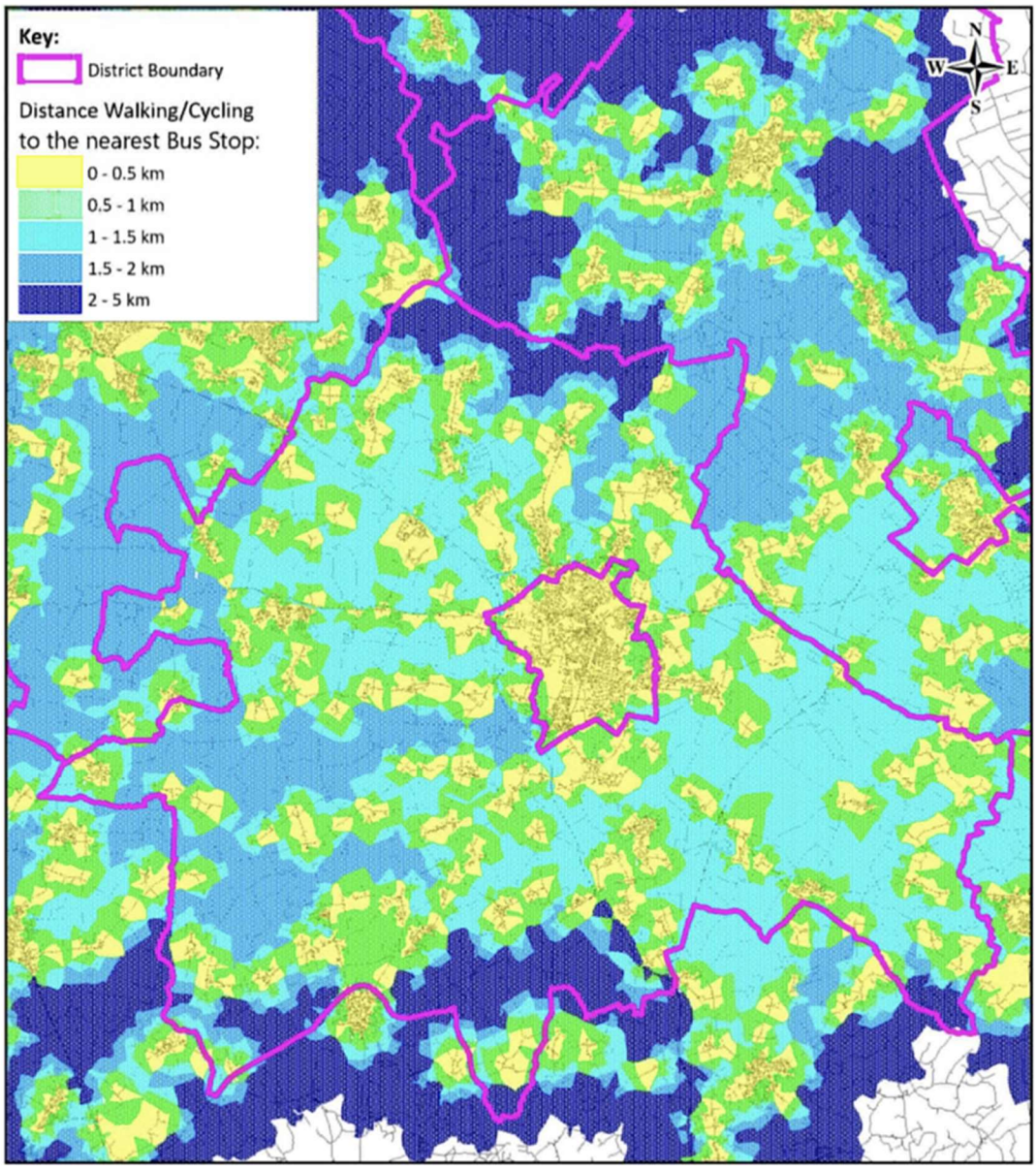


Figure 2-19 – Bus Accessibility in Greater Cambridge[71]



2.6.103. The figures above show that most settlements in Greater Cambridge are within 500m of a bus stop; however, the frequency of services provided in rural areas makes bus travel relatively inflexible and, as a result, unattractive. Furthermore, the majority of routes connect to central Cambridge, so to access major employment areas on the edge of the city, some passengers would require at least one change – unnecessarily going into and out of the city centre – which typically increases journey time[71].

[71] Greater Cambridge Shared Planning (2020). *Local Plan: Transport Existing Conditions Report*

How would Making Connections help to address existing issues with bus services?

The Programme would use revenues raised from the proposed Sustainable Travel Zone to invest in transforming the bus network serving rural areas, villages, market towns, the city, and employment areas. It would enable improved frequencies on some existing routes as well as wider provisions such as increased reliability and fare reduction. It would also enable longer hours as well as fare reductions, improving the bus as an option for shift workers and people on low incomes. Traffic reductions in the city and the potential for reallocation of road space would also improve bus journey times and their reliability.

The net impact would be to make buses a more feasible, reliable and ultimately, attractive option for people in rural areas, villages, and market towns, especially for those who do not have exclusive access to a car. It could also make bus transport more affordable, benefiting people on low incomes.

High, but Unequal, Levels of Car Ownership

Trends Over Time

2.6.104. Between 2011 and 2021 there have been increases in the number of households across all car ownership groups (those without a car or van (+14%), with one car/van (+13%), two cars/vans (+8%) and three or more cars/vans (+19%)[72] in Greater Cambridge. However, due to the general increase in the number of households in Greater Cambridge, the levels of car ownership, in relative terms, has remained largely the same. Here, there have been small increases in the proportion of no-car households and those who own one car or van (+0.2%), and a small reduction in the proportion of households who own two cars or vans (-1.1%).

2.6.105. Within Cambridge, there are stark differences in the numbers of cars owned by households between wards. The wards with the highest proportion of households with no cars are Petersfield (47%), Newnham/Market (42%), Castle (40%) and Romsey (38%). Compared to Cherry Hinton (24%) and Queen Ediths (27%) with the lowest proportion of households with no cars. In absolute terms, this means that there are between 1,000 and 1,500 households in most wards who do not own a car. On the other end of the spectrum, the wards with the highest proportion of two or more cars are Queen Edith's (27%), Cherry Hinton (26%), Abbey (20%), Coleridge (20%) and Kings Hedges (20%). In absolute terms, each of these wards has around 800-1,000 households with two more or more cars.

Inequalities in Car Ownership

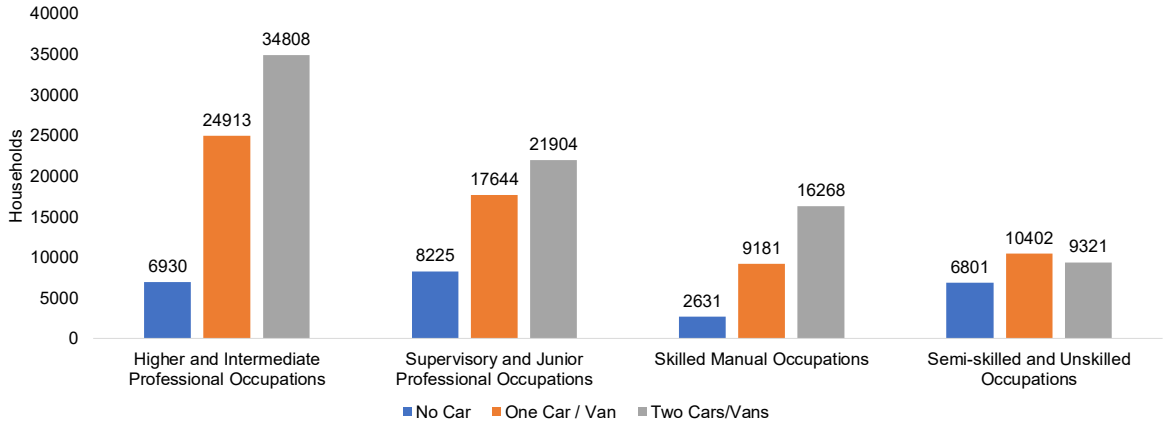
2.6.106. A large proportion of Greater Cambridge residents have limited travel choices due to the relative absence of frequent, reliable and affordable public transport services. This

[72] ONS Census (2011, 2021). *Car or Van Availability*

particularly impacts those people who do not own or have access to a car. In Greater Cambridge, 21% of households do not own a car[72].

2.6.107. A more detailed examination of car ownership data shows that, overall, those in unskilled or semi-skilled jobs, who typically earn less than more highly skilled workers[73], are less likely to own a car. In Greater Cambridge, 26% of semi-skilled / unskilled or unemployed people do not own cars, with a higher proportion living in Cambridge (37%) compared to South Cambridgeshire (14%). In addition, 9% of skilled workers, 17% of supervisors/junior managers and 10% of senior managers/professionals do not own a car[74]. The following graph summarises car ownership by employment type.

Figure 2-20 – Car Ownership by Employment Type[74]



2.6.108. Owning and using a car is a significant financial challenge for many low-income households, but evidence suggests that many households are 'forced' into buying a car due to poor public transport connections and lack of proximity to core destinations[75]. Forced car ownership is a term that defines people who are forced to purchase a car at the expense of other necessities.

2.6.109. An ONS study[76] demonstrated that in the UK's most densely populated areas, 7% of households experience 'forced car ownership' and 13% are 'car deprived' (cannot afford a car at all). In terms of demographics, 'forced car ownership' is more prevalent among those with children, people in the bottom 40% of income distributions and households with mobility difficulties.

2.6.110. Alongside the relationship between income and employment type, people facing relative health and mobility issues are also less likely to own a car. For example, in Greater

[73] ONS (2022). *Employment and Labour Market – Annual Survey of Hours and Earnings*
[74] ONS Census (2011). *Car or Van Availability by Job Occupation*
[75] Mattioli (2017). *Forced Car Ownership in the UK and Germany: Socio-Spatial Patterns and Potential Economic Stress Impacts,* Social Inclusion
[76] ONS (2021). *Housing - number of cars or vans*

Cambridge 38% of people with lower levels of personal mobility, whose day-to-day activity is limited by a long-term illness or health problem, do not own a car[77].

How would Making Connections help to address the consequences of inequalities in car ownership?

In Greater Cambridge, there is a relatively poor level of public transport accessibility overall, which particularly affects those in rural areas, and induces car dependency as people seek to access employment opportunities and services in a convenient and reliable way. Access to private cars is, however, lowest for those in lower paid occupations. Therefore, the delivery of a public transport network that is affordable, accessible and connects to where people want to travel is essential to levelling up the equality of opportunity in the area.

How the Making Connections programme fits with the GCP's strategic vision and objectives.

The Making Connections programme is being developed to contribute to the GCP's strategic objectives by:

- Tackling the problems which inhibit growth: traffic congestion and poor access from rural areas.
- Improving connectivity between employment clusters and labour markets in order to drive further growth; and,
- Providing a sustainable source of revenue for supporting investment in public and sustainable transport measures to enhance accessibility and support a long-term increase in jobs.

The Need for Radical Change to Meet the Net Zero Agenda

The Existing Situation

2.6.111. In June 2019, the UK Parliament passed its Net Zero legislation. The legislation forms a commitment to decarbonise all sectors of the UK economy to net zero by 2050[78].

2.6.112. All three of the GCP partners have declared a climate emergency. Cambridge City Council's Climate Change Strategy aims[79] for "*Cambridge to be net zero carbon by 2030*" and South

[77] ONS Census (2021). *Car or Van Availability by Long-Term Health Problem*
[78] Department for Transport (2021). *Decarbonising Transport – A better, Greener Britain*
[79] Cambridge City Council (2021). *Climate Change Strategy 2021 to 2026*

Cambridgeshire's Zero Carbon Strategy[80] aims to "*halve carbon emissions by 2030 and reduce them to zero by 2050*". Similarly, in May 2019, Cambridgeshire County Council also declared a climate emergency and has published a 'Climate Change and Environment Strategy' for the County of Cambridgeshire to be net-zero by 2045.

2.6.113. The emerging Greater Cambridge Local Plan – Net Zero Carbon Plan Evidence Base (2021) demonstrates that a reduction to near zero net emissions by 2050 across the wider Greater Cambridge area is possible, but only if the highest possible priority is given to the task. The scale of this ambition is illustrated in Figure 2-21, which shows how an overall 82% reduction could be achieved across all sectors, including transport. The forecast 2050 emissions are based on an optimistic scenario where carbon reduction is also prioritised by businesses and by national government.

2.6.114. Overall greenhouse gas (GHG) emissions in Greater Cambridge were estimated to be 1.51MtCO2eq81 in 2018. It is estimated that 35% of these emissions are from transport[82], as illustrated below in Figure 2-21 and Figure 2-22.

2.6.115. All of the partner authorities' strategies recognise the importance of addressing transport-related emission in meeting their net zero ambitions:

- Cambridge City Council's Climate Change Strategy notes the importance of partnership-working with transport bodies, including GCP, to ensure that transport schemes in Cambridge contribute to a reduction in carbon emissions. It discusses the role of GCP's City Access project in promoting measures to encourage commuters away from cars, reduce city centre congestion, and improve access by sustainable transport to the city centre and key employment sites;
- South Cambridgeshire District Council's Zero Carbon Strategy notes the importance of addressing their own travel behaviours, alongside the role of planning policy via the adopted and emerging Local Plan and working with delivery partners, including the GGP, to enhance sustainable transport in the District;
- Cambridgeshire County Council's Climate Change and Environment Strategy includes a low carbon transport theme and notes the importance of working with partners, including GCP, to deliver a sustainable transport system.

2.6.116. Given the above, and in line with Business Case guidance, a Carbon Management Plan (CMP) is being prepared as part of the Making Connections programme. The emerging headlines have been summarised in the Management Dimension and indicate that Making Connections would be a significant contributor to Cambridge's goals for transport decarbonisation. The CMP would be presented in the updated OBC for September.

[80] South Cambridgeshire District Council (2020). *Zero Carbon Strategy*
[81] Metric tons of carbon dioxide equivalent
[82] Greater Cambridge Shared Planning (2018). *Emerging Greater Cambridge Local Plan Net Zero Carbon Plan Evidence Base*

Figure 2-21 – GHG emissions in Greater Cambridge, 2018[82]

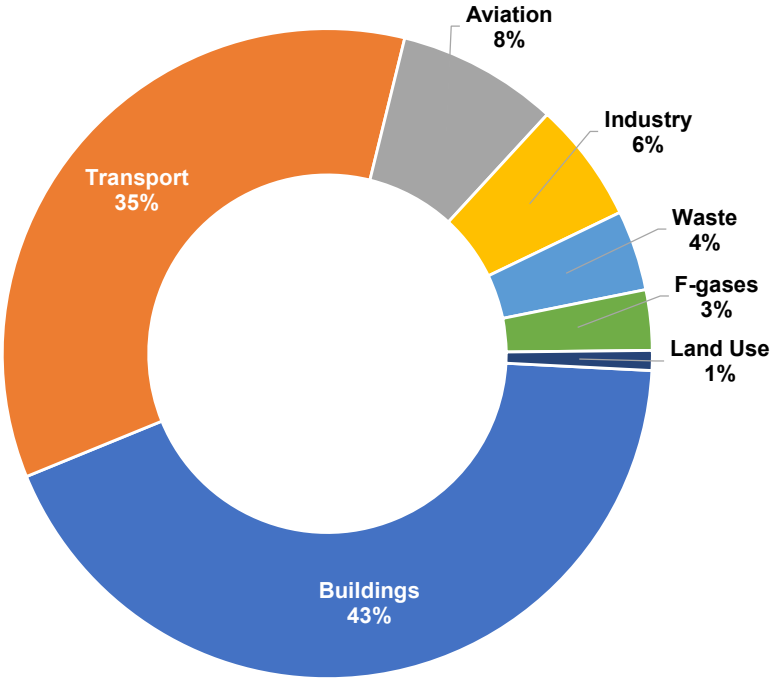
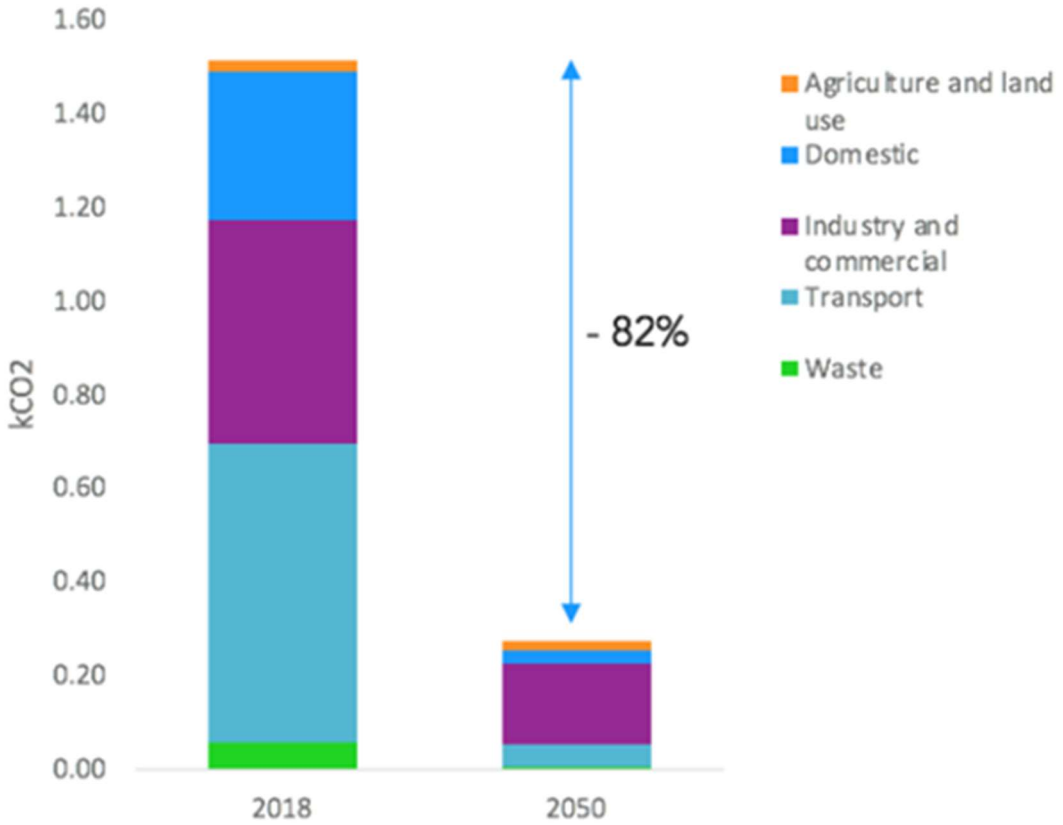


Figure 2-22 – Potential Reductions in GHG Emissions in Greater Cambridge[82]



2.6.117. The latest locally available data on GHG emissions from 2020 indicates that road transport emissions, as a proportion of total emissions, have remained largely unchanged in Greater Cambridge since 2018, equating to approximately 34% of all GHG emissions in the area[83].

2.6.118. Given that road traffic accounts for over a third of total GHG emissions in Greater Cambridge, there is a clear need to significantly reduce transport-derived emissions in order to comply with national, and locally adopted, Net Zero targets[83].

2.6.119. Whilst it is accepted that there would be reductions in emissions due to the transition to electric vehicles, the movement away from internal combustion engine vehicles (ICE) would not completely offset emissions from personal vehicles. For example, in the past year, only 34.5% of National Grid energy generation was from renewable sources[84] with 44.1% still derived from fossil fuels.

2.6.120. Moreover, despite the ban on the sale of new petrol and diesel cars and vans from 2030, these vehicles are predicted to continue to account for a significant proportion of vehicle kilometres driven in 2030. For example, a report by the Greater London Authority (GLA) estimates that, in London, petrol and diesel cars account for between 19% and 43% of vehicle kilometres driven in 2030, depending on the forecast uptake of non-ICE vehicles.

[83] Department for Transport (2020). *Transport and Environment Statistics*
[84] National Grid ESO (2023). Monthly *Domestic Energy Statistics, March 2023*

Although this report is London-based, it provides an indication of the potential trajectory that might also be experienced in Greater Cambridge. Therefore, as stated in Policy 4 Place Based Solutions of the DfT's Decarbonising Transport report[85], reducing the impact of congestion, which can significantly increase relative greenhouse gas emissions per kilometre driven, is essential to achieving Net Zero.

2.6.121. The need to reduce traffic and congestion, alongside decarbonising the transport fleet, is evidenced in a report published by Greener Transport Solutions. The not-for-profit organization concluded that the government's anticipated roll-out of EVs would be insufficient to keep us on the 'balanced pathway' to its net zero target, and that a reduction in car-kms of 20-27% by 2030 would be needed to achieve this.

How would Making Connections contribute to achieving the Net Zero Agenda?

The proposed Sustainable Travel Zone and bus network improvements would encourage a proportion of road users to switch from car to more sustainable modes such as walking and cycling (with net zero carbon emissions) and would accelerate the electrification of the bus network. The CPCA aim to have an entirely electric bus network by 2030.

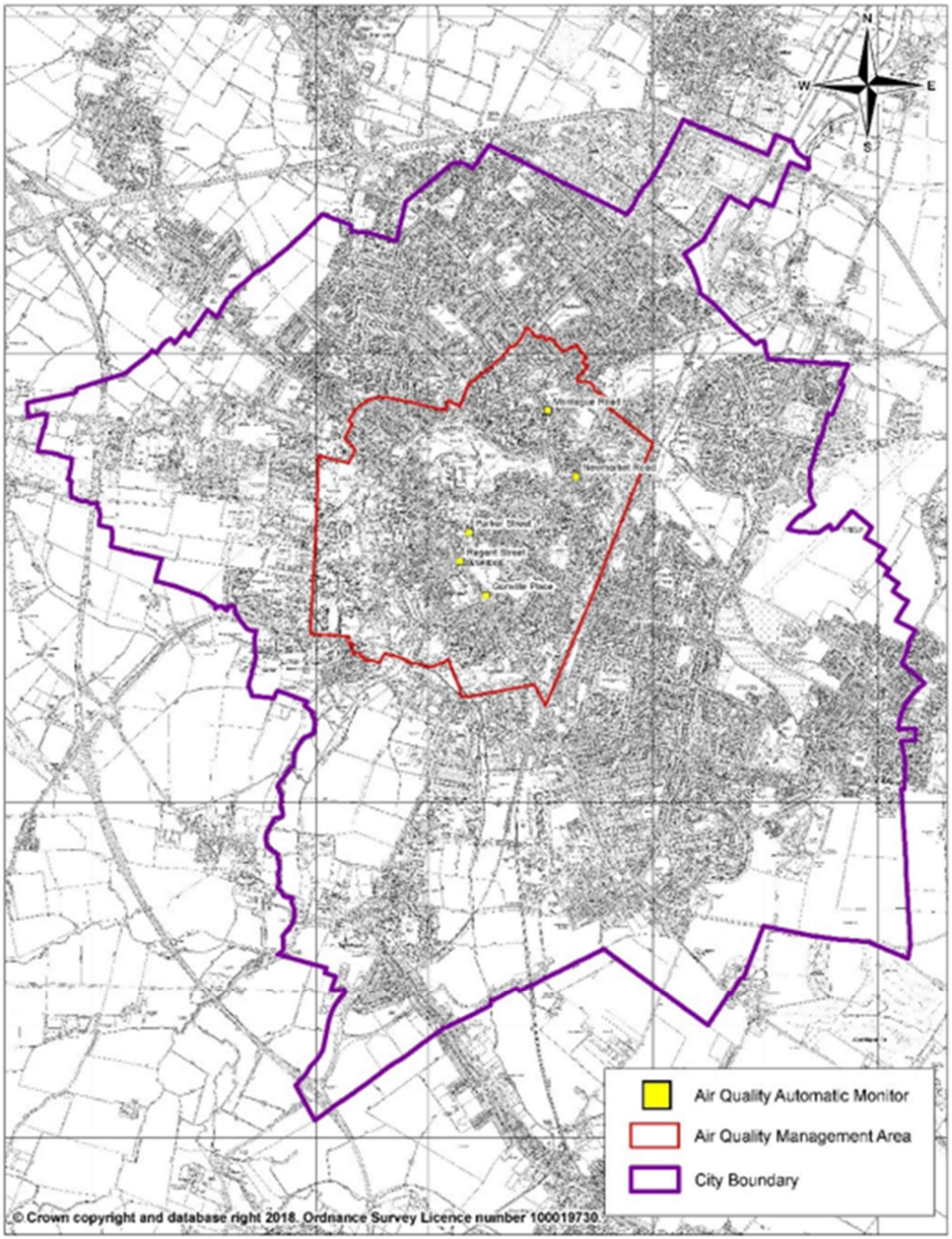
The Need to Improve Local Air Quality

2.6.122. Air pollution is a serious issue, which has "a more significant detrimental impact on the world's health than passive smoking, obesity and water pollution put together"[86].

2.6.123. In 2004 Cambridge City Council designated an Air Quality Management Area (AQMA)[87] in the area encompassing the inner ring road and all the land within it (including a buffer zone around the ring road and its junctions with main feeder roads) due to high average levels of Nitrogen dioxide (NO2). The AQMA is shown in Figure 2-23.

[85] Department for Transport (2022). *Decarbonising Transport*
[86] Broomfield, M (2019). *Every Breath you Take – A User's Guide to the Atmosphere*
[87] Cambridge City Council (2023). *Open data: Air Quality Continuous Monitor Results*

Figure 2-23 – Air Quality Management Area, Cambridge[88]



[88] Cambridge City Council (2004). Air Quality Management Area 2004

2.6.124. To assist with the monitoring of local air pollution, Cambridge City Council implemented a number of permanent air quality sensors in 2001, which provide a longer-term view of air quality. The sensors measure PM10, PM2.5 and NO2[89]. PM10 and PM2.5 are measures of harmful Particulate Matter (PM) which, when airborne, are called aerosols. PM10 includes particles less than 10 µm in diameter and PM2.5 includes those less than 2.5 µm.

2.6.125. As aerosols, larger PM10 particles can irritate people's eyes, nose, and throat (e.g., dust from roads and brake and tyre wear). Smaller PM2.5 particles (from emissions and brake wear) are more dangerous because they can enter people's lungs and bloodstream, causing respiratory problems[90]. Likewise, NO2 can cause inflammation of the airways and increase the likelihood of respiratory infections[90]. It is worth noting that this particulate matter from brake and tyre wear occurs for all vehicles (including EVs), not just internal combustion engine (petrol/diesel) vehicles.

2.6.126. Collated air quality data for Cambridge shows that annual average NO2, PM10 and PM2.5 readings have reduced across all sensors in Cambridge over the last 15 years[91]. NO2 pollution has reduced more significantly than PM10 and PM2.5 due, in part, to the modernisation of the transport fleet in accordance with stricter emissions standards[92]. In contrast, PM from surface transport has reduced at slower rates as gains from stricter emission standards have been offset by an increase in PM emissions from brake and tyre wear as vehicles have become larger and heavier[93]. However, it should be acknowledged that PM emissions from brake and tyre wear account for a relatively small proportion of PM emissions overall[94].

2.6.127. The current levels of monitored pollutant concentrations at monitored sites within Cambridge for the latest year (up until March 2023) do not currently exceed UK objectives for monitored concentrations on an annual or 24- hour mean basis. However, the World Health Organisation (WHO), indicates that Governments' should create more stringent objectives in line with those published by WHO, which have been compiled based on epidemiological studies which analyse the risks of exposure to air pollution[95]. The latest update from the UK government has set out a timeline for updating the objectives for PM2.5

[89] It is worth noting that only certain pollutants are able to be detected by sensors and thus able to be quantified. In addition, not all pollutants are measured at all active monitors.
[90] Department for Environment Food and Rural Affairs (DEFRA) (2023). *Emissions of air pollutants in the UK – Particulate matter (PM10 and PM2.5)*
[91] Cambridge City Council (2023). *Open data: Air Quality Continuous Monitor Results*
[92] Department for Transport (2021). *Transport and environment statistics: Autumn 2021*
[93] Oroumiyeh, F. and Zhu, Y. (2021). *Brake and tire particles measured from on-road vehicles: Effects of vehicle mass and braking intensity. Atmospheric Environment: X*, 12, p.100121
[94] Department for Environment, Food and Rural Affairs (2019). *Clean Air Strategy*
[95] World Health Organisation (2022). *Ambient (outdoor) air pollution guidelines*

incrementally up until 2040, reducing the level of monitored concentrations which is considered acceptable[96].

2.6.128. Until January 2022, there was a second AQMA in Greater Cambridge; the A14 AQMA between Bar Hill and Milton. A trend of decreasing monitored concentrations was recorded within the AQMA, with no exceedances above the objective levels for any pollutant, since 2014. Revocation of the AQMA was proposed in the Council's Air Quality Annual Status report, reported 2021, and has now been accepted by DEFRA. The Cambridge AQMA is now the only designated area within Greater Cambridge[97].

How would Making Connections help to improve local air quality?

The Making Connections programme would lead to a net reduction in harmful air pollutants, as a result of the significant reduction expected in motorised traffic.

The Programme would also contribute to Cambridge City Council's priority measure of reducing emissions from buses, by helping to fund the delivery of a zero, and lower, emissions fleet.

A Culture of Walking and Cycling

2.6.129. According to 2011 Census data, Cambridge has the highest active transport modal share for residents within Cambridgeshire, with nearly 80% of short commuting trips (under 2km) being walked or cycled, which compares to the national average of 47%. South Cambridgeshire has higher rates of both walking and cycling than the other non-city districts of Cambridgeshire for short commuting trips, but, despite this, 40% of people travel to work by car (as a driver or passenger) for trips under 2km.

2.6.130. To further contextualise the analysis above, the latest available Census dataset (2011)[98], undistorted by the impacts of the pandemic, showed that 16% of Cambridge (2,589) and 35% of South Cambridgeshire (2,671) residents drive less than 2km to work.

Pedestrian Trips

2.6.131. Cambridge experiences high levels of pedestrian footfall, particularly in its historic core, retail areas and near Cambridge station. The latest available footfall data demonstrates that pedestrian footfall in the city centre has largely recovered since the COVID-19 pandemic; the datasets show that for the available months in 2023, average net footfall is now approximately 3% lower than the same months in 2019. The datasets also show that, in some months, 2023 footfall exceeded the levels seen in 2019; here, footfall in February

[96] HM Government (2023). *Environmental Improvement Plan 2023*

[97] Cambridge City Council (2022). *Air Quality Annual Status Report 2022*

[98] 2021 data for this exact dataset is not comparable as ONS have not released data which demonstrates method of travel to work by distance travelled to work for under 2km.

2023 was 11% higher than in February 2019 and June 2023 was 2% higher than in June 2019.

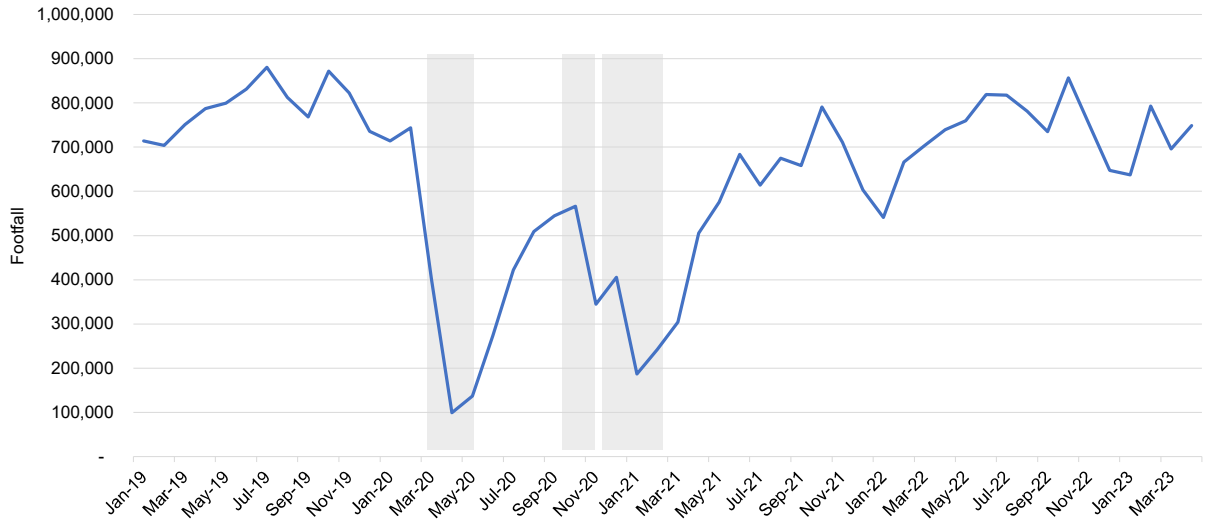
2.6.132. The footfall sensors used within this analysis are located on streets with high levels of footfall within or proximate to the city centre, comprising of Bridge Street, Fitzroy Street, Market Hill, Regent Street, Sidney Street and Rose Crescent. Other sensors are present within the city including on Kings Parade, One Station Square, Silver Street and Burleigh Street, but these sensors were not in place in 2019; thus preventing a longitudinal comparison.

2.6.133. The data demonstrates that footfall has largely recovered following COVID-19 lockdowns in 2020 and 2021. This shows that despite concerns about engagement with high streets and the city centre 'post COVID-19', people are still choosing to engage with the city centre on foot.

2.6.134. It is worth noting that the counters are largely located in pedestrianised areas that provide more comfortable pedestrian environments; these spaces typically provide more space for social distancing, which may have contributed to footfall recoveries post-COVID-19.

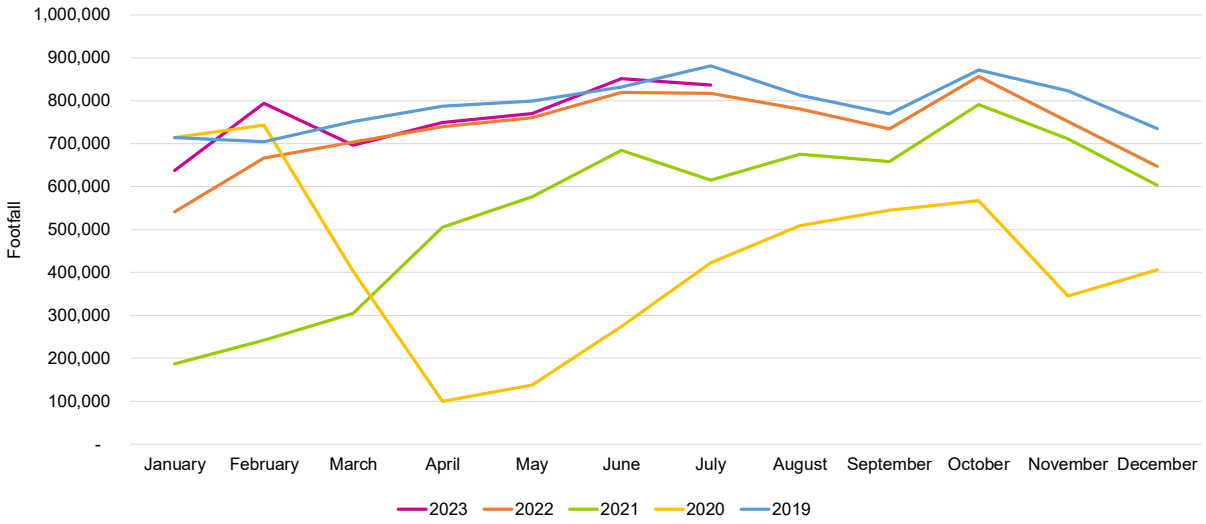
2.6.135. The following graphs demonstrate the average trend in footfall at the locations listed above over the past four years. The greyed-out sections represent the three national lockdown periods in the UK.

Figure 2-24 – Cambridge Footfall: Trends 2019-2023[99]



[99] Cambridge BID (2023). *Open data source: Monthly Footfall Reports*

Figure 2-25 – Cambridge Footfall: Month by Month Comparison[99]



Cycling

2.6.136. Cambridge has seen a significant increase in the absolute and relative number of cycling trips since 2001. According to data from the 2011 census, the proportion of Cambridge residents who cycled to work increased from 26% in 2001 to 30% in 2011[100]. Whilst the overall number of cyclists commuting to work is lower in the 2021 census, the proportion of people choosing to cycle to work increased to 31%.

2.6.137. In South Cambridgeshire, the percentage of people cycling to work in the district increased from 10.7% in 2011 to 14.5% in 2018[101].

2.6.138. In comparison to motorised vehicles, walking and cycling trips at key count points in Cambridge were only 1% lower in 2022 than in 2019, with some corridors experiencing significant increases in active travel flows.

2.6.139. Within Greater Cambridge, the number of cycling trips for all purposes has also increased, with 28.1 million cycle trips in total in 2021, made up of commuting (34%), leisure (12%), shopping and personal business (38%) and travelling to education (17%)[102].

2.6.140. In terms of cycling across all journey purposes, Cambridgeshire County Council has recorded traffic flow data across two 'screenlines' (the city boundary and the River Cam) for the last two decades. In 2019, the numbers of cyclists entering Cambridge from South Cambridgeshire increased by 64% to (over 12,000 cyclists) over a 12-hour period since 2010. Likewise, the number of cyclists crossing the River Cam in Cambridge increased by 62% since 2010, with 35,000 cyclists crossing the Cam over a 12-hour period[103].

[100] ONS Census (2001, 2011, 2021). *Travel to Work data*
[101] South Cambridgeshire District Council (2020). *Annual Monitoring Report*
[102] Sustrans (2021). *Walking and Cycling Index for Greater Cambridge*
[103] Cambridgeshire County Council (2020). *Traffic Monitoring Report*

2.6.141. The overall increase in cycle mode share in Greater Cambridge has been attributed to various factors, including investment in cycling infrastructure and cycle parking, the introduction of cycle-sharing schemes, and increased awareness of the benefits of cycling for both personal health and the environment. CCC has also implemented measures to promote cycling, such as offering cycling lessons for beginners and promoting the use of electric bikes.

The Growth of Micro Mobility

2.6.142. The use of micro modes of transport, which include personal vehicles that can carry one or two passengers, is growing in the Greater Cambridge area. Micro modes of transport are significant in that they can support an enhanced bus network by providing a solution to the first/last mile problem.

2.6.143. Cambridge is currently taking part in a trial scheme for electric e-bikes and e-scooters. The e-bikes and e-scooters are operated by Voi and are available for hire and use around the city. E-scooter use has steadily grown since the Voi trial began in late 2020, peaking at approximately 15,000 unique monthly users and covering in excess of 200,000km by March 2023. The average distance ridden is approximately 2.4km and the average trip duration is approximately 11 minutes[104]. Rental e-scooters can fill a valuable role in facilitating the 'first' and 'last'-mile element of a multi-modal journey that is beyond typical walking distances[105]. Voi also operates rental e-bikes as part of the same trial, but the growth in e-bike use is primarily driven by the personal ownership market.

[104] Cambridgeshire County Council (2023). *COVID-19 Transport Impacts: Data and Monitoring Report (April 2023)*
[105] Voi (2021). *One year in the UK Report*

How would Making Connections build on the local culture of active travel?

The Greater Cambridge area has a very high active travel modal share when compared to regional and national averages. Notably, the number and proportion of people cycling in the Greater Cambridge area significantly increased between 2001 and 2019. Despite the initial fall in cycle flows during the COVID-19 pandemic, observed cycling flows in March 2023 have recovered strongly, which demonstrates a strong culture and appetite for active travel in the area.

Similarly, the growing trends in observed footfall in Cambridge city centre demonstrates that despite concerns about city centre footfall 'post COVID-19', people are still choosing to engage with the city centre on foot. Many of the footways in Cambridge's historic city centre are, however, constrained and narrow; this results in some streets being uncomfortable for pedestrians to access, move around or rest without undesirable interactions with other pedestrians or modes of transport.

Making Connections has the potential to capitalise on this culture of active travel, and help to address the constraints of the streetscape, by reducing traffic flows; in turn this has the potential to facilitate the reallocation of road space in favour of active modes. Here, creating a more attractive environment for active travel should help Greater Cambridge to fulfil its latent potential for further walking, cycling and scooting, particularly for those people who currently drive less than 2km to work.

A Successful Park and Ride Network

2.6.144. Five 'inner' bus-based park & ride sites serve Cambridge: Babraham Road, Madingley Road, Milton, Newmarket Road and Trumpington, which provide 5,653 spaces in total[106]. Two additional park & ride sites are located to the north of Cambridge on the Cambridgeshire Guided Busway (CGB) alignment. The two sites are located at St. Ives and Longstanton and provide 1,000 and 350 car parking spaces respectively; hence, across all park & ride sites 7,003 spaces are currently provided. In recent years, parking capacity at both the Trumpington and Babraham Road sites has been expanded in response to the growth in demand.

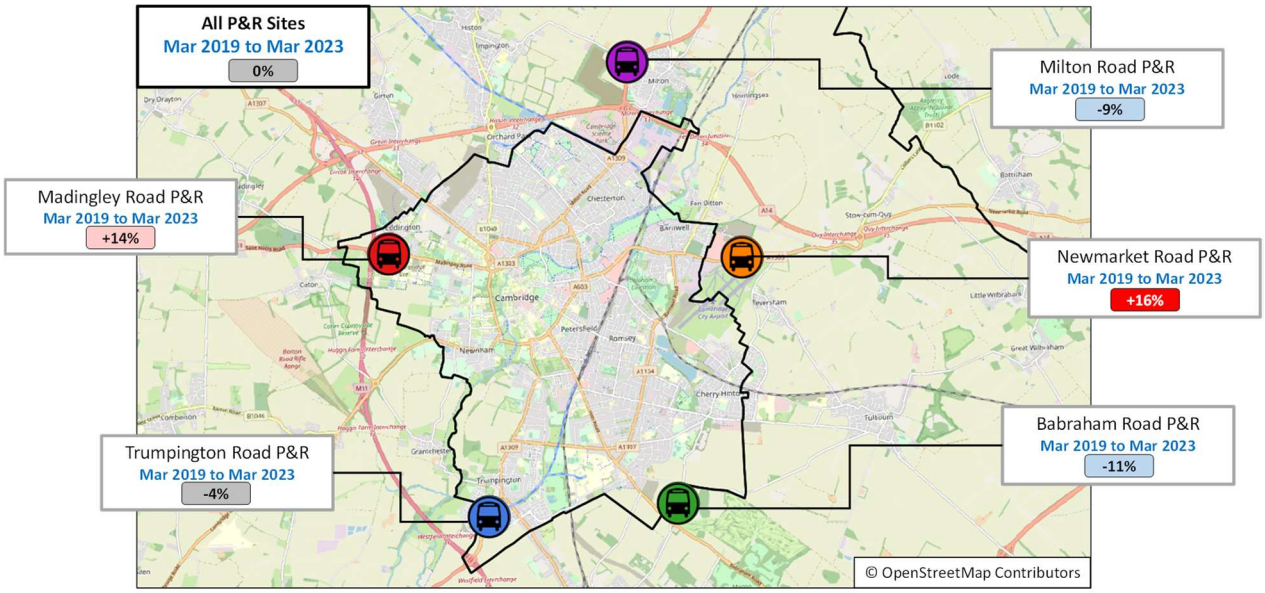
2.6.145. In total in 2019, there were over 3.6 million park & ride passenger journeys, an increase of 11% since 2018[107]. Following the COVID-19 lockdowns and the associated increase in working from home, there was a substantial reduction in park & ride journeys, with only 1.4 million being recorded in 2021. However, data from March 2023 demonstrates that overall park & ride patronage has recovered significantly up to 2019 levels. This is shown in the figure below which demonstrates that some sites have higher levels of usage compared to 2019, whilst others are still operating at lower occupancy than 2019.

[106] Cambridge Park and Ride open data [online]
[107] Comparisons to previous years not possible as data collection was not in place

2.6.146. In response to Cambridge's existing network of park and ride sites operating at or near capacity prior to the COVID-19 pandemic, the wider GCP programme includes the provision of up to 10,000 additional Park and Ride spaces around in Greater Cambridge. Amongst others, the GCP has proposals for additional capacity at the Cambridge South West Travel Hub (CSWTH) and the Foxton Travel Hub, as well as new/relocated hubs proposed via the Cambourne to Cambridge, Cambridge Eastern Access and Waterbeach to Cambridge schemes.

2.6.147. The GCP is proposing the development of an Integrated Parking Strategy that would comprehensively manage on-street, off-street and Park & Ride provision and how this can support users and encourage modal shift.

Figure 2-26 – Park and Ride Usage per Site[108]



[108] Cambridgeshire County Council (2023). *COVID-19 Transport Impacts: Data and Monitoring Report (April 2023)*

Would Making Connections impact on park and ride services?

The sustained growth in the number of spaces and levels of patronage at Cambridge's park & ride sites over the past 20 years, provides an indirect demonstration of the impact that congestion has on vehicle journey times in the city. The consistent upward trend in park & ride patronage following the end of social distancing guidance, also potentially demonstrates that park & ride is becoming more attractive as traffic levels in Cambridge recover and increase.

The introduction of a potential congestion charge as part of the STZ is forecast to reduce traffic flows within the zone and, correspondingly, increase park & ride patronage in Cambridge. Under Making Connections, all park & ride sites would fall outside of the STZ zone, parking would remain free of charge at all sites and fares into the city would reduce to £1 for a single ticket. Hence, the Programme seeks to ensure that park & ride remains convenient and accessible, and becomes more affordable and attractive, to further reduce traffic congestion and improve air quality in the Cambridge's city centre AQMA.

Growing Rail Patronage and Improving Connections

2.6.148. Entries and exits at Cambridge Station have steadily increased over the last decade, with a 51% increase between 2009/2010 and 2019/2020[109]. In 2019/20 11.6 million passengers entered and exited Cambridge station and 0.556 million passengers interchanged there.

2.6.149. The latest available data, for April 2021 to March 2022, shows there were 6.95 million entries and exits at Cambridge station, which increased from 2.3 million between April 2020 and March 2021. This comparison demonstrates that rail patronage is recovering following the impact of the UK Government-implemented COVID-19 lockdowns.

2.6.150. In terms of additional rail capacity, Cambridge North Station opened in May 2017 to accommodate growth in the local resident population and further development of the Cambridge Northern Fringe area; the station also serves the established Cambridge Science Park and other employment sites in the area. Station usage increased from 812,972 in 2018/19 to 949,550 in 2019/20. Despite station use reducing to 220,958 in 2020/21 (the year impacted by Government-imposed COVID-19 lockdowns), station usage recovered to 733,612 in 2021/22.

2.6.151. In November 2022, the UK Government approved a Transport and Works Act Order (TWAO) to construct a new station to serve the Cambridge Biomedical Campus (CBC). The station, Cambridge South, would connect the CBC directly to international airports including London Stansted and London Gatwick, and is being designed to integrate with and complement the Thameslink and proposed East West Rail schemes. The current programme states that the station would open by 2025[110].

[109] Calculated using Office of Road and Rail (2013, 2023). *Passenger Entries and Exits Dataset*
[110] Network Rail (2022). *Cambridge South Station – Progress Update*

2.6.152. In June 2023, the UK Government confirmed the preferred alignment of East West Rail between Bedford and Cambridge with new stations serving Tempsford (Bedfordshire) and Cambourne (Cambridgeshire) before following the southern alignment into Cambridge via Cambridge South Station. The East West Rail Company would be consulting on the next stage of proposals in 2024 ahead of an application for a development consent order.

2.6.153. Another rail development within the Greater Cambridge area is the proposal to relocate the existing Waterbeach Railway Station to the north of the village to better serve the major Waterbeach New Town development. South Cambridgeshire District Council approved the outline proposals in 2018, alongside an approval for part of the proposed 10,000 home development. The current programme states that the station should open in late 2025.

2.6.154. Rail improvements have the potential to contribute to the GCP's aim of reducing congestion in Greater Cambridge but are limited in their coverage and cannot reach all areas. An enhanced and complementary bus network is thus needed to offer a more comprehensive solution to congestion issues that is both readily adaptable, easier to expand and suitable for areas with fluctuating demand.

How would changes to the local rail network impact Making Connections?

The capacity and connectivity of Cambridge's rail network has improved significantly in the past decade with the opening of Cambridge North station, platform extensions at Cambridge station and the wider Cambridge resignalling programme. In the next two years, the proposed Cambridge South station, programmed to open in 2025, would also significantly enhance the public transport connectivity to the south of the city.

The opening of Cambridge South would mean that Cambridge is served by stations in the northern, southern and central areas of the city, where Cambridge's key employment clusters are located. The Making Connections programme would enhance the potential for, and convenience of interchange at these stations, by improving the level of service and affordability of connecting bus services. It is also important to note that large parts of Greater Cambridge are not served by a rail station and thus bus travel remains an important public transport option.

The combination of wider improvements to the rail network and transformational changes to the bus network, should, therefore, increase the seamlessness of public transport journeys into, out of and through Greater Cambridge.

A Decline in the Utilisation of Public Car Parks

2.6.155. According to Cambridge City Council data[111], the number of publicly available off-street car parking spaces in Cambridge increased from 6,960 to 7,822 between 2010 and 2020, which is an increase of around 12%. In contrast, the number of publicly available on-street parking

[111] Cambridge City Council open parking data [online]

spaces in Cambridge decreased from 1,763 to 1,332 over the same period, a decrease of around 24%. Hence, overall, there was an increase of 431 public parking spaces. In January 2022, however, Park Street Car Park closed for refurbishment until Summer 2024, reducing available car parking spaces in the city centre by approximately 400 spaces and thereby effectively offsetting the aforementioned increase in spaces. The proposed redevelopment, which is due to open in 2024, would incorporate circa 225 spaces, resulting in the net reduction of approximately 175 spaces.

2.6.156. Data from March 2023 shows that car parking ticket sales were 22% lower than pre-COVID-19 levels in March 2019. Here, tickets sales were 17% down on weekends and 21% down on weekdays. Based on car park ticket sales at the publicly operated car parks in Cambridge, the number of users had also been declining prior to the COVID-19 pandemic. In 2017/2018 car park ticket sales were £2.44 million, in 2018/2019 ticket sales were £2.3 million and in 2019/2020 ticket sales were £2.15 million; this is despite additional revenue from tickets sales at Lammas Land Car Park, which was free prior to 2019, and small increases in the per hour price of parking.

2.6.157. Research undertaken by CCC, shows that, outside of national lockdown periods, multi-storey car park use in Cambridge has been broadly consistent since the start of the COVID-19 pandemic. Notably, since the start of the school year in September 2022, ticket sales at the multi-storey car parks has been consistently lower than over the same period in 2021; this trend may reflect the impact of recovering traffic levels on the perceived attractiveness of driving into Cambridge.

Figure 2-27 – Multi-Storey Car Park Utilisation in Cambridge Between 2019 and 2022[112]

How do changes in car parking behaviours relate to Making Connections?

Outside of national lockdown periods, utilisation at multi-storey car parks in Cambridge has remained relatively consistent; however, in both 2020 and 2021, utilisation levels were consistently higher than in 2022 between September and December.

A Growing Appetite for Electric and Hybrid Cars

2.6.158. Since 2018, the number of licenced low emission and plug-in hybrid cars in Cambridge has grown by between 28-67% each year. The overall number of electric/plug-in hybrid cars owned by Cambridge households has more than quadrupled from 415 in 2018 to 1,798 cars in Q3 2022[113]; this demonstrates a growing local appetite for the uptake of low emission vehicles.

2.6.159. Correspondingly, the number of public electric vehicle charging points has increased in Cambridge. There were 76 charging points available by the end of Q3 2022, close to a three-fold increase on 2019. Relative to the number of EV vehicles, the incidence of charging points is 51% higher in Cambridge than the national city average, with five charging points for every 100 EV's in the City[114]. There is also a push within Cambridge to

[112] Cambridgeshire County Council (2023). *COVID-19 Transport Impacts: Data and Monitoring Report (April 2023)*
[113] Department for Transport (2023). *Licenced Vehicle Numbers Dataset*
[114] ZapMap (2023). [online]

speed up the electrification of the private hire vehicle (PHV) fleet through EV charge points for taxis[115].

2.6.160. Despite the growth in low emission and plug-in hybrid vehicles, these vehicles only account for 1.4% of all licensed vehicles in Cambridge, which is in line with the national average. Therefore, even though the growth in electric cars is accelerating each year, the current number of electric cars is still minimal compared those which use internal combustion engines[116].

What does the uptake of electric and hybrid cars mean for Making Connections?

Whilst the wider transition to low emissions private vehicles would contribute to the Programme's objectives of reducing local air pollution and GHG emissions, it would not address the impact of traffic congestion on economic growth, productivity and journey ambience[116]. Moreover, the conversion of the private vehicle fleet from Internal Combustion Engine (ICE) vehicles to low emissions vehicles is progressing relatively slowly, prior to the ban on sales of diesel and petrol cars in 2030, accounting for only 16.6% of all new car registrations in 2022[116].

The Programme's proposed improvements to bus services and other sustainable travel modes, which would broaden the quality of Greater Cambridge's transport offer and help to enable future growth, are thus dependent on the reduction of traffic and the subsequent ability to free up road space for pedestrians, cyclists and buses.

Greater Workplace Flexibility and Working from Home

Working from Home

2.6.161. The COVID-19 pandemic and the associated lockdown restrictions led to a significant rise in the number of people working from home in the UK, which in turn impacted reported and observed travel behaviours.

2.6.162. Surveys undertaken by the Office for National Statistics (ONS) show that, prior to the pandemic, one in eight (12%) working adults in the UK reported working from home in the week prior to their interview[117]. In Greater Cambridge, 7% of people stated that they worked from home in the 2011 Census. In comparison, data from the 2021 census, showed that, in the Greater Cambridge area, 45% of people were recorded as working from home; the 2021 Census was undertaken as the UK was emerging from a period of national lockdown, but still had work from home guidelines in place.

[115] Cambridge City Council (2019). *Electric Vehicle and Infrastructure Strategy*
[116] Department for Transport (2022). *Licenced Vehicle Numbers Dataset*
[117] Office of National Statistics (2022). *Is hybrid working here to stay?*

2.6.163. The latest statistical release by the ONS[118] shows that, in the East of England, only 14% of people now identify as being homeworkers only, with up to 45% of people indicating that they are now home/hybrid workers. This evidence suggests that employees are returning to office space in some capacity.

2.6.164. Despite the prevalence of people working from home, the latest statistics on commercial floorspace use in Cambridge, indicates that demand for commercial space is high and increasing. Since 2012, commercial (i.e. non-industrial) floorspace – including office, retail and other uses – increased by 4.1% across Cambridge, the 4th largest increase of 58 cities nationwide. This was in contrast to national (-1.6%) and national city (-0.5%) benchmarks, which both declined over this period.

How do changes in working patterns relate to Making Connections?

The pandemic undoubtedly led to an adjustment in working patterns, and hybrid working appears to be becoming the norm for a number of employees. However, traffic data continues to show an upward trend, and is now approaching pre-pandemic levels. This suggests that, with the continued growth in jobs and population in Greater Cambridge, the change in working patterns alone might not be sufficient to reduce congestion to the levels required for the growth in jobs and population to occur sustainably.

Inequality in Greater Cambridge

2.6.165. The Indices of Multiple Deprivation (IMD) shows that, overall, Greater Cambridge has a higher-than-average quality of life, and the ONS Labour Force Survey shows that employment rates are higher.

2.6.166. Relatively low levels of deprivation in Greater Cambridge as a whole do, however, mask pockets of deprivation. A more detailed analysis of IMD data in Greater Cambridge is provided in Appendix R.

2.6.167. The problem is not that health and the quality of life in Greater Cambridge is uniformly poor at an aggregate level, but that the area has high levels of inequality. Indeed, in 2020, Cambridge was ranked as “the most unequal city in the UK”[119]. Here, the top 6% of earners earned 19% of total income generated in the area, while the bottom 20% of the population accounted for just 2% of that total[119].

2.6.168. In terms of housing, Cambridge is also one of the least affordable cities to live. For example, in 2018 house prices were 13 times higher than the city’s median annual salary of £34,400. Despite this relatively high median salary, in 2017, one in 10 households in Cambridge earned less than £16,518 a year[120].

[118] ONS (2023) Characteristics of Homeworkers: September 2022 to January 2023
[119] Centre for Cities (2018). *Cities Outlook Report*
[120] The Equality Trust (2017). *Tackling poverty in Cambridge - The most unequal city in the UK*

2.6.169. The cost of housing and the relatively poor levels of accessibility to services means that both Cambridge and South Cambridgeshire score relatively poorly in the IMD 'Barrier to Housing & Services' domain.

2.6.170. The Barriers to Housing and Services domain measures the physical and financial accessibility of housing and local services. The indicators fall into two subdomains: 'geographical barriers', which relate to the physical proximity of local services, and 'wider barriers' which includes issues relating to access to housing, such as affordability.

2.6.171. The Barriers to Housing & Services domain is South Cambridgeshire's lowest (most deprived) domain and Cambridge's third lowest when ranked against all other local authorities nationally. Both districts were in the most deprived 100 local authorities for this domain in 2019.

How can Making Connections help to address existing socioeconomic inequalities?

The Programme has the potential to significantly increase accessibility to employment opportunities and services for the more deprived communities of Greater Cambridge, and particularly for the 21% of households that do not own a car, by delivering a more affordable, reliable, and comprehensive public transport network.

2.7 Scope of the Programme

2.7.1. The Making Connections programme covers the whole of Greater Cambridge, with two main geographical foci:

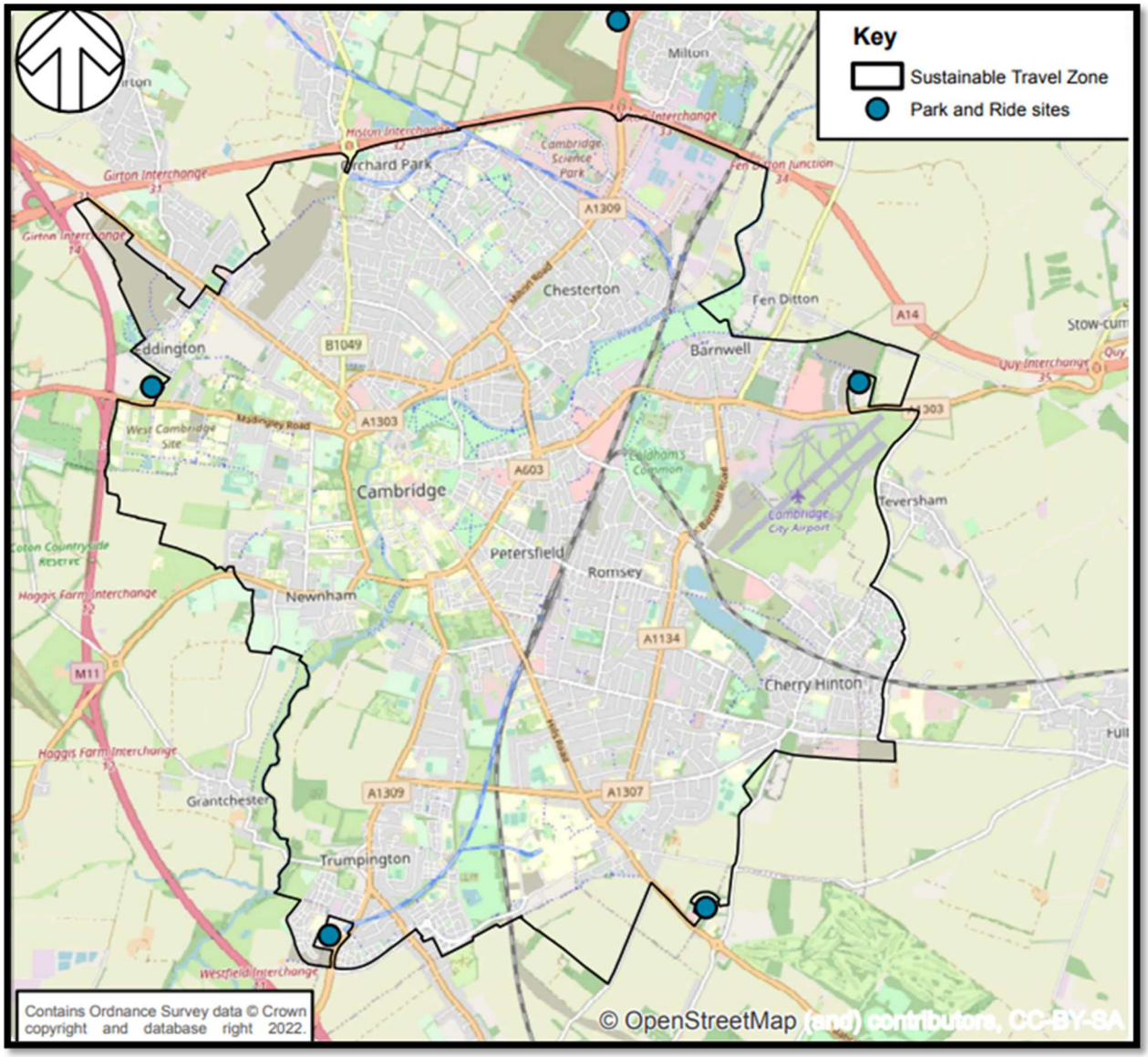
- Public transport connectivity between villages and market towns, employment areas and Cambridge City Centre; and,
- Congestion relief and support for active modes in the urban area of Cambridge.

2.7.2. The programme consists of the following potential transport interventions, designed to deliver the SMART objectives set out in Section 2.6:

- Improvements to bus services, which could include:
  - New bus services connecting rural areas and villages to rail stations and travel hubs on existing public transport corridors;
  - New more direct bus services to employment areas;
  - Increased frequencies on bus services to villages, market towns and employment areas;
  - New express bus services serving market towns and larger villages;
  - Longer operating hours, including evening services;
  - Reduced £2 bus fare; and,
  - Zero-emission buses.
- Wider improvements to sustainable travel, including:

  - Reallocation of road space within appropriate locations on the network';
  - Improvements to walking and cycling routes, to extend the existing active travel network; and
  - Improvement to public spaces.
- The introduction of smarter travel initiatives that would be common to all options and would include measures with a greater focus on making better use of the network, and maximising opportunities to influence travel demand, including:
  - Electric car clubs
  - e-Cargo bike clubs
  - e-Bike leasing schemes
- A Sustainable Travel Zone (STZ) including a charging scheme designed to reduce traffic and congestion in Cambridge city centre and generate revenue to invest in better bus services and more walking and cycling infrastructure; this would be formed of:
  - A road user charging zone - a flexible charge for road use by private vehicles within a defined area (see Figure 2-28 below).

Figure 2-28 – Proposed Sustainable Transport Zone Boundary



2.8 Strategic Benefits

2.8.1. This section describes how the strategic benefits of the Making Connections programme would be achieved and how these align with the drivers for change identified in Section 2.6.

Measures of Success

2.8.2. To ensure the successful implementation of the Making Connections programme, it is crucial to establish clear measures of success and an effective plan for delivery. This section outlines the key considerations for measuring success and provides guidance on planning for the scheme's implementation, following the DfT's Business Case Guidance.

2.8.3. Logic mapping is a way of checking that there are logical connections between the inputs to a scheme or programme (e.g., the investment made) and its expected strategic impacts.

2.8.4. At the very simplest level, the Making Connections programme would involve:

- Investment in better bus services

2.8.5. Followed by:

- Charges for using private vehicles in Cambridge
- Use of the charging income to fund ongoing investment in bus services and sustainable transport measures

2.8.6. The combination of better bus services and higher costs for private vehicle use should lead to:

- More bus use
- Less car use and lower traffic levels

2.8.7. The improved bus services and switch from car to bus for some journeys would lead to:

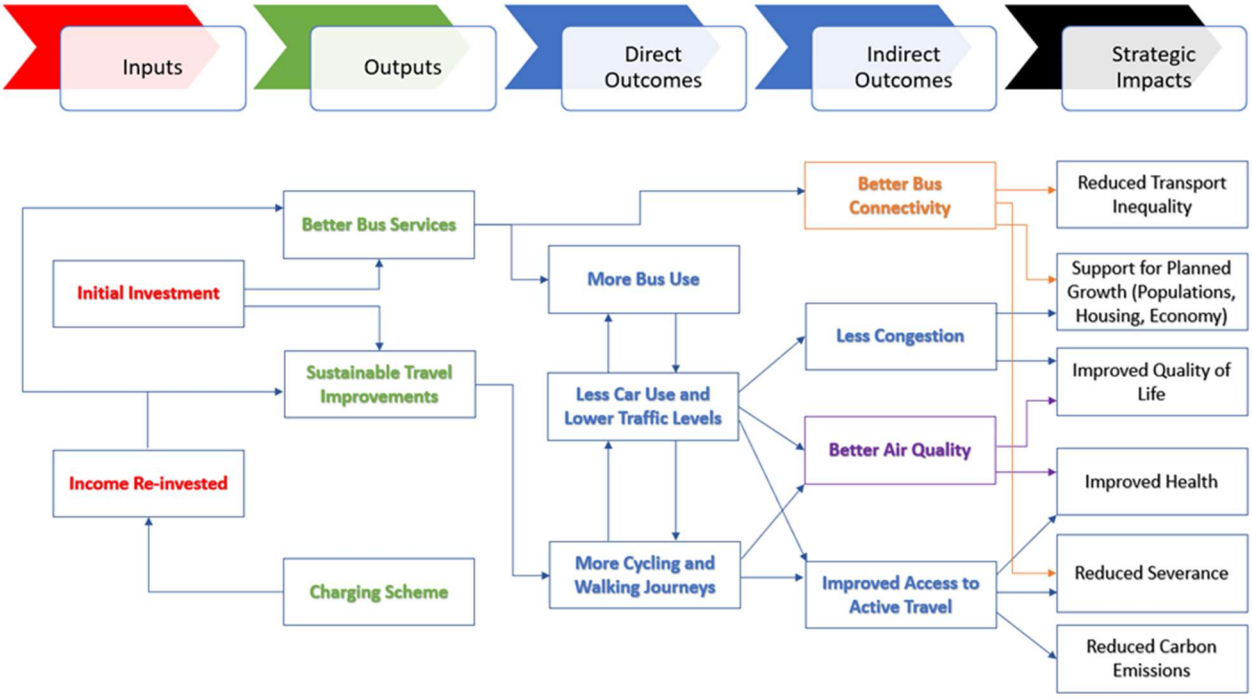
- Better connectivity by bus
- Less congestion
- Better air quality
- Improved access to active travel

2.8.8. As a result, there would be:

- Less transport inequality
- Fewer constraints on economic growth
- Improved quality of life
- Improved health
- Reduced carbon emissions

2.8.9. The relationships between these inputs, outputs, outcomes, and strategic impacts are illustrated in a simple logic map in Figure 2-29. The logic map shows why it is reasonable to expect the Making Connections programme to deliver the strategic impacts.

Figure 2-29 – Simple Logic Map



Cause and Effect

2.8.10. This section explains in more detail why the Making Connections programme is expected to achieve its objectives. It identifies all the elements of the programme and considers the most likely chains of cause and effect that should, eventually, lead to achievement of the objectives.

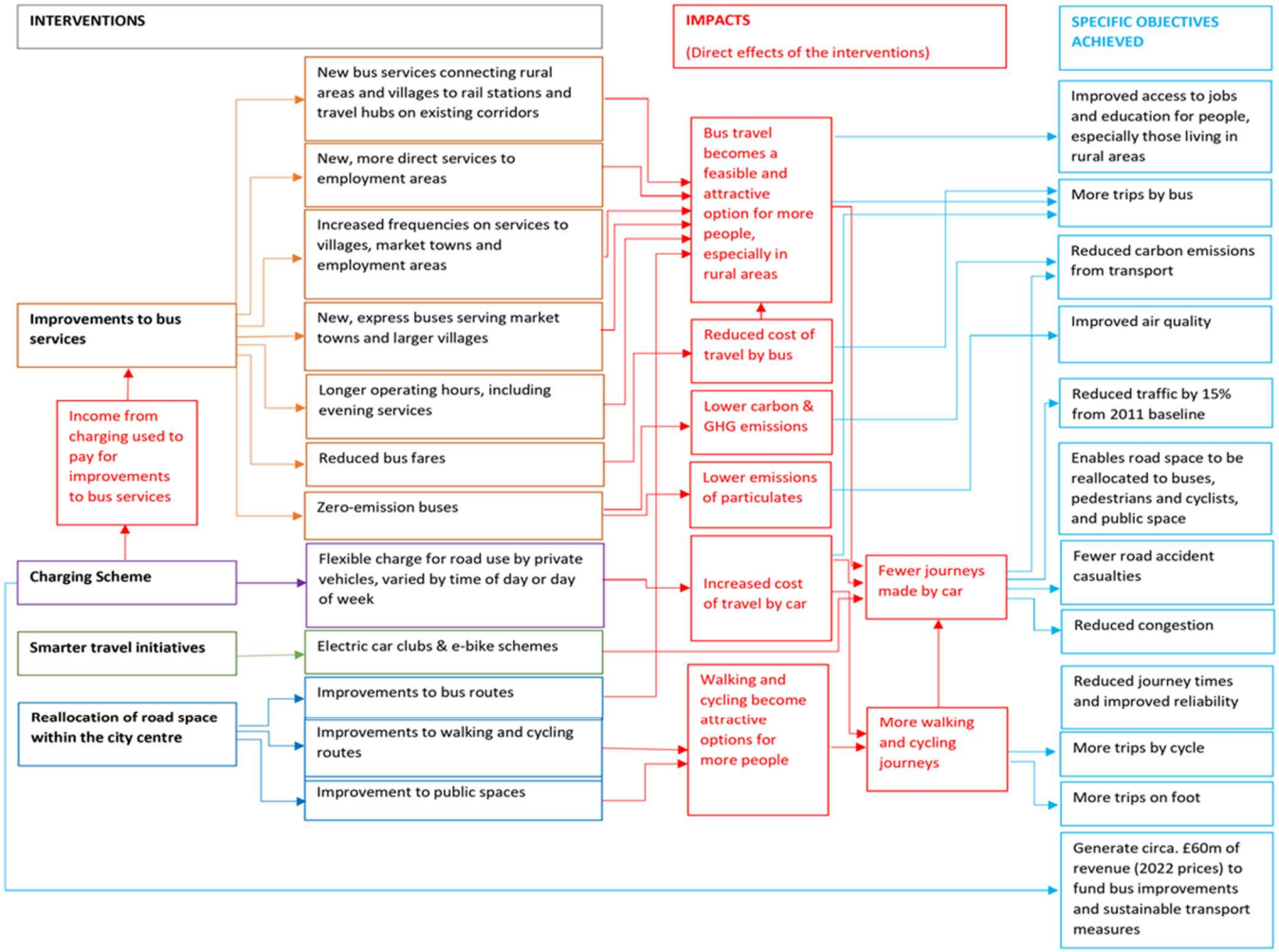
2.8.11. The results are set out in Figure 2-30 in the form of a causal chain diagram. Whilst it may appear complicated, each of the individual links is simple and logical. For example, “providing more direct bus services to villages, market towns and employment areas” is very likely to “make bus travel a more attractive option for people living in rural areas”. This, in turn, is likely to lead to “more trips by bus” and “improved access to jobs and education for people living in rural areas”. It would also lead to “fewer trips by car”, and therefore contribute towards the other benefits that depend on traffic reduction.

2.8.12. At the heart of the Making Connections programme is a simple feedback loop. The charges for road use are re-invested into better bus services and other sustainable transport improvements. As already seen, this creates a dis-incentive to drive in the city and an incentive to travel by bus and active modes, all of which help achieve the programme’s objectives. However, a reduction in car use would also mean less income from charging, so the success of the programme would depend on choosing a charge level and charging regime which would optimise the net benefits.

2.8.13. The same principle applies to investment in better bus services and other elements of the Making Connections programme. In most cases, the resulting increase in bus trips should produce more revenue from fares, reducing the overall cost. However, a reduction in fares

on some services could reduce fares income unless balanced by an increase in bus trips. Again, the success of the programme would depend on finding the level, and pattern, of support which optimises the benefits.

Figure 2-30 – Causal Chains



2.8.14. As the causal chain diagram shows, all the elements of the Making Connections programme would work together to help achieve the programme's defined objectives.

2.8.15. By tracing the lines of cause and effect through the diagram, it is possible to see which elements of the programme are likely to contribute to the achievement of any given objective. Similarly, it is possible to see how any given programme element contributes to the achievement of one or more objective.

2.8.16. It can be difficult to directly measure the achievement of strategic objectives, and even more difficult to directly attribute this to a specific project or programme. This is because numerous external factors would also have impacts on such issues as economic growth, CO2 levels or health. However, almost everything else in the causal chain diagram is quantifiable and measurable, especially the achievement of the "specific objectives" which, as explained in Section 2.6.8, have been designed to be SMART. This would give confidence that the programme is contributing towards achievement of the strategic and specific objectives.

Forecasting the Impacts of the Programme

2.8.17. Forecasts of key indicators such as traffic volumes, journey times, mode choice, costs, revenues, economic benefits, carbon emissions, air quality and accidents, have been used to:

- Identify the best performing options
- Show that the preferred programme would achieve its strategic and specific objectives
- Show that the preferred programme offers value for money
- All these indicators can be forecast using the traffic and economic models

2.8.18. The project OAR, which can be found in Appendix A and is summarised in Section 0, defines measures appropriate for evaluating the effectiveness and impact of the Making Connections programme. The following measures have been considered and details pertaining to their measurement can be found in the Monitoring and Evaluation Scoping Report (see Appendix D):

- **Increased Public Transport Usage:** Monitoring the number of passengers using public transport services within the Programme coverage area. Compare this data to the baseline figures to assess the scheme's ability to encourage modal shift from private vehicles to public transportation.
- **Reduced Congestion:** Measure the impact of the scheme on traffic congestion by evaluating changes in average travel times and delays along key routes. This data would help assess the effectiveness of the scheme in improving overall traffic flow.
- **Improved Air Quality:** Monitor air quality indicators, including levels of nitrogen dioxide (NO2) and particulate matter (PM), in the scheme area. Comparing these measurements with baseline data would determine the extent to which the scheme contributes to improved air quality.

- **Enhanced Accessibility:** Evaluate the scheme's impact on improving accessibility for different user groups, including people with disabilities and those from disadvantaged communities. Assess changes in accessibility indicators through a mix of quantitative outputs and attitudinal surveys, such as the number of accessible transport options and the reduction of barriers to travel.
- **Increased Active Travel:** Monitor the number of pedestrians and cyclists within the scheme's coverage area. Assess changes in mode share for active travel to evaluate the programme's effectiveness in promoting sustainable modes of transportation.
- **Incidence of Road Traffic Collisions:** Obtain data from Cambridgeshire County Council for the Programme's coverage area and identify trends, including changes in the frequency and severity of collisions over time, before and after the implementation of the scheme to assess its impact.

2.9 Strategic Assessment of Options

2.9.1. This section provides an overview of the options development and sifting processes that have taken place as part of the Making Connections programme; detail of these processes are set out in the OAR in Appendix A.

2.9.2. The OAR fulfils the requirements set out in Steps 1 to 8 of the DfT's Transport Appraisal Guidance (TAG) - The Transport Appraisal Process. An initial OAR was published in 2022 in advance of the SOC. The updated version continues the story beyond the 2022 consultation so that the full options development process is covered in a single document.

Multi-Criteria Analysis Assessment Framework

2.9.3. To ensure that the potential Making Connections options address the programme objectives adequately, and that the success of the programme could be monitored effectively in the future, a Multi-Criteria Analysis Assessment Framework (MCAF) has been developed. The MCAF development process involved adding assessment criteria to the specific objectives, set out above, to make them SMART.

2.9.4. The MCAF has been developed using information gathered from the initial BIA, EqIA and other impact assessments; this comprised baseline data updates, high-level analyses based on qualitative information, and quantitative outputs where available. Feedback gathered from the autumn 2022 Making Connections public consultation has also fed into several impact assessments. The MCAF is set out in the table below and the methodology for the options analysis is outlined in the Appraisal Specification Report (ASR) and presented in the Options Appraisal Report (OAR).

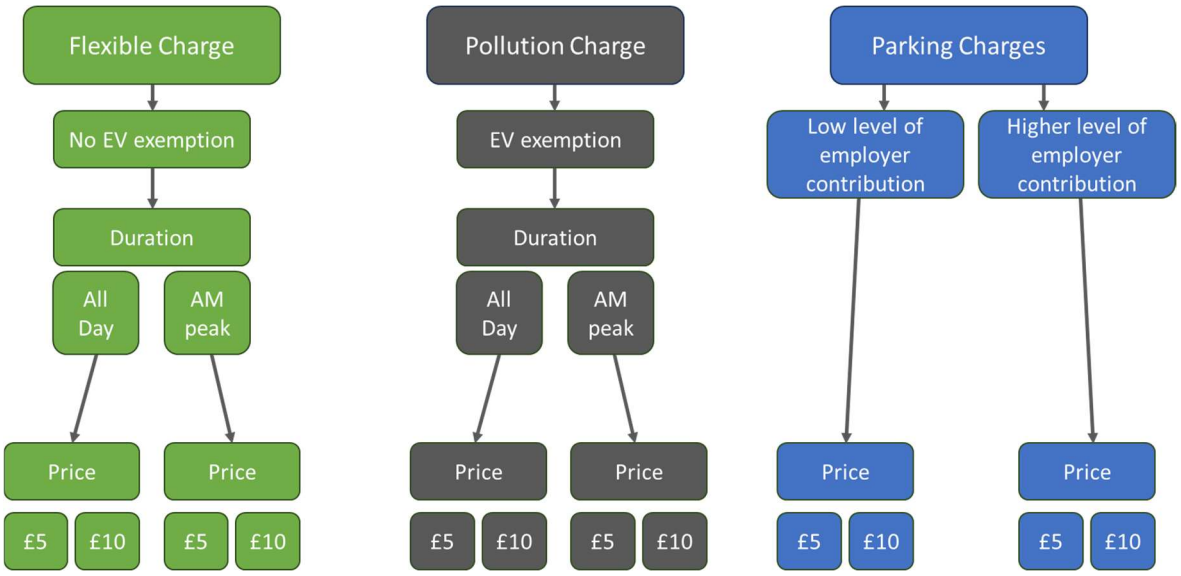
Table 2-7 – MCAF Criteria Based on Strategic Objectives

Link to Strategic Objectives	Themes	Assessment Criteria
To support decarbonisation of transport and improvements to air quality	Environmental	Impact on net GHG emissions
		Local air quality impacts
		Noise impacts
To contribute to the GCP objective to reduce traffic by 15% from the 2011 baseline, freeing up road space for more public transport services, and other sustainable transport modes	Congestion	Impact on traffic flows
To support decarbonisation of transport and improvements to air quality		Journey time impacts
To ensure public transport is more affordable, accessible and connects to where people want to travel, both now and in the future	Sustainable Travel	Public transport
		Connectivity to key employment areas
To make it safe and attractive to walk and cycle for everyday journeys		Sustainable transport measures
To raise the money needed to fund the delivery of transformational bus network changes, fares reductions and improved walking and cycling routes	Deliverability	Scheme complexity
		Scheme enforceability
		Timescale (programme) impact
		Deliverability
		Revenue generation
To make Greater Cambridge a more pleasant place to live, work travel or just be	Quality of Life	EqIA impacts
		Social and distributional impacts
To make it safe and attractive to walk and cycle for everyday journeys		Impact on road traffic collisions
		Business impacts

Pre-Sift

2.9.5. A pre-sift took place to establish three charging scheme options, namely, a flexible charge, a pollution charge and a parking charge. Each type of charge had associated sub-options shown in Figure 2-31.

Figure 2-31 – Charging Scheme Options



Sifting in 2022

2.9.6. The purpose of the sift was to assess the ten selected charging options, using outputs from the CSRM, against the Making Connections strategic aims and objectives. The OAR provides a detailed assessment of the following ten options:

- Sustainable Travel Zone Charge
  - 2026 City Access A £5
  - 2026 City Access A £10
  - 2026 City Access A £5 AM only
  - 2026 City Access A £10 AM only
- Pollution Charge
  - 2026 City Access A £5
  - 2026 City Access A £10
  - 2026 City Access A £5 AM only
  - 2026 City Access A £10 AM only
- Parking Charge
  - High level of Workplace Parking Levy passed on; and
  - Lower level of Workplace Parking Levy passed on.

2.9.7. The analysis demonstrated that the higher the charge and the longer its hours of operation, the greater the level of traffic reduction and revenue generation. This, however, needed to be balanced against the wider policy objectives and outcomes of Making Connections.

2.9.8. Findings from the analysis on the three road user charging options were considered and incorporated into the recommendations to the Greater Cambridge Partnership Joint Assembly held in September 2022. The outcome built on sifting undertaken against the strategic objectives of Making Connections and feedback from the 2021 consultation.

2.9.9. A core option of a £5 road user charge applied 7am-7pm on weekdays, was recommended to, and accepted by, the Joint Assembly and Executive Board in 2022; this option was subsequently taken forward in the SOC alongside the proposed improvements to bus services and sustainable transport measures. This core option of a base £5 road user charge was also the basis of the consultation held in Autumn 2022, the response to which has informed the development of this OBC.

Sifting in 2023 – Developing Options

2.9.10. The recommended core option from the 2022 sifting exercise went to public consultation in late 2022 to seek feedback on the proposed enhancements to public transport services, wider sustainable transport investment, and the STZ charging parameters and rules.

2.9.11. More detail on the consultation responses, and how they informed the options development process, is provided in the OAR in Appendix A.

Further Option Development

2.9.12. The options development work undertaken in 2023 approached the optimisation of the consulted proposal in a logical order, and categorised findings from the consultation into the following two groups for separate assessment:

- **Changes to the scheme parameters,** such as (but not limited to) changes to the hours, opening year, phasing, charge rate and boundary location of the STZ; and
- **Changes to the scheme rules**, such as changes to discounts, exemptions, reimbursements, and users accounts.

2.9.13. Consideration of potential changes to the parameters or rules was mainly based on the potential of individual changes to balance their ability to:

- Address consultation feedback and learnings from other early-stage assessments; and,
- Maintain benefits and deliver objectives.

2.9.14. At this stage the following changes to scheme parameters were considered:

- **Reducing the hours of operation**: many respondents felt the proposed STZ charging hours would not allow people to move around at times of lower congestion;
- **Phase in the STZ over a longer period**. The consultation proposed beginning to gradually phase in the STZ, by introducing peak hour charging ahead of all-day charging over a period of two years;
- Making minor alterations to the hours of operation, such as finishing the charge earlier to enable a number of social, leisure, shopping and caring trips to happen outside of the hours of charging; and

- **Reduced charge rates:** reducing the charge rate for all types of vehicles was raised as one of the issues that has the potential to change people's opposition to the zone.

2.9.15. The following changes suggested during the consultation were also considered in the options assessment, but were not taken forward due to a lack of alignment with the programme objectives:

- Reducing the size of the STZ zone to the city centre only; and
- Removing Cambridge University Hospitals site from the zone.

2.9.16. The analysis supporting the decision for not taking these changes forward is provided in Section 7 of the OAR. In summary, the OAR notes that the city centre accounts for only approximately 15% of traffic on the city network so a STZ zone of that scale would not address the congestion problem. The OAR also notes that the Cambridge Biomedical Campus (CBC), on which the hospitals are located, is a large and growing traffic generator. Removing the CBC from the STZ area would raise several practical and policy issues but the possibility of exempting all hospital patients and their visitors as an alternative – a 'virtual' removal – could be explored further as a potential additional discount or exemption (see scenarios discussion below).

2.9.17. In addition to these wider, area-based, considerations as part of the next phase of scheme development, consideration would also be given to localised amendments to the boundary of the STZ to reflect specific local issues such as farm accesses. Appendix U outlines boundary issues that were raised during the public consultation and proposed approaches to address these concerns.

2.9.18. Changes to scheme rules were also explored, which mainly related to changes to discounts, exemptions, and reimbursements (DERs). The potential DERs identified and considered since the 2022 public consultation are shown in Table 2-8. Additionally, several areas are recommended for further consideration as part of the next stage of works, as set out in the OAR:

- Removing charges for mopeds/motorbikes;
- Consider business impacts research and consultation feedback around HGV and LGV charge; levels and how these could be refined;
- To consider if there is a mechanism for giving discounts to unpaid carers in receipt of benefits;
- To continue to consider discounts for charity volunteers and community groups; and,
- To further consider the impact on residents near the edge of the STZ boundary.

Table 2-8 – Discounts, Exemptions and Reimbursements (DERs)

When DERs were Considered	DER
Identified for consideration at consultation	• Emergency vehicles • Military vehicles • Disabled tax class vehicles • Dial-a-ride services • Breakdown services • Blue badge holders • Certain local authority operational vehicles • Car club vehicles (official providers) • People on low incomes • NHS staff • NHS patients • Other essential emergency trips • Other emergency services staff • Minibuses and LGVs used by charities and not-for-profit groups • Social care, community health workers and Care Quality Commission registered care home workers • Registered bus services • Hackney Carriageway (Taxis) and private hire vehicles
Additional groups considered for DER's post consultation	• Small Medium Business Enterprises (SME) • Access to hospitals and healthcare (patients and visitors, and eligible staff parking) • Free days • Residents living near to the boundary travelling outbound • Unpaid carers • Goods vehicles • Residents • Groups that can't use public transport for specific reasons

Formulating Scenarios

2.9.19. The sifted potential alterations to the charge scheme parameters and rules were combined to formulate new scenarios for the STZ of Making Connections. The scenarios are set out in Table 2-9. The new options were created with the aim of balancing the consultation feedback against the programme's ability to achieve its defined objectives.

2.9.20. Including the consultation proposal, the new scenarios represent the culmination of all options development since 2015. The options are intended to offer a new baseline for further assessment going forward.

Table 2-9 – Four Refined Scenarios along with the Consultation Proposal and 'Do Minimum'

Options	Charge	Time	Implementation Date	Additional Discounts (to those consulted on)
Consultation Scheme	£5 for cars £10 LGV £50 HGV	7am-7pm weekdays	AM only 2026	
Scenario 1	£5 for cars £10 LGV £50 HGV	AM/ PM weekdays	No – starts 2027	Hospitals (patients and visitors) Small vans as cars
Scenario 1A*	£5 for cars £10 LGV £50 HGV	AM/ PM weekdays	No – starts 2027	SME business discount 50 free days indefinitely
Scenario 2	£5 for cars £10 LGV £50 HGV	7am-7pm weekdays	AM only 2026	180 Free days 2026, 2027 100 Free days 2028 50 Free days 2029
Scenario 3	£3 for cars £10 LGV £50 HGV	AM / PM weekdays	No – starts in 2027	Hospitals (patients and visitors) 100 Free days 2027 100 free days 2028
Do Minimum	Ref Case			

* Scenario 1A was developed as a response to the conclusions emerging from the Business Impact Assessment and the desire to understand the impact of keeping free days indefinitely. It has only been financially assessed to keep the appraisal proportionate.

2.9.21. All scenarios in the table above additionally include the full range of discounts, exemptions and reimbursements (DERs), which are shown in Table 2-8. Full details of the tested DERs are included in Section 7 of the OAR in Appendix A.

2.9.22. The scenarios presented in Table 2-9 would generate different levels of revenue and therefore support different levels of bus and STM improvements. Illustrative bus scenarios have been developed to complement these scenarios.

2.9.23. The scenarios were assessed using a MCAF to measure how well they addressed the scheme objectives. A summary of the MCAF scores is provided in Table 2-10 – Summary of Assessment and a full version of the detailed scoring evidence is provided in the OAR.

Table 2-10 – Summary of Assessment

Scenario	Environmental	Congestion	Sustainable Travel	Deliverability	Quality of Life	Revenue*	Total
Consultation proposal	6	6	11	-1	5	3	30
Scenario 1 Peak only proposal	3	6	5	-2	3	2	17
Scenario 2 Consultation proposal + free days	6	6	11	0	5	3	31
Scenario 3 Minimalist option	3	5	4	-2	1	1	12
Do Minimum	Reference case used to compare scenarios against in OBC						

*Note: Revenue is part of deliverability but had been presented in its own column as it is an important aspect to consider. Deliverability has been adjusted to exclude revenue here to ensure there is no double counting.

2.9.24. The analysis demonstrates that all the scenarios have positive impacts in terms of congestion and environmental benefits. All scenarios also deliver the funding necessary to facilitate a transformation of the bus network and the introduction of sustainable travel measures.

2.9.25. The level of funding generated, and scheme benefits delivered is, however, dependent on whether a scenario has peak hour or all day STZ charges, and the extent of any additional DERs.

2.9.26. The results of the MCAF appraisal suggest that all three new scenarios, alongside the consultation scheme, have potential merit in terms of their strategic impact. Therefore, all scenarios have been taken forward for more detailed assessment in the Economic Dimension of this OBC.

2.9.27. In response to the emerging work on the BIA, a variant of Scenario 1 was developed. Post-MCAF, Scenario 1A was built upon Scenario 1 to include a targeted discount for locally-owned SMEs.

2.10 Risks and constraints

2.10.1. The management of risk and uncertainty is key to the successful delivery of the Making Connections programme, as it identifies threats to project delivery and enables effective risk management actions to be assigned. The approach to the management of programme risks, including details of the GCP's Risk Management Framework, is set out within the Management Dimension.

2.10.2. The key risks to achieving the Programme's objectives, as identified as part of the Outline Business Case, are associated with social acceptance, economic and human resources, traffic and congestion impacts and wider dependencies on other projects and programmes. The risks include, but are not limited to:

- **Legal challenges** to the scheme (e.g. Judicial Review) result in delays or cancellations to the scheme.
- **Inadequate bus network improvements:** the bus network improvements are not sufficiently attractive and/or believed to be deliverable, there are delays to the delivery of bus network improvements, or the improvements are not deliverable due to funding constraints. This could result in a disproportionate penalisation of vulnerable groups in society.
- **The impact of the Sustainable Travel Zone on traffic flows is too low or high.** The STZ either fails to generate enough revenue to fund the wider Making Connections package or does not reduce traffic enough to alleviate congestion to the desired level.
- **Unintended traffic consequences:** the potential impacts on the network due to the displacement of traffic, displacing negative outcomes to other areas of Greater Cambridge.
- **Lack of public acceptance:** the scheme is perceived as having too negative an impact, particularly in current cost of living crisis, resulting in significant objections.
- **Economic resources and delivery teams constraints:** the potential lack of adequate economic and people power to fund and run the implementation of the Programme.

2.10.3. A programme risk register has been developed and is being updated throughout the life cycle of the Programme; the Management Dimensions explores, in further detail, the potential consequences and mitigations of the programme risks.

2.10.4. Whilst it is considered that each option broadly faces the same risks to programme delivery and operation, the likelihood and impact of each risk varies between each option. The primary driver for this variation is differences in the proposed STZ charge and hours of operation.

2.11 Stakeholders' Views and Requirements

Consultation on Making Connections Proposal

2.11.1. Stakeholder Engagement for the Making Connections programme is managed by the project's Communications and Engagement Team; details of these arrangements are set out in the Management Dimension.

2.11.2. The engagement process is summarised in the following subsections and documented within the latest Consultation Report.

Summary of Previous Consultations

2.11.3. In 2017 the GCP hosted 'Our Big Conversation', a public consultation designed to help shape its Future Investment Strategy. The consultation found that respondents wanted affordable, clean and practical transport solutions that offer alternatives to private vehicles and that there was a need to reduce or discourage car use, particularly within the city centre.

2.11.4. Our Big Conversation was followed in 2019 by the Choices for Better Journeys consultation and the Greater Cambridge Citizens' Assembly, which considered public transport, congestion and air quality issues. Notably, in the Choices for Better Journeys consultation, 82% of respondents supported GCP's vision to significantly improve public transport and 81% chose a 'traffic-reducing measure' as their first choice for both funding public transport and reducing congestion.

2.11.5. In September 2021, the GCP Executive Board agreed to develop a final package of options for improving bus services, expanding the cycling-plus network and managing road space in Cambridge. The Board agreed on a roadmap commencing with a public consultation (8 November to 20 December 2021) setting out proposals for improvements to the bus network and measures to prioritise road space for sustainable transport.

2.11.6. The public was also invited to suggest options to fund ongoing sustainable transport improvements, either via increased parking charges and a Workplace Parking Levy, a pollution charge or a road user charge.

2.11.7. The consultation survey received 2,369 responses and a further 72 responses were received by email. The key findings were as follows:

- 78% of respondents supported proposals to create a bus network with cheaper, faster, more frequent, and reliable services;
- 71% supported the overall aims of reducing carbon emissions, tackling pollution and congestion;
- 68% supported reducing traffic to improve walking and cycling options; and
- 52% supported reducing traffic to improve public spaces.

2.11.8. The consultation included focus groups, and workshops with Citizens Assembly members, which shadowed the strong support for delivering a transformation of bus services, as

envisaged in the 'Better buses for all' package, as well as taking action to tackle congestion and pollution and improve active travel.

Public Consultation 2022

2.11.9. Between 17th October 2022 and 23rd December 2022, GCP sought views on the Making Connections proposals to make public transport, cycling and walking more attractive. The consultation also considered ways to reduce traffic and raise the additional revenue needed to support sustainable transport solutions. The full findings of this public consultation are reported in detail in the 'Making Connections 2022 – Consultation Report' which was published on 26th May 2023.

2.11.10. The consultation sought views on the following measures:

- Transforming the bus network
- Investing in other sustainable travel schemes
- Creating a Sustainable Travel Zone

2.11.11. The consultation proposal package also sought a view on a list of proposed discounts, exemptions, and reimbursements, which were informed by the previous consultation and engagement with key stakeholders in Autumn 2021.

Response Demographics and Stakeholder Groups

2.11.12. In total, there were 24,071 responses to the consultation, which was supplemented by 894 emails, 10 letters, 149 organisation responses and 2,176 comments on GCP social media posts related to Making Connections.

2.11.13. In addition, stakeholders provided feedback in a range of ways including meetings, workshops, focus groups and other relevant events on the GCP 'Making Connections' proposals.

2.11.14. The stakeholders included people from the Greater Cambridge Citizens' Assembly which first took place pre consultation in 2019.

2.11.15. The other stakeholders have been categorised into six categories. The full list of stakeholders is shown below in Table 2-11.

Table 2-11 – Stakeholder Groups

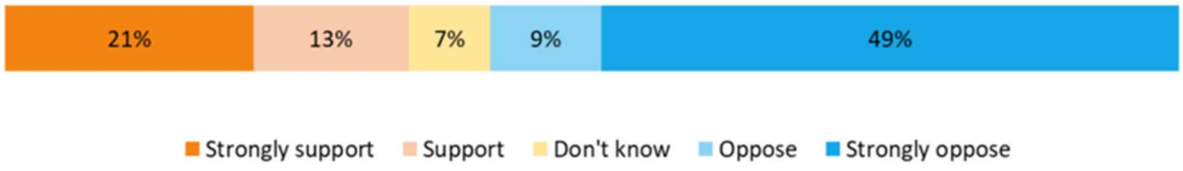
Category	Groups
Transport & Environment	Cycling UK Campaign for Better Transport Living Streets Transport for All Sustrans
Businesses	Logistics UK Federation of Small Businesses Cambridge Chamber of Commerce Cambridge Taxi Trade Cambridge Market Traders AICES International Express
Education & Young People	Anglia Ruskin University & Students Union Centre 33

	Cambridge Youth Panel Cambridge Secondary Heads Assoc University of Cambridge Student Union Cambridge Regional College Long Road Sixth Form College Hills Road Sixth Form College University of Cambridge Staff
Health Care, Social Care & Informal Care	NHS Comms Cell (Cambridgeshire and Peterborough Combined Care) Caring Together Community Transport Cambridge Biomedical Campus: Workforce, Travel and Transport Briefing Community Transport Providers – Dial-a-ride and Car Schemes Healthwatch Cambridgeshire and Peterborough – Older People's Partnership Board Asthma and Lung UK Cambridge Biomedical Campus Exemptions Workshop East of England Ambulance Service Cambridgeshire Search and Rescue Rosie Maternity Hospital (Addenbrooke's CUH) SERV Suffolk and Cambridgeshire Age UK Cambs and Peterborough Taxi Forum
Community Sector	Cambridge City Council Community Services Citizens Advice Bureau Cambridge & District Cambridge Women's Resource Centre Cambridge Council for Voluntary Services Rape Crisis
Disability Groups	Transport for All

Creating a Sustainable Travel Zone

2.11.16. In total, 58% of respondents to the consultation were opposed (9%) or strongly opposed (49%) to the introduction of a Sustainable Travel Zone to fund improvements for bus services, walking and cycling. In contrast, the consultation revealed that 34% of people supported (13%) or strongly supported (21%) the introduction of a STZ to fund in contrast, 58% of people were opposed (9%) or strongly opposed (49%) to the STZ.

Figure 2-32 – To what extent do you support or oppose the introduction of an STZ to fund improvements to bus services, walking and cycling?[121]



- Support by age:
  - The greatest support for the STZ was among younger age groups, with 61% of those in the 16-24 age bracket and 45% in the 25–34 age bracket either supporting or strongly supporting the STZ.

[121] Greater Cambridge Partnership (2023). *Making Connections 2022 Consultation Report, May 2023*

  - Levels of support generally decreased in older age categories; for example, 28% of people supported, and 64% opposed the STZ in the 55-64 age bracket.
- Support by location:
  - 46% of Cambridge residents support (15%) or strongly support (31%) the STZ;
  - 31% of South Cambridgeshire residents support (14%) or strongly support (17%) the STZ;
  - Overall, the support for the STZ in Cambridgeshire stood at 40% (25% 'strongly support' and 15% 'support'), whilst 54% opposed the proposals (44% 'strongly oppose' and 10% 'oppose').
- Hours of operation:
  - The most common response was that the proposed operating hours (0700-1900 Monday to Friday) of the Sustainable Travel Zone were too long;
  - 3,913 respondents said that the operating hours should be reduced, whilst 740 respondents supported the proposed operating hours (0700-1900, Monday-Friday).
  - 2,614 comments expressed general opposition to the STZ;
  - 1,438 respondents said that the STZ should apply to peak hours only; and,
  - 895 respondents stated that the STZ should operate 7 days per week.
- STZ Boundary:
  - 4,581 respondents to the questionnaire suggested that the area of the STZ is too large and should be reduced;
  - 2,850 respondents said that certain locations should be excluded from the zone; and,
  - 1,418 respondents argued that it was unacceptable to pay to access essential services that were located inside the zone; Addenbrooke's Hospital was mentioned frequently.
- Discounts, exemptions and reimbursements
  - 1,836 people stated that the exemptions did not go far enough;
  - 1,446 respondents commented that public sector employees should be exempt from the charge;
  - 1,213 respondents argued that discounts should not be offered to anyone; and,
  - 1,117 stated that residents should exempt from the charge.

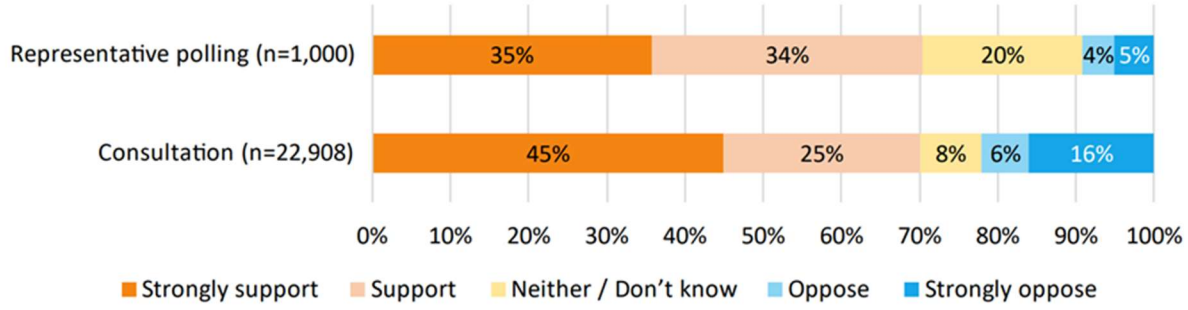
Transforming the Bus Network – Bus Improvements

2.11.17. The majority of responses across the consultation survey, the opinion polling, stakeholder responses and the targeted meetings were in agreement that the bus network across Greater Cambridge is in need of improvement and were supportive of the vision set out.

2.11.18. The responses received from the questionnaire indicated strong support for bus improvements from respondents: 45% strongly supported the plans, and 25% supported the plans. The results in the demographically representative poll indicated that overall support

was broadly similar, however, the poll had fewer opposing responses when compared to the consultation questionnaire responses.

Figure 2-33 – To what extent do you support or oppose the proposals for bus improvements and fare reductions?[121]



Sustainable Travel Measures

2.11.19. There was strong support for the proposed sustainable transport improvements with an average of 75% of people, across all the proposed measures, being either 'strongly supportive' or 'supportive' of the proposals. The exception to this was car clubs where 40% of respondents said they do not know whether they support proposals.

2.11.20. The most popular measure was making the city more accessible for disabled people and those with additional mobility requirements. When asked what additional measures they would most like to see funded, the most common comment received in the consultation questionnaire was to improve cycling infrastructure.

Refined Scenarios

2.11.21. In summary, although there was general support for the bus-based and other sustainable transport measures, the greatest number of comments received related to the STZ; these focused on its operation, level of charge, geographic extent, time of day, and potential exemptions. As noted in the Strategic Assessment of options section above, a number of refined options have now been developed. These options consider the impact of lower levels of charge, shorter hours of operation, and various discounts and exemptions. The impact of these potential changes is set out in the OAR that accompanies this OBC.

What are the key outcomes of the 2022 public consultation and what does this mean for Making Connections?

The majority of responses across the consultation survey, the opinion polling, stakeholder responses and the targeted meetings, were in agreement that the bus network in Greater Cambridge is in need of improvement and were supportive of the vision set out in Making Connections. The responses received from the questionnaire indicated strong support for bus improvements: 45% strongly supported the plans, and a further 25% supported them.

There was also strong support for the sustainable transport improvements, with an average of 75% of respondents, across all the proposed measures, being either 'strongly supportive' or 'supportive' of the proposals.

Overall, respondents did not support the Sustainable Travel Zone (STZ) element of Making Connections. Here, 34% of survey respondents were supportive of the STZ as the means of delivering the vision set out in Making Connections, whilst 58% opposed it.

Support for bus service improvements was comparatively higher than opposition to the STZ. There was also a clear relationship between those who were supportive of the STZ and bus improvements, at a rate of 98%. High levels of support for bus improvements continued with respondents who were 'unsure' of whether they supported the STZ (81% supportive) and even those who opposed the STZ (76% supportive). Support for the bus improvements only fell below 50% when looking at respondents who 'strongly opposed' the STZ (46% supportive).

The results of the 2022 Public Consultation show that the public is supportive of the vision for improved public and sustainable transport provision set out as part of the Making Connections programme. Whilst there is some support for the STZ, the majority of respondents opposed the road user charge proposed as part of the consultation option. These concerns have been reflected in the options development process that form part of this OBC with a number of refined scenarios now defined to assess these.

3 Economic Dimension

3.1 Purpose

3.1.1. This chapter covers the Economic Dimension. As required by the GCP City Deal Assurance Framework (2021), it was prepared in accordance with the Transport Business Case Guidance published by the Department for Transport (DfT) in August 2021 (updated February 2022) and with the DfT's Transport Appraisal Guidance (TAG) and Value for Money Framework[122] published in July 2017 (and then updated in July 2021).

3.1.2. The purpose of the Economic Dimension is to set out:

- The technical approach, specifications, and assumptions upon which the tests and appraisals were undertaken.
- The scenarios tested and appraised.
- The sensitivity tests to show the economic performance of the scheme under a range of assumptions.
- An overall Appraisal Summary Table (AST), along with Transport Economic Efficiency (TEE) table.
- Public Accounts (PA) and Analysis of Monetised Costs and Benefits (AMCB) tables, which includes an assessment of economic, environmental, and social impacts.
- A 'value for money' assessment setting out findings of the Economic Dimension.

3.1.3. The remainder of this chapter gives a summary of VfM findings before providing further details to the following questions:

- What Scenarios were assessed and how they were identified?
- What the economic impacts were captured and how?
- How were the wider range of impacts assessed?
- What are the central forecasts and how their robustness was demonstrated through sensitivity tests?

3.1.4. A Value for Money (VfM) statement is presented at the end to conclude the Economic Dimension.

3.1.5. The Department for Transport's 'Transport Business Case Guidance' outlines elements that should be covered in the Economic Dimension (by the end of OBC stage). The following table indicates where these requirements are met in this document.

[122] Department for Transport (2021). *Value for money framework*

Table 3-1 – Contents of the Economic Dimension

Content	DfT Requirements	Section
Longlist appraisal	assess the longlist of options (outlined in the strategic dimension) to a shortlist of options and identify the preferred way forward	3.3
Methodologies, assumptions and data	set out the methodologies, assumptions and data that have been used to underpin any transport modelling and appraisal	3.4
Social cost-benefit analysis of shortlist	present and explore the main economic impacts associated with the intervention from a UK social welfare perspective	3.6
Distributional analysis	provide distributional analysis to understand the impacts on different social groups	3.6
Place-based analysis	conduct place-based analysis where the proposal has geographically focused objectives or where impacts of national-level interventions may differ spatially (where this is proportionate)	3.6
Wider analysis	any extra analysis which provides useful insight to inform the decision-making process: this could include analysis of the various options' performance against the SMART objectives at the shortlist stage. This analysis should be proportionate and consistent with the strategic dimension	3.5
Value for Money	As per DfT Value for Money guidance	3.2 3.8
Uncertainty analysis	Analysis to understand how changes in different factors affect the value for money of the investment	3.7
Appraisal summary tables	TEE, PA, AMCB and ASTs as per TAG guidance	Appendix S

3.2 Summary of Value for Money

3.2.1. All Making Connections scenarios considered are expected to deliver material behavioural changes that shift travel demand to sustainable transport modes and provide ongoing net revenue to invest.

3.2.2. Technical evidence suggests that Scenario 2 (£5 all day charge) is best performing against the established scheme objectives, particularly in terms of the aspired behavioural changes. It is also recognised that this scenario does not fully address concerns recognised in the Autumn 2022 consultation and financial impacts on business, particularly after the free days offered in the early years phase out.

3.2.3. On the other hand, scenario 3 (£3 peak charge) is the most challenging due to the lower level of revenue forecast in the early years, and therefore has less headroom to offer further discounts such as free days to the public. The forecast behavioural changes, although material, are also the lowest out of all scenarios assessed. This is the result of relatively lower charge proposed, but is also constrained by the limited headroom in the net revenue available to fund more substantial improvements in public transport and active mode measures in order to encourage higher modal shift.

3.2.4. Scenario 1 (£5 peak charge) appears to offer a balanced outcome compared with the other scenarios. The potential positive behavioural changes are not as high as Scenario 1 but still very substantial. Meanwhile, it is able to offer more DERs to address concerns from the

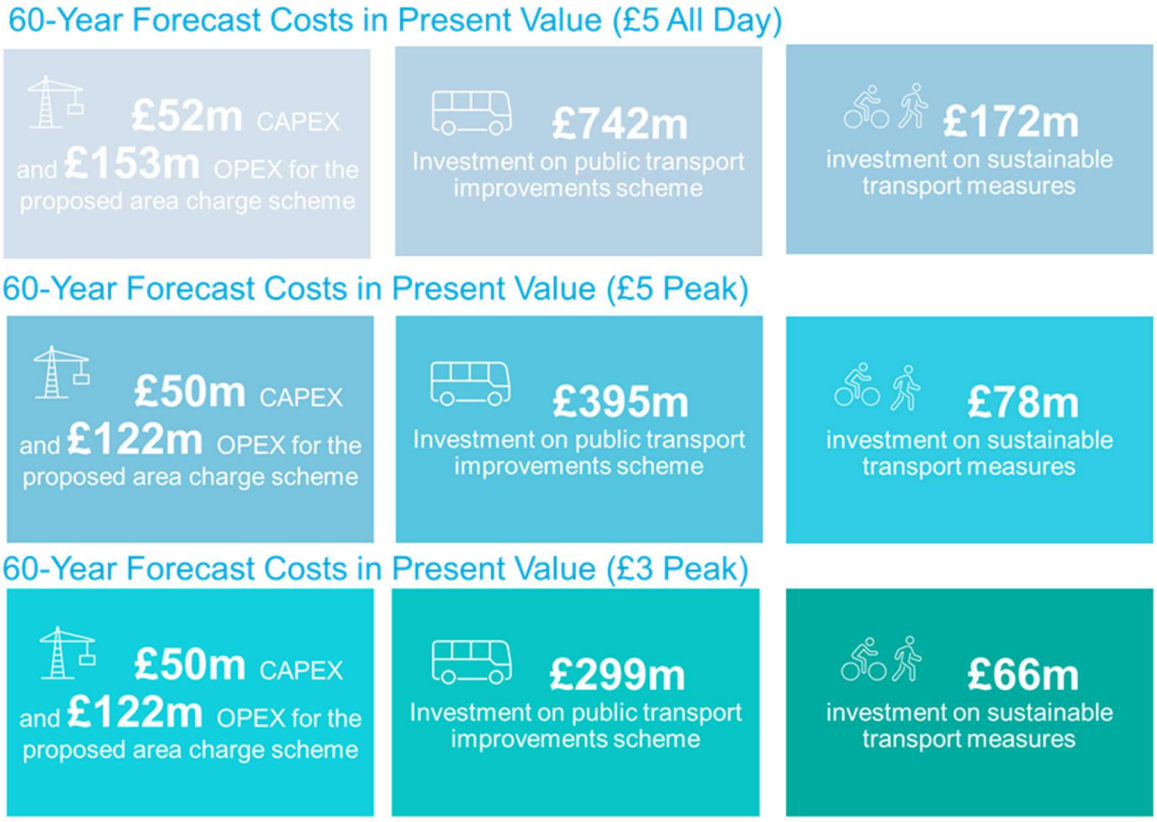
consultation (compared with Scenario 3) and would generate higher net ongoing revenue (than Scenario 3) to invest on public transport and other sustainable transport measures in order to facilitate and safeguard the behavioural changes driven by the proposed area charge.

3.2.5. These findings are underpinned by a cost-benefit analysis based on several distinct, but related, streams of assessment:

- Costs to the public sector – associated with setting up and operating a sustainable travel zone;
- Costs and subsidies associated with transport providers for the improved bus services;
- Costs associated with other sustainable transport measures in the Making Connections programme.
- Whole life costs for all interventions in the scope.
- Transport economic efficiency impacts such as time savings, active mode user impacts, cost savings, area charge user impacts and bus fare user impacts.
- Transport network impacts such as collisions and reliability.
- Environmental impacts.
- Wider economic impacts, focused on quantitative and qualitative evidence; and
- Social and distributional impacts as well as equality impacts.
- Place-based analysis.

3.2.6. In present value terms[123], Making Connections programme was forecast to bring the following impacts over a 60-year period under different scenarios explored in the business case. Each scenario was forecast to generate sufficient revenue income to cover the investment proposed. Further details on the forecast revenue are documented in the Financial Dimension.

[123] Present value term means presenting the financial impacts in 2010 prices and values as per the requirements in DfT's TAG.

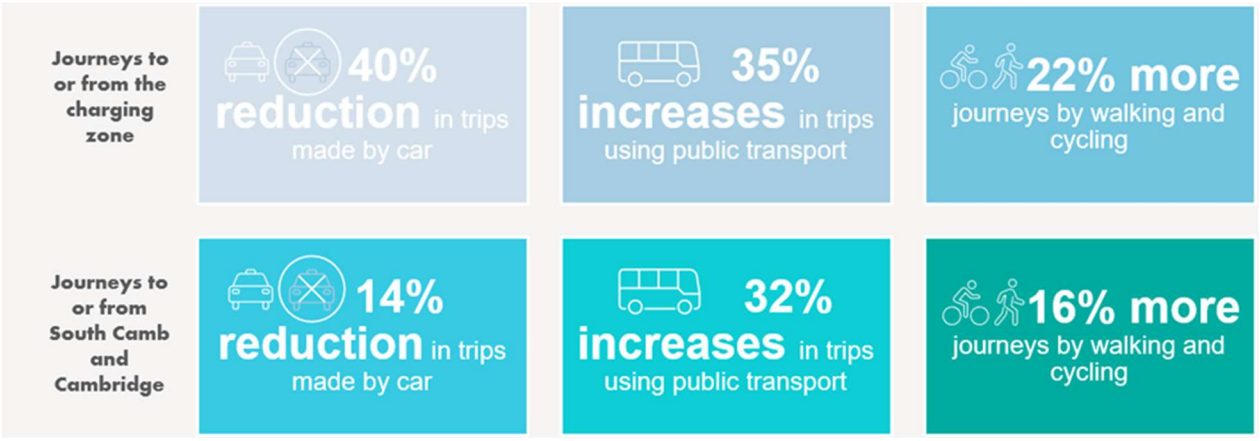


3.2.7. A transformational change to the bus network would be achieved along with other sustainable transport measures aimed at delivering the aspired modal shift[124] to sustainable modes and enabling increased levels of economic growth in the region.

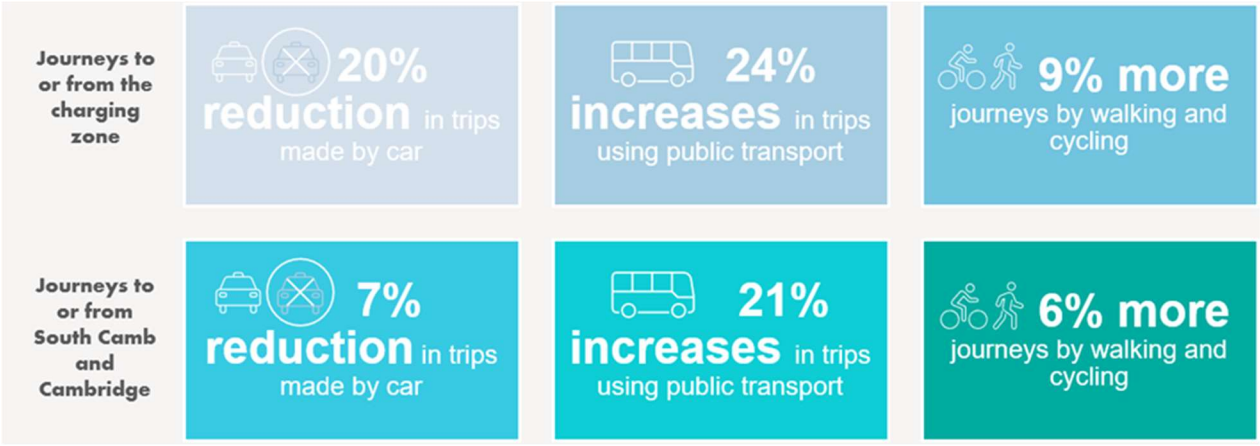
3.2.8. The forecast reduction in car trips would free up significant network capacity for the existing residents, employees, and future growth, but also generate journey time savings for other car and bus users, reduce emissions and lower risks of collisions. Bus users would also benefit from reduced fare, higher frequency in services. Consequently, the increase in bus trips would lead to higher revenues. Increases in active mode trips would also result in benefits from improved health.

3.2.9. The £5 All Day charge scenario was forecast to lead to significant behavioural changes for journeys to or from the charge zone. Widening the geography to also include all Greater Cambridge (i.e., with South Cambridgeshire also included), a similar trend in travel behaviour changes was forecast. Figures represent all-day trip variations.

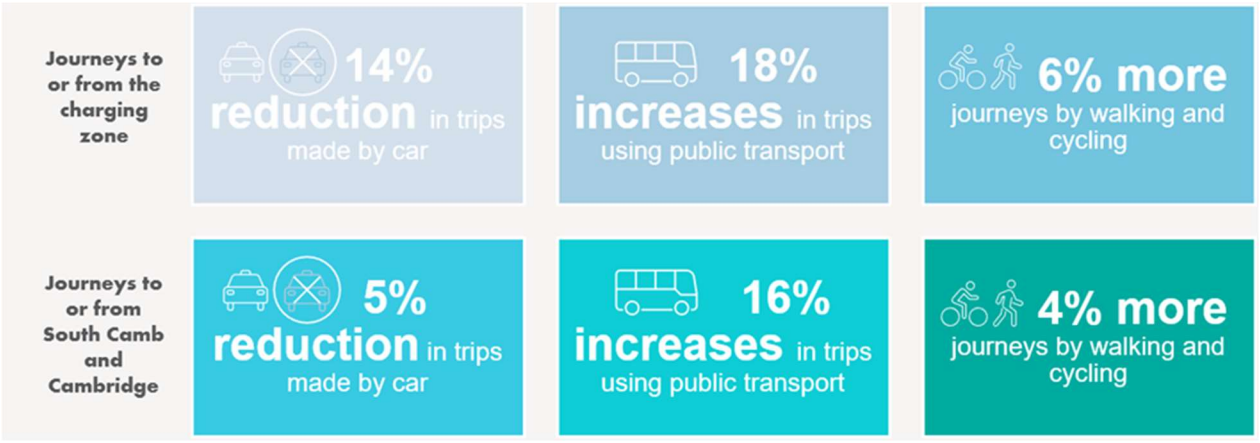
[124] Trips to, from or within the city of Cambridge



3.2.10. The forecast behavioural changes for the £5 Peak charge scenario are slightly less as expected but still substantial.



3.2.11. The £3 Peak charge scenario would bring a lower level of changes but its impacts are still material.



3.2.12. Over the appraisal period, the Making Connections programme is forecast to generate significant benefits to transport users and wider society.


60-Year Forecast Impacts (£5 All Day)
£1bn time savings for car users as a result of decongestion after modal shift
£236m time savings for public transport passengers due to improvements to bus services
£152m savings in vehicle operating costs for transport users.
£393m health benefits due to increase in physical activities through the use of active modes
£150m saving from the reduction in accidents
CO2 £52m saved from the reduced Greenhouse Gas emission
60-Year Forecast Impacts (£5 Peak Only)
£800m time savings for car users as a result of decongestion after modal shift
£118m time savings for public transport passengers due to improvements to bus services
£90m savings in vehicle operating costs for transport users.
£163m health benefits due to increase in physical activities through the use of active modes
£54m saving from the reduction in accidents
CO2 £38m saved from the reduced Greenhouse Gas emission
60-Year Forecast Impacts (£3 Peak Only)
£600m time savings for car users as a result of decongestion after modal shift
£65m time savings for public transport passengers due to improvements to bus services
£65m savings in vehicle operating costs for transport users.
£121m health benefits due to increase in physical activities through the use of active modes
£35m* saving from the reduction in accidents
CO2 £25m* saved from the reduced Greenhouse Gas emission
* Approximated values to be updated upon completion of analysis

3.2.13. In addition to the above monetised benefits, other benefits have been assessed quantitatively or qualitatively. These include the positive impacts from journey time reliability improvements, social and distributional impacts, equality impacts, wider economic impacts, and other environmental impacts.

3.3 Scenario Development and Assessment

3.3.1. The process of scenario identification is described in the Introduction and the Strategic Dimension. Table 3-2 summarises the five scenarios under consideration in the OBC.

Table 3-2 – Scenarios identified in the OAR for further assessment in the OBC

Scenario	Headline Description
Consultation Scheme	7am to 7pm weekdays £5 for cars (per day) AM Peak 2026 All-day scheme from 2027 or 2028
Scenario 1*	AM and PM peaks on weekdays £5 for cars (per day) Hospital visitors and patients free Small vans charged the same as cars
Scenario 2	As consultation scheme 180 free days for first two years of STZ 100 free days for 2028 50 free days for 2029
Scenario 3	AM and PM peaks on weekdays £3 for cars (per day) Hospital visitors and patients free 100 free days 2027 and 2028
Do Minimum	Reference case without Making Connections to compare the performance of the above four against

*Note: Scenario 1A is a variant of Scenario 1 with the addition of free days indefinitely and an SME discount is assessed in the Financial Dimension.

3.3.2. In each scenario, with the exception of Do Minimum, the specifications also include a £10 charge for LGVs and £50 for HGVs (per day). These are the same as the proposal consulted in December 2022.

3.3.3. As explained in the OAR, information in Table 3-2 is termed scenarios instead of options as they are not fully developed at this stage but are intended to set out a range of possible options to incorporate insights gained from the 2022 consultation. By considering the consultation scheme and the option of Do Minimum in the mix, this provides the widest range of options.

3.3.4. These broad scenarios were taken forward for consideration as part of the development of the OBC. Further refinement or alternatives to the parameters were considered in the OBC about scenarios outlined in Table 3-2, such as variations to the ramp-up period during implementation, the distinctions in charges between different vehicle types (higher charges for LGVs and OGVs as an example) or other parameters. Whilst there is initial consideration of Discounts, Exemptions and Reimbursements (DERs) in the scenarios tabulated, these

were refined and developed as part of the OBC development and may continue to evolve beyond as details are finalised for the Full Business Case (FBC).

3.3.5. It is noted that the consideration of many variations or parameters as described above were incorporated through analysis outside of the transport model. These considerations were captured in the Financial Dimension.

3.3.6. The proposed **public transport improvements** have focused on the following areas building on the work in the SOC and OAR:

- Improved services to planned growth and development areas on radial routes into the city.
- Faster and more frequent rural services to villages and market towns.
- Longer operating hours, including evening services.
- Reductions in fare prices to set a flat £1 fare for all trips within Cambridge or £2 for all trips within Cambridgeshire.

3.3.7. These measures are aimed at enabling sustainable development while minimising emissions related to car use.

3.3.8. Three primary public transport scenarios were modelled in OBC development using Cambridge Sub-Regional Model (CSRM2), including the full 'Making Connections' service specification including reduced fare and two reduced specifications (for Scenarios 1 and 3 in Table 3-2 which are expected to provide lower levels of improvement commensurate with the lower net revenue expected).

3.3.9. **Active mode measures**, such as reallocation of road space for active travel, away from car where demand no longer requires existing levels of capacity, aim to make best use of existing infrastructure, and so deliver benefits while minimising costs. Such measures were proposed to complement the planned public transport upgrades and provide more attractive and accessible access/egress between services and key destinations in the city. Provision of measures for active modes were considered largely qualitatively or based on simplified modelling prepared externally to the strategic model, as CSRM2 model captures only the demand side of active mode travel, without any representation of the supply side.

3.3.10. In addition to transport interventions the release of highway space for other purposes and generation of revenue for reinvestment would enable a wider range of measures to be pursued. These may include liveable neighbourhoods, future transport measures such as mobility hubs, e-scooters, e-cargo bikes, freight consolidation, and micro-consolidation. These complementary measures are not suited to representation within CSRM2 and so would be considered qualitatively.

Modelling the Identified Options in OBC

3.3.11. CSRM2 is the primary modelling tool used in the OBC. Details of this model suite and its suitability for this purpose are covered in detail in the ASR.

3.3.12. A Do Minimum (DM) scenario was used as a baseline for transport provision, against which the Making Connections programme was assessed in the OBC. The DM scenario was specified as including Cambridge South Station in addition to a range of GCP's proposed public transport corridor schemes, details of which are set out in the CSRM2 F-Series Forecasting Report. This is a model scenario that has been updated from that used in the SOC. More details of the DM scenario and its associated documentation are presented in the ASR.

3.3.13. Identification of the Do-Something (DS) modelling scenarios was an iterative process, which was described in the ASR. Eight model runs (DS1 to DS8) were proposed but ultimately only a selection was used to represent the consultation scheme and three broad scenarios outlined in Table 3-2 of this report. These include DM, DS1, DS6, DS7 and DS8 as shown in Table 3-3.

Table 3-3 – OBC Model runs for Scenarios Identified

Spec \ Scenario		No Scheme	Consultation Scheme	Scenario 1	Scenario 2	Scenario 3
		DM	DS1	DS6/7	DS1	DS8
		Ref Case	All day £5	AM and PM peaks £5	All day £5	AM and PM peaks £3
Model Years	2026	Y	Y	Y	Y	Y
	2041	Y	Y	Y	Y	Y
Charge period	All Day		Y		Y	
	AM & PM			Y		Y
Charge value*	£5		Y	Y	Y	
	£3					Y
PT Fare	Full	Y				
	Reduced		Y	Y	Y	Y
PT Upgrade	None	Y				
	Reduced			Y (DS6)		
	Reduced v2			Y (DS7)		
	Reduced v3					Y
	Full		Y		Y	

*Note: In each of the above scenarios, except for Do Minimum, the specifications also include a £10 charge for LGVs and £50 for OGVs (per day)

3.3.14. Model runs in the table above aim to represent the permanent state of the proposed interventions as closely as possible, so any interim schemes for early years (such as 2026, 2027 or 2028) that may be required are not captured by model runs presented in this table. Where necessary for the assessment undertaken, these interim schemes were approximated by other model runs or adjustment outside of the transport model, which are introduced subsequently in this report.

3.3.15. Similarly, the designated model runs in Table 3-3 do not fully capture some subtle difference between the broad scenarios in Table 3-2, such as the discrepancies in DERs. These have been accounted for outside of the transport model and their cost and revenue implications were captured in the Financial Dimension.

3.3.16. In the process of OBC development, two model runs (DS6 and DS7) were defined for Scenario 1 in Table 3-3. DS6 is the first run with an approximated public transport specification whilst DS7 is an update with a refined public transport specification deemed more in line with the likely scale of revenue that could be generated by the charging scheme. Therefore, the assessment of Scenario 1 in the current draft OBC was based on DS7 wherever it was possible to do so (such as user impacts assessment with TUBA), but some assessments were based on DS6 output (such as collision impact and wider impact assessment). These would be updated in a subsequent draft when relevant outputs become available. Revisions incorporating inputs from DS7 are not expected to significantly change results relative to those produced using DS6 inputs.

3.4 Economic Appraisal Methodology

Economic Impacts Assessment

3.4.1. Key components of the Making Connections programme are outlined in Section 3.3, which fall into the following three categories:

- Charging scheme
- Provision for public transport
- Provision for active modes and other complementary measures

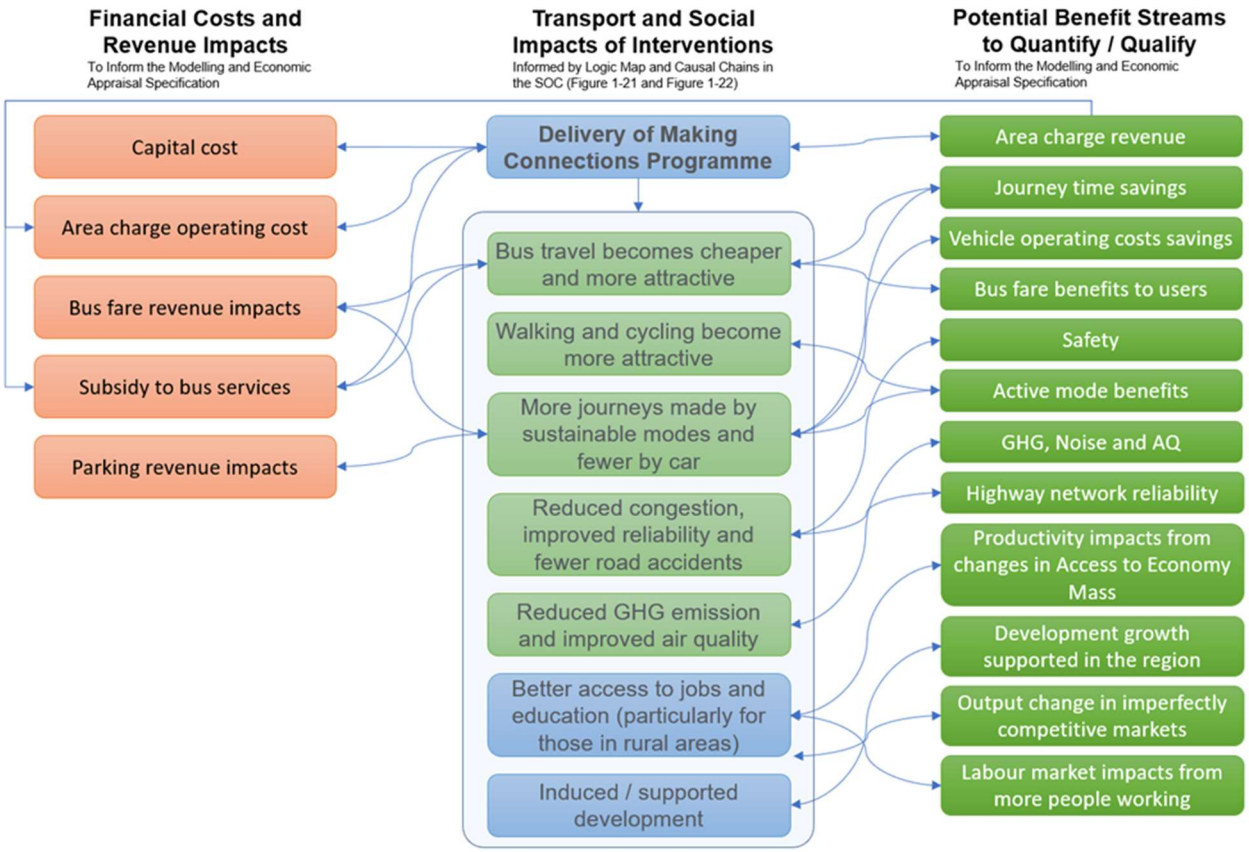
3.4.2. A full range of outcomes and impacts from the Making Connections programme are outlined in the middle column of Figure 3-1. These expected impacts reflect the Logic Map and Causal Chains established in the Strategic Dimension. This ensured the alignment between both dimensions to maintain a common thread between the strategic narrative for the programme and the range of technical evidence that was prepared in the OBC.

3.4.3. The cost and revenue impacts from delivering Making Connections programme and its subsequent impacts are listed in the left column of Figure 3-1, whilst the potential benefit streams are outlined to the right.

3.4.4. Collectively, the range of impacts in the left-hand and right-hand side of Figure 3-1 determined the analytical requirements of the technical evidence developed in the OBC. They shaped these requirements by influencing the scope of technical activities, key assumptions in the process, the fitness-for-purpose of techniques and tools employed in order to ensure the robustness of the findings.

3.4.5. This appraisal considered the potential comparative impacts between the DM scenario and each of the future situation (Do Something scenarios as per Table 3-2), capturing each of the potential impacts covered in the logic chain outlined Figure 3-1.

Figure 3-1 – The Scope of output and impacts from Making Connections



3.4.6. The scope of economic impacts quantified as part of this assessment is summarised below:

- Journey time and cost (for vehicle operating or fare) savings for highway and public transport users, due to decongestion from reduction in car use, bus service improvement and fare reduction. This was assessed in TUBA v1.9.17 in accordance with TAG A1-3. Owing to the structure of the CSRM2 transport model, a bespoke approach has been developed for TUBA assessment to avoid double counting. Details of the approach adopted have been presented in the ASR.
- Active mode user impacts – of those trips choosing not to drive, a large proportion are expected to either walk or cycle, especially for shorter distance trips. Potential impacts such as health benefits and reduced absenteeism from increased physical activities as a result of the forecast changes were assessed with DfT's Active Mode Appraisal Toolkit (AMAT). An appraisal period of 60 years was adopted within the AMAT assessment as the appraisal has accounted for the operational and renewal costs over the entire appraisal period for a scheme that is expected to bring significant behavioural changes.
- STZ charge user impacts and revenues – the charge would provide a financial stimulus for shift towards more sustainable modes, but for those who continue driving this would generate a user disbenefit, which has been considered in the appraisal. This impact is covered as part of the TUBA assessment;

- Safety – A reduction in car use would reduce the number of collisions and their associated economic costs to the society. Benefits arising from the reduced collisions are assessed with the latest version of COBALT following the methodology presented in the ASR.
- Indirect Tax Revenues – As levels of expenditure on tax-free items including the area charge and bus fares are increased, while car operating costs which incur high rates of tax are reduced, tax revenues would change. This is covered in TUBA assessment;
- Greenhouse gases – Reduced fuel consumption would directly lead to a reduction in the emission of CO2 and other greenhouse gases. Methodology for GHG assessment is outlined in the next sub section.
- Noise – A reduction in car travel would reduce noise from traffic, particularly when those trips are instead made by active modes. Methodology for noise assessment is outlined in the next sub section.
- Air Quality – Reduced car travel and congestion in the city would reduce harmful emissions and lead to better air quality and improved health. Methodology for air quality assessment is outlined in the next sub section.
- Reliability – Reduction in congestion would improve journey time reliability for both car and bus users. Increased frequencies of service and service options and better services outside of peak periods would all add further to journey time reliability for bus users. At this stage of assessment only the reliability benefits to car users have been monetised in accordance with the guidance in TAG A1.3 for urban roads. Improvements in reliability of public transport services would be significant but would require a greater level of detail of modelling to quantify these impacts accurately.

3.4.7. The introduction of the area charge increases the cost of travel for car users leading to fewer car trips being made. However, this impact is offset to a degree by the decongestion impacts which make car travel faster.

3.4.8. Improvements in provision of bus services and reduced fare prices also provide stronger competition for the choice of mode of travel.

3.4.9. Increases in park and ride services result in higher levels of car use on specific routes outside of the city but help to further reduce car trips within the area charge cordon.

Revenue

3.4.10. Revenue forecasts were available from the TUBA assessment based on CSRM2 model forecasts. It is noted that these were high-level forecasts for the purpose of VfM assessment and only represent the likely impacts from models runs representing the broad scenarios defined in Table 3-2, focused on the permanent state of the proposed interventions. More detailed assessment of revenue income from different charging options and particularly impacts from the DER offers proposed has been carried out as part of the financial modelling. These findings are presented in the Financial Dimension. They capture impacts from more nuanced analysis of difference between different options and variations in DERs and phasing of the scheme during delivery.

Capital Costs

3.4.11. For appraisal purpose, adjustments for inflation were applied to the estimated base costs based on the consumer price index (CPI) in line with assumptions set out in the Financial Dimension. This nominal inflation has been converted to real growth by removal of background inflation, based on the GDP deflator set out in the TAG Data Book. As expenditure would be primarily on equipment, rather than construction works, CPI provides a reasonable representation of likely cost increases in the future.

3.4.12. Following the consideration of real cost changes over time, all future year scheme costs were rebased to 2010 prices using the GDP deflator. These were then adjusted from factor costs to market prices (a factor of 1.19) and discounted to 2010 present values, in line with TAG A1-2 guidance.

3.4.13. More detailed assessment of capital costs for different Scenarios has been carried out as part of the financial modelling and is presented in the Financial Dimension.

Operating Costs

3.4.14. Operating costs for the area charge equipment and services were estimated on an annual basis, reflecting changes in numbers of trips by vehicle type subject to the charge and changing methods of payment as users become more accustomed to the systems. These costs were prepared from the opening date up to 2036 and assumed to remain stable thereafter, varying only in line with inflation.

3.4.15. The estimated bus operating costs reflect the change in services specified, and ongoing costs for maintenance of bus shelters and operation of CCTV.

3.4.16. As for capital costs, operating costs have been inflated in real terms, converted to 2010 prices, discounted to 2010 and then converted to market prices before being taken into account in the VfM assessment.

Whole Life Costs

3.4.17. In addition to the initial implementation of the proposed interventions and day-to-day operation, regular maintenance and renewal are also required on a regular cycle. These costs were captured, aligned to the operational lifespan of those assets in the VfM assessment.

3.4.18. The application of inflation, discounting, optimism bias and conversion of units for whole life costs has been applied consistently with the treatment applied to operational costs.

Optimism, Risk and Contingency

3.4.19. In addition to the cost adjustments to convert to present values, as outlined above, this appraisal included optimism bias for the Area Charging capital costs. An optimism bias of 23% was used in line with the default value for schemes that fall under the Roads category in Table 8 of TAG Unit A1-2.

3.4.20. Due to the limited infrastructure requirement of the Making Connections programme, the evidence which informed the recommended optimism bias uplift rates for road schemes provided in TAG may not be directly comparable to this investment. Therefore, the default value of 23% was compared against the contingency from a Quantified Risk Assessment (QRA). Guidance in Section 4 of TAG A1-2 was considered to interpret and reconcile the divergence between QRA and optimism bias estimates. The higher value from the optimism bias and the P(mean) from the QRA was applied as an uplift to the base cost forecast in the OBC. In accordance with the guidance, the optimism bias and QRA estimate were not used cumulatively in the VfM assessment.

3.4.21. The QRA indicated an uplift of 7% on the central cost forecasts. As this is the lower of the rates the optimism bias uplift has been used for the central forecast and a sensitivity test has been performed replacing the optimism bias uplift with the QRA forecast.

3.4.22. There are no specific recommended optimism bias uplifts for operating costs in TAG due to insufficient evidence. However, given the high proportion of the costs of the Making Connections scheme which relate to operating costs it has been considered prudent to include an allowance. The study which informed the TAG optimism bias guidance[125] has indicated an average rate of optimism bias in operational costs across a wide pool of case studies of 23%. This uplift has therefore been prudently applied to the operational elements of the PVC for the STZ.

3.4.23. It is noted however that in the longer-term there would be substantial flexibility in ongoing annual investment which can be tailored to align with changes in generated revenue. This would provide substantial mitigation against risks related to changing costs, with available funding determining how much would be spent. Therefore, no optimism bias adjustment has been applied to the costs of bus improvement or sustainable travel measures.

Sensitivity Testing

3.4.24. Assessment of costs, particularly over an extended period of time, always contains an element of uncertainty. A range of sensitivity testing of the impacts of cost variations on the VfM findings has been undertaken, details of which are set out following the central forecast of VfM within the Economic Dimension.

3.4.25. More detailed assessment of the operating costs for different Scenarios has been carried out as part of the financial modelling and is presented in the Financial Dimension.

Bus Operator Subsidy

3.4.26. For the purpose of the VfM assessment, it was assumed that the bus operator would experience no positive or negative net impact on operating margins as a result of this scheme. Over the length of the appraisal period, it was therefore assumed that commercial contracts would be renegotiated to adjust for changing revenues and costs.

[125] Oxford Global Projects report (2020).

3.4.27. As set out in the Commercial Dimension a number of different means of delivery of bus service improvements are available. Therefore, rather than representing these in detail a simplified presentation of bus operating and revenue impacts has been provided.

3.4.28. This approach indicates that all changes to costs and revenue related to bus service and fare changes would be borne by Greater Cambridge Partnership (GCP) and / or Cambridgeshire & Peterborough Combined Authority (CPCA) and so appear as a cost in the Public Accounts, adding to the total Present Value of Cost (PVC) of the proposed scheme.

3.4.29. Different commercial arrangements would result in variations to profit margins for the bus operators, which would cause a shift of value from the PVC to the PVB. However, this would affect the Net Present Value (NPV) of the scheme.

Limitations

3.4.30. Certain limitations exist within the economic appraisal in relation to the assessment of the proposed scenarios and variations in assumptions between the Economic Dimension and the Financial Dimension should be understood for clarity of what each represents.

3.4.31. Each of the scenarios assessed in the economic analysis is based upon a transport model that is strategic in nature. These model runs reflect the core user charge assumption for the proposed times of day and the range of public transport improvements, but the assessment presented in the Economic Dimension does not capture:

- Interim arrangements during the early years of operation. The focus is on the Do Minimum scenario without Making Connections and the final state of each scenario.
- Temporary measures during the early years of operation. The focus is on the difference between the Do Minimum scenario without Making Connections and the final state of each scenario;
- Free days are not represented;
- Discounts for visitors and patients to Addenbrookes or other hospitals are not captured;
- Other DERs and failures to capture license plates are not reflected.

3.4.32. All of the above have been included within the assessment set out in the Financial Dimension and results in that part of the document should be viewed to understand the impact of these measures.

3.4.33. As the transport model does not reflect the more detailed scheme specifications and operational features set out above, these details did not influence the demand forecasting or assignment of trips to the network.

3.4.34. Factors such as inclusion of free days for users would lead to variations in demand from that forecast by CSRM2 which would affect revenue and user disbenefit related to the trips making those free trips, but in turn would also affect the level of congestion on the roads for other traffic, the amount of greenhouse gas emissions, noise and air quality impacts and impacts on other parties such as pedestrians, local businesses and employees.

3.4.35. While it is possible to broadly represent the impacts of the additional scheme specifications on revenue alone in the Financial Dimension, providing an accurate measure of these impacts across all these areas captured within the Economic Dimension could only reasonably be achieved though inclusion of the measures within the transport model. Therefore, for internal consistency, the Economic Dimension excludes these impacts throughout.

3.4.36. It is important to recognise the impacts of this exclusion, however.

- Journey time benefits would be slightly over-estimated, as DERs result in lower levels of traffic suppression and mode shift than are represented in the model;
- Vehicle operating cost benefits would similarly be slightly over-estimated. This benefit relates to fuel savings from decongestion, not to fuel savings for trips which change mode or otherwise choose not to travel by car, so the loss of precision is likely to be low;
- User charge disbenefits would be more significantly over-estimated. Whereas changes in costs lead to a demand response with fewer trips made once a charge is introduced this suppression of trips does not directly influence journey time saving benefits or vehicle operating cost benefits. Only those trips still using car would be affected by the changes in congestion. However, trips choosing to change mode or not travel at all as a result of the introduction of the area charge would receive a charge disbenefit, as would those which chose to travel and pay the area charge;
- As a result, this benefit type is more significantly over-estimated than others;
- Public transport fare benefits relate to the change in bus fare prices. If fare prices were kept constant, then the increased in bus patronage would not generate any fare benefits. These benefits are over-estimated but to a much lower degree than the area charge disbenefits. The reduced bus fare prices mostly affect trips which already use public transport in the do-minimum scenario and so inaccuracies in the demand model have a lesser influence;
- Bus fare revenue is affected in two different ways with their own limitations related to the modelling. There is an over-estimate in bus fare revenue increases related to the higher mode shift from car in the demand model. However, the reduction in fare prices means than operators would see this increased in revenue partially or entirely offset depending on the balance between changes in fare price per trip and the change in number of trips. While the change in fare price per trip is accurately reflected in the model, the fares and demand are inter-related. It is likely that fare revenue growth would be over-estimated (or revenue loss under-estimated);
- Revenues from the area charge are over-estimated for the same reasons that the user charge disbenefits are over-estimated and at a similar proportional scale, being related directly to the difference in assumptions used in the demand model and those identified in the scenario specifications; and
- Indirect tax impacts are driven by a number of factors related to changes in fuel consumption and other operating costs for drivers which incur high rates of tax and changes in spend on public transport fares and the area charge which are untaxed. The

most significant factor is the loss of tax from reduced car use. This disbenefit would be over-estimated due to the limitations described above.

3.4.37. As all scenarios are affected similarly by the limitations described above the results of the analysis set out in this Economic Dimension provide a reliable representation of comparative performance of the scenarios. However, the balance between different benefit and revenue contributions should be taken into account when applying such a comparison based on the scale of impacts of the limitations set out above.

3.4.38. The absolute values of benefits and revenues should be treated with greater caution.

3.5 Wider Impact Assessments

Wider Economic Impacts Assessment

3.5.1. In addition to the impacts covered in Section 3.4, several wider economic impacts recognised in DfT's TAG A2 series have also been assessed. These include:

- Productivity gains from enhanced agglomeration (i.e., better access to economic mass) as individuals and firms derive productivity benefits from locating in close proximity to other individuals and firms;
- Labour supply impacts due to individuals moving into the labour market from economic inactivity and the tax wedge from these impacts; and
- Output change in imperfectly competitive markets – changes in the level of output as a result of a transport investment are not unique to imperfectly competitive markets, but the presence of market failures in such markets means that there are additional sources of welfare which should be captured (i.e., the value of the output is greater than the costs of production).

3.5.2. All these have been identified in the scope of potential economic impacts from the Making Connections programme, as illustrated in Figure 3-1.

3.5.3. Productivity uplift usually arises from improved labour market interactions, knowledge spillovers and linkages between intermediate and final suppliers. For a place of significant economic mass like Cambridge, these may occur within an industry (localisation economies) and across industries (urbanisation economies) when significant changes in transport connectivity (to economic mass and opportunities) occur.

3.5.4. Findings from the SOC suggest that the Making Connection programme is expected to bring significant changes in the transport network and travel demand / behaviours, with material changes to the cost of travel in different modes and significant modal shift expected. Significant improvement in the public transport connectivity and reduction in fare is expected, along with decongestion in the highway network as a result of modal shift.

3.5.5. These are expected to enhance the access to economic mass through the local transport network. On the other hand, application of an area charge would also increase the cost of travel by private vehicles. Therefore, an increase in travel cost (i.e., reduced access by car) is expected. Furthermore, the pattern of travel / distribution of journeys would also change,

and the impacts of these changes would influence different types of journeys / activities in different ways. The collective and net impact of these potential changes on the access to economic mass (i.e. a key measure of agglomeration) was quantified in the OBC.

3.5.6. Labour supply impacts were also included in the scope of assessment set out in the ASR. This was included based on the assumptions that the programme may bring material impacts to the following outcomes:

- Better job matching as travel to work areas expand.
- Potential changes to the number of working hours.
- Reduction in labour inactivity as more people enter the labour market.

3.5.7. The assessment undertaken in the OBC only captures the labour supply side response from the Making Connection programme. The proposed programme would improve and expand the travel to work areas, particularly for the public transport and some rural settlements in the region, along with clear decongestion in the highway. The proposed area charge on the other hand would increase the cost of travel to work by car to or from the city. The collective impacts of these different changes along with their welfare effects (i.e., tax wedge) were assessed in the OBC. It is noted that this assessment was based on fixed land use assumptions so potential new jobs from investment facilitated by Making Connections were not considered.

3.5.8. Both the productivity uplift (from changes in urban agglomeration) and labour supply impacts were assessed in the OBC with WITA v2.2, which is a standard tool for this purpose as recommended by DfT. This assessment undertaken strictly followed the guidance in TAG with travel demand and cost data covering the entire country. Masking of benefits was be applied to focus on the most reliable forecasts.

3.5.9. The potential for output change in imperfectly competitive markets is informed by the evidence showing that transport acts as a barrier to investment. This benefit stream was estimated with a proxy that is equivalent to 10% of the business user transport economic efficiency impact in accordance with the guidance in TAG.

Environmental Impacts Assessment

3.5.10. Assessment of environmental impacts was based on both quantitative and qualitative evidence, following the approach set out in the ASR.

Noise

3.5.11. A reduction in car travel would reduce noise from traffic, particularly when those trips are instead made by active modes. The reduced noise impact was assessed following the guidance in the Design Manual for Roads and Bridges (DMRB) LA111 Noise and Vibration. The investigation was focused on the difference or change in noise level as a result of different scheme scenarios. It was used as the primary differentiator to determine the relative performance of individual scenarios from an acoustics perspective.

3.5.12. In order to determine the change in road traffic noise levels along each road link, firstly an 18-hour Basic Noise Level (BNL)[126] was calculated for each road link in accordance with the Calculation of Road Traffic Noise (CRTN)[127] and based on the CSRM2 2026 forecast traffic flows. The change in noise level was then calculated by comparing each of the proposed scenario against the DM, to predict the change in noise level as a result of each scheme option.

3.5.13. The DMRB criteria for assessing the magnitude of the predicted change in road traffic noise are set out in Table 3-4 below. Details of the methodology are documented in the Acoustics Report[128].

Table 3-4 – DMRB Criteria for Assessing the Magnitude of Changes in Road Traffic Noise

Magnitude	Noise level change, dB $L_{A10, 1h}$	Significance
Major beneficial	<= -5.0	Likely to be significant (beneficial)
Moderate beneficial	-4.9 to -3.0	
Minor beneficial	-2.9 to -1.0	Unlikely to be significant
Negligible	-0.9 to 0.9	
Minor adverse	1.0 to 2.9	
Moderate adverse	3.0 to 4.9	Likely to be significant (adverse)
Major adverse	>= 5	

Air Quality and Emissions

3.5.14. The assessment was built upon the quantified evidence from the previous stage of environmental assessment, enhanced by a review of changes in the forecast traffic from new model runs for the OBC.

3.5.15. The outputs of the previous air quality assessment have been reviewed to identify those areas that experienced the greatest changes (both decreases and increases) in pollutant concentrations in each of the scenarios assessed, including the 'hot spots' where air quality was predicted to worsen (based on the previous assessment). These include:

- Some of the roads just outside the STZ, where traffic is predicted to increase, such as the road from Hauxton to Shelford;
- Roads such as Regent Street and Station Road and those inside the Biomedical Campus, where there would be a significant increase in the number of buses; and
- Some roads close to the Park and Ride sites, such as Newmarket Road.

3.5.16. The new traffic forecasts from model runs at the OBC stage have also been reviewed and the change in total vehicle flows for each of the scenarios, when compared to the relevant baseline year, were calculated. Using the CERC modelling as a base, a comparison was

[126] The Basic Noise Level (BNL) is described in the Calculation of Road Traffic Noise (CRTN). It does not relate to any specific receptor, but rather is a measure of source noise, at a reference distance of 10 m from the nearside carriageway edge of a specific length of highway. It is determined by obtaining the estimated noise level from the 18-hour traffic flow and then applying corrections for vehicle speed and percentage of heavy vehicles as described in CRTN.
[127] Department of Transport, (1988). *Calculation of Road Traffic Noise. HMSO*
[128] Making Connections Acoustics Report, Aug 2023

made between the traffic data provided for the previous stage and new data at the OBC stage.

Greenhouse Gases

3.5.17. This impact was assessed in line with the latest guidance from DfT in TAG Unit A3.

3.5.18. In accordance with the latest guidance from DfT in TAG Unit A3, this assessment of Greenhouse Gases sought to consider carbon emissions over the whole lifecycle of the proposed interventions, including user carbon (emissions associated with scheme users, such as changes in emissions due to modal-shift), capital carbon (emissions associated with scheme construction) and operational carbon (emissions associated with scheme operation and maintenance).

3.5.19. Due to limitation in the information available at this stage, assessment reported in this draft does not include the embodied carbon. This would be covered in the whole-life carbon assessment as part of the full Carbon Management Plan submission.

3.5.20. The quantification of carbon impacts predominantly used appraisal, modelling and cost estimation outputs. It applied industry standard methodologies to calculate carbon impacts. Several tools bespoke to different impacts were used in these carbon calculations, but the workings and results were collated within WSP's Carbon Zero Appraisal Framework for the purpose of bringing individual calculations and the supporting qualitative assessment together in a consistent, transparent format.

Other Environmental Impacts

3.5.21. Based on initial findings from the SOC, the proposed interventions were not found to have significant impacts on other aspects of the environmental assessment such as landscape, townscape, historic environment, biodiversity and water environment. Therefore, these were assessed qualitatively in the OBC.

Social and Distributional Impact Assessment (SDIA)

3.5.22. Social and distributional impacts have been assessed qualitatively, supplemented by sociodemographic analysis, to consider the extent to which the programme would impact sensitive groups. Sensitive groups include vulnerable and disadvantaged groups, in particular people with reduced mobility, older people, and people experiencing higher levels of deprivation.

3.5.23. The Social Impacts Assessment (SIA) has considered the effects of the scheme on road traffic accidents, physical activity, security, severance, journey quality, accessibility, option and non-use values and personal affordability. The assessment for the SIA was structured around each of the impacts outlined above. The assessment is presented using a 7-point scale, which is outlined below.

Table 3-5 – Assessment Categories

Impact	Assessment
Beneficial and the population impacted is significantly greater than the proportion of the group in the total population	Large Beneficial
Beneficial and the population impacted is broadly in line with the proportion of the group in the total population	Moderate Beneficial
Beneficial and the population impacted is smaller than the proportion of the group in the total population	Slight Beneficial
There are no significant benefits or disbenefits experienced by the group for the specified impact	Neutral
Adverse and the population impacted is smaller than the proportion of the population of the group in the total population	Slight Adverse
Adverse and the population impacted is broadly in line with the proportion of the population of the group in the total population	Moderate Adverse
Adverse and the population impacted is significantly greater than the proportion of the group in the total population	Large Adverse

3.5.24. The Distributional Impact Assessment (DIA) considers the variance of impacts from the transport intervention across different social group has considered user benefits, noise, air quality, accidents, security, severance, accessibility, and affordability. The assessment has been carried out in line with TAG Unit A4.2 (May 2023) using the same seven-point grading scale used for the SIA.

3.5.25. Details about the SIA and DIA methodology and findings can be found in Appendix E. The assessment reported in this draft only covers Scenario 1 but would extend to all other scenarios in the next draft of the OBC upon completion.

Place-based Analysis

3.5.26. In addition to the SIA and DIA, place-based analysis was undertaken in accordance with TAG A4.3. This analysis aimed to evaluate the spatial distribution of scheme impacts across the study area. This analysis is closely linked with the DIA and uses the same traffic modelling inputs as that assessment. However, the place-based analysis examines the ways in which impacts are distributed spatially, whereas the DIA primarily examines the ways in which impacts are distributed across different groups. Place-based analysis was undertaken by assessing the GIS (Geographic Information System) maps which were produced as part of the DIA to assess spatial distribution of expected impacts. Details about the methodology and findings are presented in Appendix E of this document.

Equality Impact Assessment (EqIA)

3.5.27. Whilst there are overlaps between the EqIA and the SDIA, the SDIA is based on DfT TAG for the purpose of the business case and a constituent part of the Appraisal Summary Table. The EqIA sits in a wider space across the Making Connections Programme

3.5.28. An EqIA update was undertaken for Making Connections OBC. It considered the Protected Characteristic Groups (PCGs) in the Equality Act 2010, plus a number of other categories and additional characteristics not covered by the Equality Act 2010. It draws on the local knowledge of the councils' equalities officers, findings from the EqIA in 2022 (and baseline data updates) plus feedback from the consultation in autumn 2022.

3.5.29. The PCGs and other categories (such as characteristics not covered by the Equality Act 2010) examined within this EqIA include:

- Age (children and young people and older people)
- Disability
- Gender re-assignment
- Low-income
- Pregnancy and maternity
- Race
- Religion and belief
- Sex
- Sexual orientation
- Additional characteristics: care leavers, carers and armed forces veterans

3.5.30. As the marriage and civil partnership PCG concerns impacts within the workplace, they were screened out of the PCG screening in the EqIA 2022. This PCG has therefore been scoped out of the Making Connections EqIA. Whilst not one of the nine PCGs from the Equality Act 2010, low-income has been included as an additional PCG given the impact the STZ charge could have upon this group.

3.5.31. From further engagement with stakeholders, consultation responses and project development, further socio-demographic groups have been highlighted where their vulnerability to be disproportionality impacted crosses over with one or more of the Equality Act PCGs. These groups, include care leavers, carers and Armed Forces veterans.

3.5.32. It is also noted that given the rural nature of the areas surrounding the STZ, there are likely to be an increased presence of rural deprivation and isolation in some communities. Consideration of these impacts on these communities has been incorporated across all PCG assessments.

Impacts during Construction and Maintenance

3.5.33. Overall, the impacts during construction and maintenance were deemed small. Works required to implement the area charging element of the Making Connections programme would be generally off-line and should have limited impact on existing travel. The core component of the Area Charge scheme is the installation of ANPR cameras in the proposed charging zone. Installation may have some short-term adverse impact on existing travel. Any work to the bus fleet or stops (such as maintenance) can be carried out while vehicles are not in operation or when there are relatively low levels of demand at stops.

3.5.34. Some traffic management would likely be required while implementing any reallocation of road space for buses and to support the proposed sustainable transport interventions.

3.5.35. In light of the above, no quantitative assessment was carried out to measure the impacts during construction and maintenance.

3.6 Central Case Results

3.6.1. Economic analysis is set out below indicating the comparative performances of the four proposed Making Connections scenarios outlined above. These analyses provide a single point forecast based on what are considered the most likely set of assumptions.

3.6.2. However, as for any forecast uncertainties exist and it is likely that circumstances would change before the forecast benefits and costs are fully realised. These forecasts should therefore be considered alongside the next section which sets out details of uncertainty analysis and how the performance of each scenario is likely to be affected by different circumstances.

3.6.3. All economic impacts presented in this section are based on an assessment over a period of 60 years from the date of opening and are in units of 2010 Present Value Market Prices.

Economic Benefits

3.6.4. This section sets out the forecast impacts of the Making Connection scenarios on transport users, the private sector and wider society including impacts on bus operators, local residents, the environment and affected businesses.

3.6.5. Set out in Table 3-5 and Figure 3-2 is a summary of economic benefits generated by each option, considering impacts on transport users and wider society. These summaries include what are defined in TAG as Level 1 benefits, i.e. those derived using techniques with the highest level of analytical maturity. Wider economic impacts and reliability impacts are not included in these summaries and are covered separately below. Impacts on bus operators are also covered separately.

3.6.6. The Consultation Scheme and Scenario 2 differ in specification only in the details of implementation over the opening years. As the economic analysis is focussed on the end-state of each scenario results for these scenarios are the same.

3.6.7. The values presented in these results should be viewed with consideration for the limitations in the appraisal set out in Section 3.4. In particular it should be recognised that the omission of DERs from the transport modelling results in an over-estimate of area charge disbenefits as trips for which DERs apply would not experience this disbenefit. Other positive benefits would also be over-estimated for the same reason, but to a lesser extent.

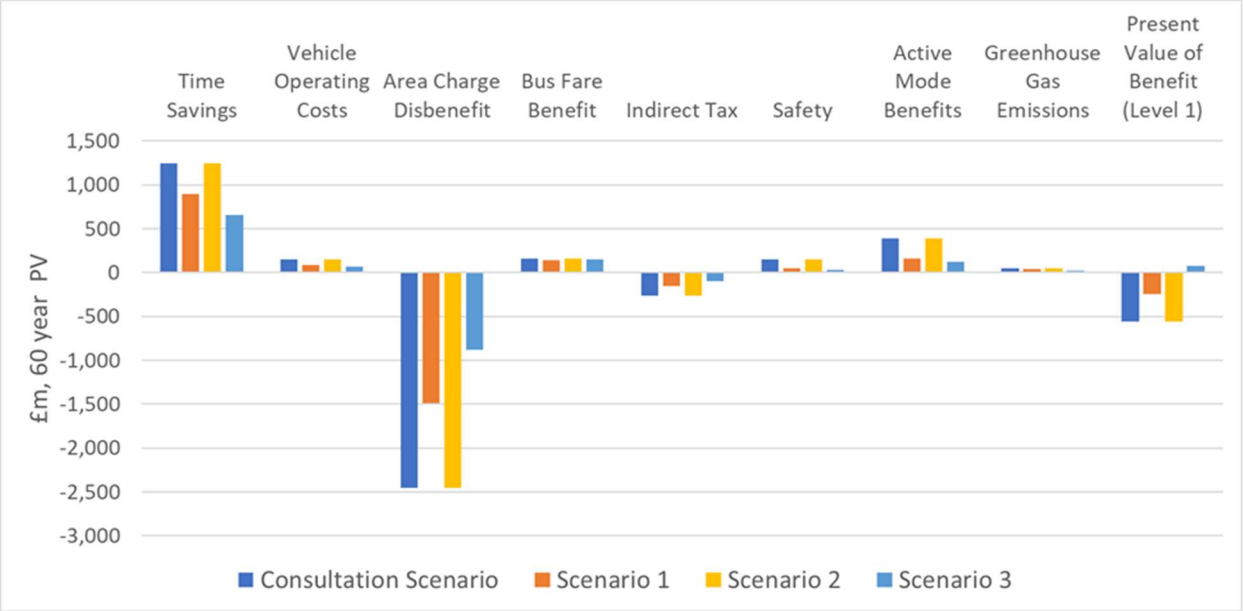
3.6.8. Similarly, the exclusion of DERs means that the analysis does not reflect the progressive nature of the charging scheme. DERs such as discounts for those on lower incomes, mean that the costs of the scheme to transport users do not disproportionately affect those who are less able to afford the charges. Those on lower incomes also have lower rates of car ownership and so would receive a greater benefit from the improved public transport and sustainable travel improvements.

Table 3-5 – Summary of Economic Benefits (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Time Savings	1,242	897	1,242	660
Vehicle Operating Costs	152	90	152	65
Area Charge Disbenefit*	-2,452	-1,472	-2,452	-878
Bus Fare Benefit	162	146	162	153
Indirect Tax	-259	-150	-259	-102
Safety	150	54	150	35
Active Mode Benefits	393	163	393	121
Greenhouse Gas Emissions	52	38	52	25
Present Value of Benefit (Level 1)	**-560**	**-234**	**-560**	**78**

*Note: Includes a marginal parking charge benefit

Figure 3-2 – Summary of Economic Benefits (£m, 2010 PV, market prices)



3.6.9. Breakdowns and additional details of the most significant of these impacts are provided below.

3.6.10. Time saving benefits are mostly attributable to highway decongestion with car users gaining the greatest journey time benefit and significant benefits also being generated for freight trips. A combination of decongestion and increased bus services, including higher service frequencies, results in substantial journey time saving benefits for public transport users despite the number of trips being much lower than the number of trips by car.

3.6.11. A summary of these benefits is set out in Table 3-6.

Table 3-6 – Summary of Journey Time Benefits (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Car	782	621	782	475
LGV	174	122	174	93
OGV	49	36	49	26

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Bus & Rail	236	118	236	65
Total	**1,242**	**897**	**1,242**	**660**

3.6.12. User charge benefits and disbenefits for highway and public transport modes contribute a large value to the overall benefit assessment. Reductions in bus fares generate benefits to users of up to £162 million, but this value is substantially lower than the £1,492 million disbenefit attributable to the area charge for car users and a further £960 million for freight trips. These values are calculated excluding the impacts of DERs which would help to mitigate the disbenefits.

3.6.13. A summary of these benefits is set out in Table 3-7.

Table 3-7 – Summary of Charge Benefits and Disbenefits (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Car	-1,492	-986	-1,492	-587
LGV	-614	-329	-614	-189
OGV	-346	-168	-346	-102
Bus	162	157	162	160
Total	**-2,290**	**-1,326**	**-2,290**	**-718**

3.6.14. While safety benefits appear low relative to some of the other benefit groups, the prevention of collisions leading to serious and fatal injuries is an important objective of the scheme. Reductions in road traffic are directly related to reduced numbers of collisions. A summary of the forecast reduction in collisions which would otherwise lead to personal injury accidents (PIAs) are set out below. In addition to the value of preventing these PIAs the economic value of preventing the much higher numbers of accident which result only in damage to property are captured within the monetised assessment above.

Table 3-8 – Summary of Prevention of Highway Collisions (Number of Collisions)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3*
PIA Collisions Prevented	3,830	1,462	3,830	958
Casualties Prevented				
Fatal	28	10	28	7
Serious	477	185	477	121
Slight	4,581	1733	4,581	1,136

*Note: Values estimated based on Scenario 1 impacts and relative change in vehicle-kms pending completion of modelling.

3.6.15. Building on the Level 1 economic impacts, set out in Table 3-9 are the additional elements of benefits which have been monetised. These follow elements of TAG methodology which have less mature methods of assessment and so are classed as Level 2 impacts. This includes reliability benefits and wider economic impacts. Reliability benefits have been monetised only for highway trips. Benefits of improved reliability for public transport users are currently considered qualitatively.

3.6.16. Assessment of wider economic impacts shows a small combined positive impact from productivity gains and labour supply impacts and small disbenefits from output change under imperfect competition. As noted elsewhere, the economic assessment is based on transport modelling which does not reflect DERs and so the forecast negative impacts are likely to be over-stated.

Table 3-9 – Level 1 and Level 2 Economic Benefits (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Present Value of Benefit (Level 1)	**-560**	**-245**	**-560**	**78**
Reliability	146	110	146	87
Wider Economic Impacts				
Productivity gains and labour supply impacts from WITA	20	13	20	27
Output change under imperfect competition	-67	-28	-67	-11
Present Value of Benefit (Level 2)	**-461**	**-462**	**-461**	**182**

Costs and Revenue

3.6.17. This section presents details of capital costs required to implement the scheme, operational and maintenance costs to run the area charging facilities and direct costs in operating the additional public transport services. It also captures the revenue streams from both area charging and increased public transport patronage and any losses of revenue through reduced payment of parking charges[129].

3.6.18. The capital cost of installing the STZ has been calculated in current prices, inflated in real terms and optimism bias has been applied.

3.6.19. Operational costs, including those for the STZ and the re-investment of revenue in bus services and sustainable measures have been considered over a 60-year appraisal period in line with the assessment of scheme benefits.

Table 3-10 – Capital and Operating Costs (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
STZ Costs				
Capital Investment	42.3	40.6	42.3	40.6
Optimism Bias	9.7	9.3	9.7	9.3
Subtotal	52.1	50.0	52.1	49.9
Operating and Lifecycle Cost	124.3	99.2	124.3	99.1
Optimism Bias	28.6	22.8	28.6	22.8
Subtotal	152.9	122.1	152.9	121.9
Bus Improvement Measures	742	395	742	299
Sustainable Travel Measures	172	78	172	66
Present Value of Cost	**1,119**	**644**	**1,119**	**536**

[129] No change to parking charges themselves is assumed, only the number of trips paying for parking

3.6.20. A summary of revenue impacts is set out in Table 3-11.This indicates the high level of area charge collection associated with the 3-hour AM peak period. The 6-hour interpeak period generates a similar level of revenue, having a lower number of trips per hour and a higher proportion of those trips being uncharged due to vehicles having already been charged earlier in the day. The PM peak period generates the lowest revenue as a high proportion of trips in this time period are repeat trips.

3.6.21. In Scenario 1, vehicles travelling in the city during both the interpeak and PM peak periods are not charged during interpeak and so the proportion of repeat trips during the PM peak is lower. Therefore, while the number of trips during the PM peak in Scenario 1 is similar to the Consultation Scenario, the PM peak revenue is Scenario 1 is notably higher.

3.6.22. Bus fare revenues are affected by two factors. The increase in bus patronage results in an increase in revenue while the reductions to bus fares causes reductions in revenue. In the consultation scenario the increase demand outweighs the impact of lower revenue per trip. However, in Scenario 1 the impact on demand is much reduced during the interpeak period and so the lower prices lead to a negative overall impact on public transport revenues.

3.6.23. Reducing car trips in the city results in a loss of parking revenue. This loss is not insubstantial but is considerably lower than the gains from the area charge.

3.6.24. As noted in Section 3.4, there are certain limitations in this assessment of revenue, in particular with respect to DERs and results should be considered comparative across options rather than indicative of revenue available to spend.

3.6.25. The Financial Dimension has followed a different approach to revenue assessment with greater focus on the introductory periods of each scenario and on the operational specifications which would affect the actual revenue collected.

Table 3-11 – Summary of Revenue Impacts (£m, 2010 PV, market prices)

		Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Area Charge Revenue	AM	861	847	861	584
	IP	984	-	984	0
	PM	422	551	422	296
	Total	**2,266**	**1,397**	**2,266**	**880**
Bus Fare Revenue	AM	38	15	38	-1
	IP	34	-18	34	-28
	PM	37	8	37	-6
	Total	**108**	**5**	**108**	**-35**
Parking Revenue*	AM	-29	-30	-29	-18
	IP	-50	2	-50	-2
	PM	-13	-11	-13	-8
	Total	**-92**	**-42**	**-92**	**-28**
Total Revenue	AM	869	832	869	565
	IP	968	-20	968	-30
	PM	445	547	445	282
	Total	**2,282**	**1,360**	**2,282**	**817**

* This change in parking revenue is a consequence only of mode-shift away from car as a result of the Making Connections scheme. It bears no relation to impacts of other investments such as the Integrated Parking Strategy.

Level 1 Cost Benefit Analysis

3.6.26. This section presents an overview of the findings of the Cost Benefit Analysis. Detailed CBA tables including Appraisal Summary Tables (AST), Transport Economic Efficiency (TEE), Public Accounts (PA) and Analysis of Monetised Costs and Benefits (AMCB) are presented in Appendix S.

3.6.27. Table 3-12 provides an overview of the Level 1 benefits of the scheme. These are the impacts which TAG considers having the highest level of maturity in methods of assessment.

3.6.28. For car and freight users the higher charging scenarios lead to the greatest disbenefits. The gain in decongestion from higher charges is lower than the disbenefit of the charges themselves. However, the higher charging scenarios generate larger levels of revenue for reinvestment.

3.6.29. The greatest benefit for public transport users in Scenarios 1 and 3 comes from the reduction in fare prices, but with the charge applied throughout the day the revenue raised

is sufficient to provide greater service improvements resulting in time saving benefits which exceed the fares benefit.

3.6.30. All options result in indirect tax losses, proportionate to the level of mode shift, as car costs are taxed at a high rate while public transport trips are untaxed, as is the area charge.

3.6.31. Safety, active modes and greenhouse gas benefits are all derived from reductions in car use resulting from mode shift away from car and other changes in travel behaviour.

Table 3-12 – Summary of Level 1 Benefits (£m, 2010 PV, market prices)

		Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Car Users	Time Savings	782	621	782	475
	VOC Benefits	115	63	115	45
	Charge Benefits	-1492	-975	-1492	-580
	Subtotal	**-595**	**-291**	**-595**	**-60**
Freight	Time Savings	224	158	224	119
	VOC Benefits	37	27	37	20
	Charge Benefits	-960	-497	-960	-291
	Subtotal	**-699**	**-312**	**-699**	**-151**
Public Transport	Time Savings	236	118	236	65
	Fare Benefits	162	146	162	153
	Subtotal	**398**	**264**	**398**	**218**
Non-User Benefits	Indirect Tax	-259	-150	-259	-102
	Safety	150	54	150	35
	Active Mode Benefits	393	163	393	121
	Greenhouse Gases	52	38	52	25
Level 1 PVB		**-560**	**-237**	**-560**	**86**

3.6.32. Table 3-13 summarises the breakdown of impacts on transport users by trip purpose. This indicates that business trips would be most affected, with freight experiencing a proportionally large disbenefit due to the high value of charge applied to those trips. Elements of this disbenefit to freight trips would be offset by the DERs set out in the

scenario specifications which are not represented in this modelling. Opportunities would also exist for businesses to re-optimise their transport strategies to reflect the impacts of the STZ. Business trips made by car are less likely to change to bus use than other trip purposes and would be more willing to pay the charges to continue driving due to their higher value of time.

3.6.33. Commuting trips are forecast to experience a largely neutral impact. As these trips are mostly made during the busiest periods, they would experience the largest time savings from reduced levels of congestion. Commuters would also enjoy a large portion of the benefits from the improved public transport and sustainable travel measures.

3.6.34. Trips made for other purposes, including education, shopping and leisure trips are more variably affected by the different scenarios, with higher charges resulting in a disbenefit while the lowest charging scenario generates a modest benefit. These trips are more likely to change mode as a result of the charges on car trips and experience the largest benefit from reductions in bus fares due to the large proportion of existing bus users.

Table 3-13 – Level 1 User Benefits by Trip Purpose (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Business	-738	-320	-738	-141
Commute	7	-14	7	68
Other	-165	-5	-165	79
Total	**-896**	**-339**	**-896**	**7**

3.6.35. Table 3-14 sets out the Present Value of Cost of the scheme over the 60-year appraisal period. Positive values in this this table represent increases in cost or reductions in revenue relative to the do-minimum, while negative values represent increases in revenue.

3.6.36. The negative PVCs for all Scenarios indicate that the revenue generated would exceed the planned expenditure. However, these revenue forecasts do not include reductions resulting from DERs which have been excluded in this Economic Dimension to maintain consistency across the assessment of benefit, revenue and cost groups aligned with the transport modelling which has informed those assessments. The Financial Dimension provides a more detailed representation of revenue impacts and how these relate to the costs of investment. With these elements taken into account a more neutral PVC would be expected.

Table 3-14 – Present Value of Costs (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Capital Investment	52	50	52	50
Opex and WLC	153	122	153	122
Bus Improvement Measures	742	395	742	299
Sustainable Travel Measures	172	78	172	66
Total Cost	**1,119**	**644**	**1,119**	**536**
Area Charge Revenue	-2,266	-1,397	-2,266	-880
Bus Fare Revenue	-108	-5	-108	35
Parking Revenue	92	42	92	28
Total Revenue	**-2,282**	**-1,360**	**-2,282**	**-817**
Present Value of Cost	**-1,163**	**-715**	**-1,163**	**-281**

3.6.37. Table 3-15 sets out the Level 1 Cost Benefit Analysis, bringing together the cost and benefit components described above to generate a Net Present Value (NPV) and Benefit to Cost Ratio (BCR).

3.6.38. The BCRs in this case should be treated with caution, as is the case whenever a scheme has negative values in the PVC. DfT provide specific guidance on interpreting scheme performance in the event of PVCs indicating that a scheme is financially positive as is seen here. This guidance is summarised in Section 3.8. BCRs are therefore excluded from the table at this point to avoid confusion.

3.6.39. To best understand the impacts, it is helpful to focus on the NPV rather than the BCR. These NPVs indicate that the Consultation Scenario, Scenario 1, and Scenario 2 all generate disbenefits but also generate an income. The NPVs show that the incomes exceed the disbenefit, resulting in a positive net outcome. Scenario 3 generates less income, but produces a positive benefit to society and therefore also results in a positive NPV, though slightly lower than the other scenarios.

3.6.40. In all cases the consideration of DERs would result in improvements to benefits for users and reductions in revenue. The details of these elements within the scenario specifications can be configured to determine the extent to which revenue generation is maximised and how this is used to achieve an optimised balance between social and financial impacts on users. An increased level of modelling detail would be required at FBC to capture these impacts accurately.

Table 3-15 – Summary of Level 1 Cost Benefit Analysis (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Present Value of Benefit	-560	-234	-560	86
Present Value of Cost	-1,163	-715	-1,163	-281
Net Present Value	603	482	603	366
Benefit to Cost Ratio	See Section 3.8			

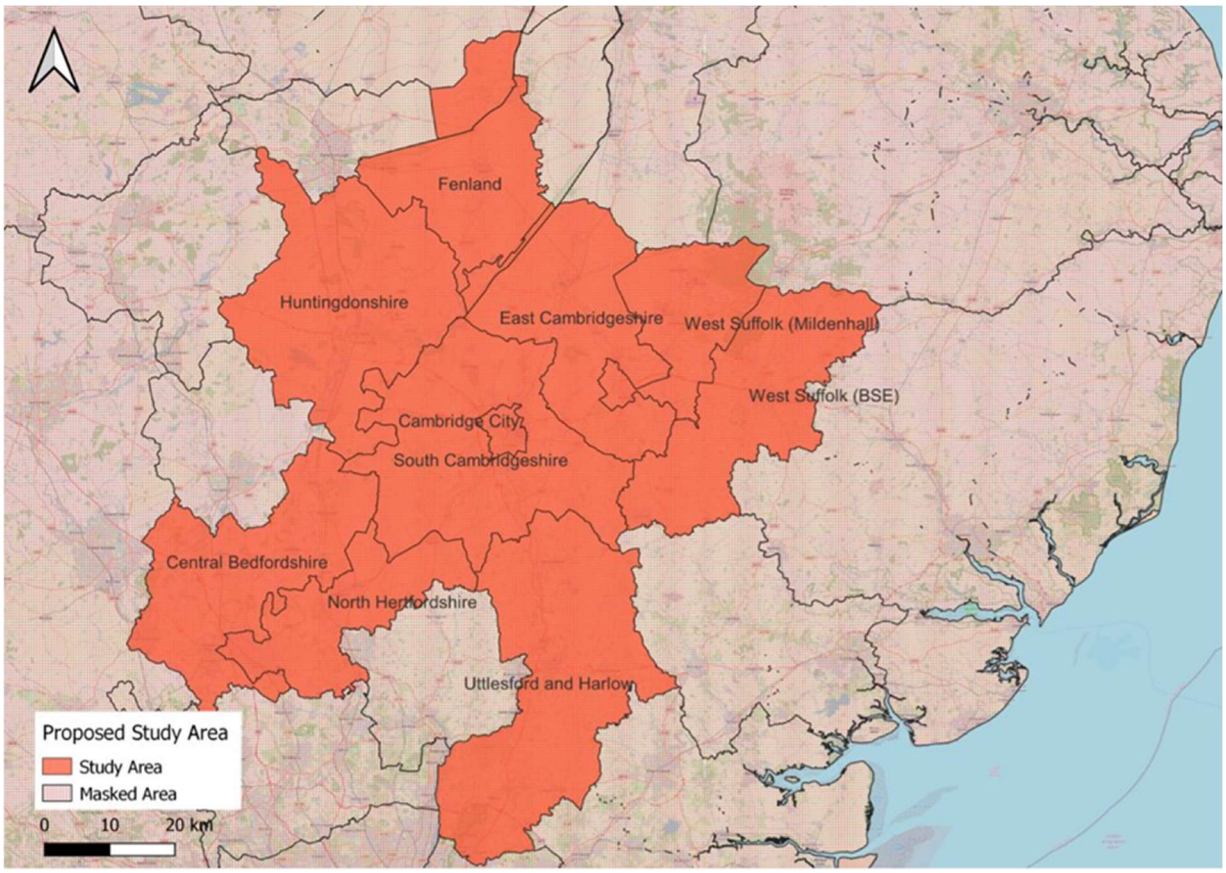
Wider Economic Impacts Assessment

3.6.41. This Assessment was carried out following the methodology outlined in Section 3.5. The wider economic impacts assessed include productivity gains from enhanced agglomeration, labour supply impacts and output change in imperfectly competitive markets.

3.6.42. The former two out of the three wider economic impacts were directly estimated using DfT's WITA, whilst the last one was estimated with 10% of forecast business user conventional user impact.

3.6.43. The wider impact assessment was undertaken on a nationwide basis following the guidance in TAG but the benefits were only claimed in an area deemed relevant to the impact of the proposed interventions as illustrated in Figure 3-3.

Figure 3-3 – Indicative Study Area for Wider Economic Impacts Assessment



3.6.44. Quantified impacts from the assessment are presented in Table 3-16.

Table 3-16 – Summary of Forecast Wider Economic Impacts (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Productivity gains and labour supply impacts from WITA	20	13	20	27
Output change under imperfect competition based on 10% of business user transport impacts	-67	-28	-67	-11

3.6.45. Overall, the forecast productivity gains and labour supply impacts from WITA are modest but positive. This is likely due to two reasons:

- The significant connectivity gains from decongestion of the highway network and improvements in the public transport network is partly offset by the cost to users for the proposed charge so although the forecast behavioural changes are substantial, the net combined impact is relatively small. The overall positive impact suggests the proposed interventions are likely to enhance the connectivity with economic mass despite the proposed charge.
- Current assessment is based on fixed land use assumptions so no short-term or long-term interaction between land use changes and transport investment has been considered. This potentially make the current forecast conservative as the proposed programme would facilitate more development which would increase the number (density) of jobs in the local area and hence enhance the access to employment.

3.6.46. The forecast output change under imperfect competition are small negative values. This is mainly driven by the forecast business user impacts (10%) as the average overall cost for driving has increased due to the charge despite the time savings from decongestion.

Reliability Assessment

3.6.47. Reduction in congestion would improve journey time reliability for both car and bus users. Increased frequencies of service and service options and better services outside of peak periods would all add further to journey time reliability for bus users. At this point, only the reliability benefits to car users have been monetised in accordance with the guidance in TAG A1.3 for urban roads.

3.6.48. Table 3-17 sets out the calculated benefits for car and freight trips of congestion relief enabling more predictable travel times. These benefits are additional to the savings in average journey times which are included in the Level 1 benefits.

3.6.49. Commuters and businesses using LGVs to transport goods are forecast to receive the largest journey time reliability benefits.

Table 3-17 – Highway Journey Time Reliability (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Car Commute	65	57	65	45
Car Other	10	9	10	8
Car Business	12	9	12	7
LGV	56	34	56	26
OGV	2	1	2	1
Total	**146**	**110**	**146**	**87**

3.6.50. Assessment of improvements in reliability for public transport users would be introduced in the next iteration of the OBC.

Level 2 Cost Benefit Analysis

3.6.51. The Level 2 Cost Benefit Analysis builds on the Level 1 assessment, introducing the additional categories of benefit for which assessment techniques are considered by DfT to be less mature.

3.6.52. Across all options the inclusion of these benefit groups improves the PVB and NPV. As noted for the Level 1 CBA, BCRs are not presented as the negative PVCs make BCRs misleading.

Table 3-18 – Summary of Level 2 Cost Benefit Analysis (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Level 1 PVB	**-560**	**-234**	**-560**	**86**
Wider Economic Impacts				
Productivity gains and labour supply impacts	20	13	20	27
Output change under imperfect competition	-67	-28	-67	-11
Reliability	146	110	146	87
Level 2 PVB	**-461**	**-138**	**-461**	**189**
Present Value of Cost	**-1,163**	**-715**	**-1,163**	**-281**
Net Present Value	**703**	**577**	**703**	**470**

Environmental Impacts Assessment

3.6.53. Quantified impacts from the assessment of Greenhouse gases have already been included in the cost benefit analysis reported earlier. Qualitative findings from the noise, air quality and other environmental assessments are reported in this sub section.

3.6.54. Findings from the noise assessment suggest that Scenario 2 (£5 all day charge) is forecast to result in the greatest number of road links predicted to experience a reduction in noise level compared to the Consultation proposal or Scenario 1 (£5 peak charge). However, there are also potential material increases in noise with Scenario 2 in operation on certain roads, likely due to rerouting of traffic. Detailed list of road links that were predicted to experience a potentially significant moderate or major increase or decrease in noise level is presented in the Acoustics Report.

3.6.55. Based on numerical analysis and visual representation of the likely noise changes in different scenarios as presented in the Acoustics Report, Scenario 2 (£5 all day charge) is considered preferable from an acoustics perspective.

3.6.56. Conclusions from the air quality assessment suggest that the findings have not changed since the previous iteration of the assessment. Initial review of changes in overall total traffic flows forecasts at the OBC stage indicates that a £5 all day charge (consultation proposal and scenario 2) results in greater change in traffic flows compared with other scenarios. It should be noted however, that this is based on overall traffic flows and does not take into account individual vehicle types, e.g. buses. It is also noted that the introduction of a zero-emission bus fleet would lead to reductions (improvements) in NO2 concentrations. However, the same level of improvement is not likely to be observed in relation to particulate matter due to the non-exhaust emissions associated with electric vehicles. Although this provides an indication of air quality impacts, it is only through detailed dispersion modelling that these impacts can be fully determined.

3.6.57. Qualitative assessment of other aspects of the environmental matters such as landscape, townscape, historic environment, biodiversity and water environment was also carried out. These were found to be neutral, and no material difference is expected across different Making Connections scenarios. A summary of the qualitative findings is presented in Table 3-19.

Table 3-19 – Findings from Other Qualitative Environmental Assessment

Assessment	Findings	Narratives
Landscape	Neutral	The Making Connections programme would not directly affect Landscape and so this impact has been considered as neutral for the purposes of this appraisal.
Townscape	Neutral	The Making Connections programme would have limited direct effect on Townscape and so this impact has been considered as neutral for the purposes of this appraisal. However, the potential reinvestment it enables, including in public realm measures to support increased active travel, may allow schemes to be progressed which may in turn bring townscape benefits.
Historic Environment	Neutral	The Making Connections programme would not directly affect Historic Heritage and so this impact has been considered as neutral for the purposes of this appraisal.
Biodiversity	Neutral	The Making Connections programme is unlikely to have a significant direct impact on biodiversity and so this impact has been considered as neutral for the purposes of this appraisal.
Water Environment	Neutral	With limited infrastructure requirements, impacts on the water environment have not been assessed at this stage. A neutral impact is therefore assumed.

Social Impact Assessment

3.6.58. Summary of findings from the SIA is presented in Table 3-20 below with full details of the assessment documented in Appendix E.

Table 3-20 – Summary of Findings from Social Impact Assessment

Impact	Assessment	7-point score
Accidents	A reduction in accidents of all severity levels is forecast as a result of reduced car use. The biggest reduction was in slight accidents, with a 1.89% reduction in the in Scenario 1. There was a similar reduction in serious accidents and a smaller reduction in fatal accidents. This assessment provides evidence that the scheme is effective in reducing the number of accidents in the study area and results in a moderate beneficial effect.	Moderate Beneficial
Physical Activity	There are several plans in place as part of this programme that aim to encourage active travel by methods such as improving active travel networks and infrastructure. The measures of the programme would have a beneficial impact on physical activity within the study area. Greater rates of active travel and use of public transport would likely lead to more physical activity and subsequently better health and environmental outcomes.	Moderate Beneficial
Security	A wide range of impacts have been assessed across all modes, ranging from neutral to moderate beneficial. No adverse impacts have been forecast for any user group.	Slight Beneficial
Severance	The Making Connections Programme is expected to generate slight beneficial effects due to improvements to footways and cycles and reductions in car traffic which would decrease the impact of severance.	Slight Beneficial
Journey Quality	As outlined within TAG Unit A4.1 should more than 10,000 travellers experience benefits of improved journey quality then the programme would result in beneficial effects. It is considered that the programme would lead to benefits for over 10,000 people across the study area. However, as the details of public transport interventions are yet to be finalised a conservative assessment has been made, therefore the programme is expected to result in moderate beneficial effects as some level of revenue is expected to be generated which could be available to invest in interventions that improve journey quality both on public and active travel.	Moderate Beneficial
Accessibility	Overall, the programme is considered to have a moderate to large beneficial effect in terms of accessibility due to the significant improvements coming forward to the public transport and active travel network. The scale of the effect is likely to vary depending upon the amount of revenue which is available to fund improvements to public transport and active travel. Care should be taken when interpreting these scores as this is the result of a high-level assessment which needs to be revisited once scheme details have been developed further.	Moderate to Large Beneficial
Option and non-use values	Networks improvement would be made across the Cambridge travel-to-work area extending to Newmarket, Bury St Edmunds and Haverhill in Suffolk, Royston in Hertfordshire, and St Neots, Huntingdon, Alconbury, Ramsey Chatteris, March and Littleport in Cambridgeshire. These areas are currently under served by public transport. Where there is already public transport, the provision of it would be greatly improved, including increased frequencies and reduced fares. This would create a step change in the services that are provided, and more households would have access to the bus network.	Moderate Beneficial

Impact	Assessment	7-point score
	Improvements to the active travel network and wider measures are being considered to aide behaviour changes to create more opportunities for travel on these routes.	
Personal Affordability	Whilst a road user charge is being proposed that could potentially increase the cost of personal travel, revenues from this element of the scheme would be reinvested into the public and active transport network. The improved availability and connectivity of public and active transport would improve access to services and employment opportunities and offer a low-cost travel option. For those individuals who are reliant on a car to access key services and employment opportunities i.e., those with limited mobility or those from a low-income household a series of discounts and exemptions are being put in place which would mitigate any increases to journey costs and still make car journeys affordable.	Slight Beneficial

Distributional Impact Assessment

3.6.59. Summary of findings from the DIA is presented in Table 3-21 below with full details of the assessment documented in Appendix E.

Table 3-21 – Summary of Findings from Distributional Impact Assessment

Impact	Assessment	7-point score
User Benefits	User benefits are experienced in specific areas by specific groups of people. The proposed scheme is projected to deliver benefits to public transport users across the study area. Overall the assessment focusses on user benefits from the charge and non-charge (public and active transport improvements) elements of the programme. For charge elements of the programme, analysis shows that adverse effects would be experienced across all income quintiles. It should be noted however, that detailed modelling does not make allowances for the proposed discounts and exemptions, which would mitigate against some of the adverse effects identified as part of the quantitative assessment. Assessment of user benefits as part of the non-charge elements has been undertaken separately and considers time and vehicle operating costs. Journey times have improved due to people shifting to public and/or active travel resulting in fewer vehicles and therefore less delays. Revenue raised from the STZ would be re-invested into improvements to public and active travel, which would improve accessibility, journey times and reliability and offer a lower cost travel option for those travelling by these modes. Overall, Scenario 1 would lead to moderate beneficial effects.	Moderate Beneficial (Non-charge elements) Moderate Adverse (Charge elements)
Noise	Across all scenarios there would be a reduction in traffic, this would result in an overall beneficial outcome especially for children and the older population.	Slight Beneficial

Impact	Assessment	7-point score
Air Quality	It is expected that there would be beneficial impacts in terms of air quality, particularly for vulnerable users including children and older people, as air quality levels should improve because of the reduction of traffic flows within the city centre.	Large Beneficial
Accidents	Analysis shows that the majority of links are expected to experience a decrease in accident rates (benefit). Accidents involving all vulnerable groups are more likely to occur on links forecast to experience a decrease in accident levels. In addition, for all vulnerable groups (apart from cyclists), the proportion that experience benefits and disbenefits is in line to the number of accidents across the impact area. For cyclists, the expected change is larger than their proportion of accidents.	Moderate Beneficial
Security	Some level of revenue would be generated which can be used to fund some wider measures to enable people to shift to sustainable modes. Transport users including women, younger and older people would experience improved levels of personal security due to investment on Sustainable Transport measures such as potential improvements to lighting and CCTV, which would increase the amount of formal surveillance as well as improved lighting/visibility in the study area.	Slight to Moderate Beneficial
Severance	Traffic modelling indicates that on average, most routes would experience a decrease or increase of traffic of less than 10% which does not constitute a significant change in line with guidance set out in TAG Unit 4.2.	Neutral
Accessibility	The scheme would improve accessibility due to the improvements to the bus network including increased bus frequencies, an expanded bus network, extended operating hours, and improved access to bus stops which makes access to public transport significantly easier and more accessible as a result of the scheme, especially for young people, those with disabilities and older people within Cambridge City, South Cambridgeshire and the wider study area.	Moderate to Large Beneficial
Affordability	The proposed charge zone would potentially lead to disbenefits across all income quintiles as the programme includes road user charging. Whilst a road user charge is being proposed that could potentially increase the cost of personal travel, revenues from this element of the scheme would be reinvested into the public and active transport network. The improved availability and connectivity of public and active transport would improve access to services and employment opportunities and offer a low-cost travel option. For those individuals who are reliant on a car to access key services and employment opportunities i.e., those with limited mobility or those from a low-income household a series of discounts and exemptions are being put in place which would mitigate any increases to journey costs and still make car journeys affordable. Reducing fares on public transport would benefit those who are from lower income households and do not have access to a car for example those in the northeast of Cambridge City as well as to wider areas within the study area. With the scale of improvements set to come forward, public transport and active travel would offer a lower cost option compared to driving.	Slight beneficial

Place-based Analysis

3.6.2. In accordance with TAG unit A4.3, place-based analysis is defined by the HMT Green Book as *"Place Based Analysis concerns appraisal applied to geographically defined areas within the UK. This definition includes a wide range of obvious categories such as villages, towns, cities, counties and regions and the home countries that make up the UK, it also includes other geographically based definitions such as "rural areas" or "areas of urban deprivation."*

3.6.3. Place-based analysis is closely linked with Distributional Impact Analysis, with TAG noting that DIA considers how impacts are dispersed across population groups, whereas Place-Based Analysis considers dispersion across spatial groups.

3.6.4. This analysis therefore built upon the findings of the DIA and examined how the impacts identified in that assessment were distributed spatially across the study area. Details on the findings are presented in Appendix E.

3.6.5. Examining the spatial implications of user benefits analysis across the study area indicates that the greatest degree of benefits would be felt to the northwest of Cambridge, in particular in Huntingdonshire and East Cambridge. Areas which show greater concentrations of disbenefits are largely within Cambridge and South Cambridgeshire.

3.6.6. The analysis for severance indicates that the greatest concentration of severance benefits is expected to be experienced in Cambridge, largely due to reduced traffic volumes within the city which are anticipated to be delivered by the scheme. There are also pockets of anticipated benefits concentrated in the centres of Neots, Huntingdon and Ely.

3.6.7. The proposed charge zone would potentially lead to disbenefits across all income quintiles as the programme includes road user charging. Reducing fares on public transport would benefit those who are from lower income households and do not have access to a car for example those in the northeast of Cambridge City as well as to wider areas within the study area.

3.6.8. It should be noted that the DIA which has informed the place-based analysis has been derived from the transport model which excludes the impacts of DERs. This means that the analysis does not reflect the progressive nature of the charging scheme. DERs such as discounts for those on lower incomes, mean that the costs of the scheme to transport users do not disproportionately affect those who are less able to afford the charges. Those in lower quintiles also have lower rates of car ownership and so would receive a greater benefit from the improved public transport and sustainable travel improvements.

3.7 Sensitivity Analysis

3.7.1. Consideration has been given in the OBC to a range of factors that reflect the uncertainties in the future. These cover uncertainties associated with the proposed programme as well as long-term uncertainties set out in DfT's Common Analytical Scenarios (CAS) in the TAG Uncertainty Toolkit.

3.7.2. Sensitivity tests in the Economic Dimension are focused on the level of uncertainty in the forecast scheme impacts and Value for Money findings. These were formulated in the context of Value for Money assessment. They also complement (but do not take over the role of) the 'stress tests' presented in the Financial Dimension, which are more focused on the uncertainty surrounding impacts on public finances.

3.7.3. These tests seek to cover both uncertainties to do with certain aspects of the proposed interventions (such as forecast responses and choices of transport users impacted by the scheme) and long-term evolutions in the transport system in the future (such as trends in behaviour, technology and decarbonisation that may drive significant change over time). These were categorised into the following three:

- Uncertainties covered in DfT's CAS in Uncertainty Toolkit.
- Uncertainties specific to the proposed programme.
- Uncertainties surrounding costs.

3.7.4. Sensitivity surrounding the above two defined categories was explored in the OBC through quantitative and qualitative evidence.

CAS In Uncertainty Toolkit

3.7.5. All CASs have been considered individually in the ASR to identify the level of relevance of each scenario to Making Connections in order to establish an appropriate method of assessment.

3.7.6. **High and Low Economy scenarios (CAS1 and CAS2)** potentially have large impacts on the economic and financial performance, as these represent different rates of growth in the economy, affecting GDP, population, and employment, which subsequently influence the travel demand, a key driver to the level of congestion and the potential revenue from the proposed interventions. The implication of this is that the Low Economy scenario (CAS2) may result in reduced revenue and journey time savings, but with lower user charge disbenefits, while the High Economy scenario (CAS1) would have the reverse effect. Both scenarios are considered valuable to inform the longer-term impacts and should ideally be quantified.

3.7.7. **Regional (CAS3)** refers to varying level of growth (population, households and employment) in different parts of the country so can manifest itself through impacts on travel demand in Cambridge in a similar way to CAS1 and CAS2. For the same reason as above, it is also deemed relevant and quantifiable using the databook from DfT.

3.7.8. A common feature among the three CAS scenarios introduced is that their impacts can all be reflected in changes to travel demand. The current CAS databook provides indices to account for such changes in travel demand driven by factors described above. These factors were used (as relative changes in % terms) to estimate potential changes in the forecast economic impacts (pivoting off the central forecasts).

3.7.9. **Behavioural Change (CAS4)** scenario reflects important behavioural trends because of new ways of working, shopping and travelling in the future. These result in changes in trip rates, vehicle ownership and use of LGVs (less shopping trips but more deliveries due to increased online shopping). This scenario represents a future in which changes to these travel patterns which emerged post-COVID continue and increase into the future. The result of such a change is for trip numbers to considerably reduce in the future, rather than simply slowing down growth as is represented in CAS2.

3.7.10. Changes to travel since the introduction of this scenario suggest that the continued growth of working from home is already beginning to reverse, with many companies requiring office attendance for at least part of the week. The CAS4 scenario may therefore be considered a highly unlikely case, which would likely require additional future extreme events to occur to reverse this trend of returning to office-based work.

3.7.11. Based on the mix of trip purposes represented in the CSRM2 model this scenario would suggest that traffic would decline from 2023 levels by 10% by 2029, by 20% by 2037, reaching a 26% reduction by 2041. The result would be a world in which demands on the transport network are substantially different to those which have been forecast. In the event of such an extreme change to travel, the flexibility of the scheme would mean that the initial scenario specifications would be adapted. It is therefore not considered informative to represent the impacts of this CAS within the context of the existing scenarios.

3.7.12. With regard to the **Technology Scenario (CAS5)**, this scenario considers the potential impact on travel behaviour as road travel becomes far more attractive and accessible to road users because of a high take-up of connected autonomous vehicles (CAVs), which enter the fleet in the 2020s and make up to 50% of it by 2047. These could lead to changes in travel demand (such as trip rates and vehicle ownership change) as well as changes in travel behaviours (such as reduction in the perceived Value of Time and car occupancy). The changes in the former (trip rates) are essentially reflected in uplifts in travel demand. These impacts are not dissimilar to what have already been explored in CAS1 to CAS4. Whilst for the travel behaviour related changes, these would primarily be reflected in two areas of travel costs:

- Perceived Value of Time (VoT) - Low VoT savings per hour of travel are associated with CAVs because users would be able to make more effective use of their travel time. Shortening their travel time therefore adds less value than would otherwise be the case. The Making Connections programme would increase the cost of car travel through application of the area charge. Therefore, the reduced VoT is likely to affect demand less than what would be the case for trips where VoT forms a larger proportion of the cost of travel. Modelling would be required in order to robustly capture impacts from this change. However, any tests with changes in VoT are basically varying the proportions of costs attributed to travel time and the proposed charge in the total travel costs. It is argued that similar insights can be gained from tests that are already covered by the range of model runs with varying charges, i.e., how transport users would respond if the cost attributed to

travel time is a higher or lower proportion of the total generalised travel cost. It was therefore decided not to model the potential falls in VoT in CAS5 separately at this stage of the business case for the reason of proportionality when similar impacts are already covered in model runs planned; and

- Vehicle Operating Costs (VOCs) – The Technology scenario also assumes a much higher take-up of electric vehicles, bringing down VOCs. User benefits derived from VOC savings as a result of decongestion would therefore be reduced. However, the impact of VOCs as a proportion of the scheme impacts is not large enough for modelling to be proportionate. It was therefore decided to assess the impacts of this scenario qualitatively.

3.7.13. **Decarbonisation scenario (CAS6)** refers to two plausible futures where there is either vehicle-led or mode-balanced decarbonisation. The difference between these two is mainly whether there would be an unspecified government intervention to equalise electric vehicle costs with costs for petrol and diesel vehicles. Its implication on travel demand forecast is through the PPK (pence per kilometre) parameter in the transport model, which would be reflected in changes in the proportion of vehicle related cost in the total travel cost. For the same reasons as those for CAS5 (that VOCs impacts from the proposed interventions is marginal and there are already a range of tests with varying total travel costs), it was decided not to model this separately.

3.7.14. The adopted approach for all the six CAS scenarios is outlined in the table below, based on the rationale described above.

Table 3-22 – Summary of technical approach for CAS

CAS Scenarios	Quantification in the OBC?
1 - High Economy	Yes
2 - Low Economy	Yes
3 - Regional	Yes
4 - Behavioural change	No but can be assessed qualitatively
5 - Technology	No but can be assessed qualitatively
6 - Decarbonisation	No but can be assessed qualitatively

3.7.15. CAS1 to CAS3 have been assessed based on an approach of identifying the extent to which each scenario affects demand growth relative to the central CSRM2 forecasts and then adapting the interpretation of the modelled forecast years to represent alternative forecast years. Details of this approach are set out in

3.7.16. Figure 3-6 and the methodology is the same as has been used for the sensitivity of COVID impacts described below.

3.7.17. The sensitivity testing of these CASs has focussed on impacts captured through the TUBA software, which encompasses journey time savings, vehicle operating costs, user charges, indirect taxes and revenue generation. Other benefit groups are excluded in this analysis and so the tables below are not fully consistent with the details of the Level 1 PVB presented above. To provide a measure for comparison the same group of benefits have been presented for the core set of demand growth assumptions.

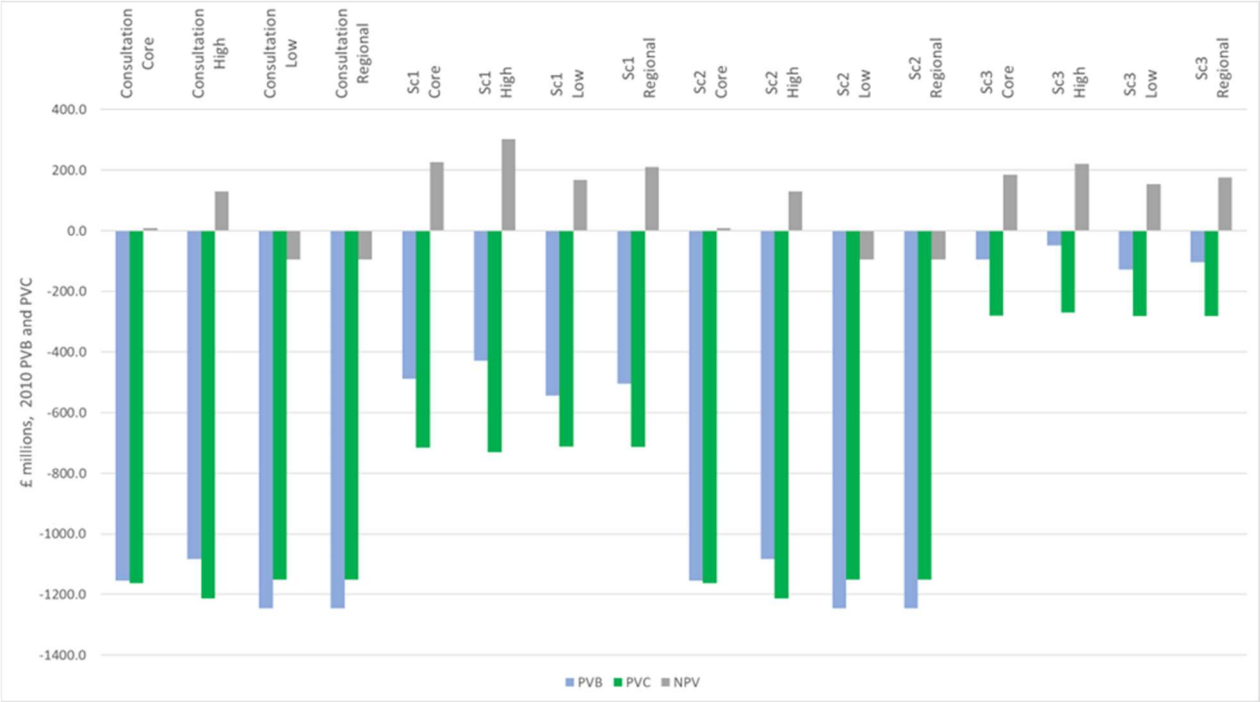
3.7.18. Table 3-23 presents the PVB, PVC and NPV based on this select group of benefits, revenues and costs for the Core Growth, CAS1: High Economy, CAS2: Low Economy, and CAS3: Regional across each of the four scenarios. The results are summarised in Figure 3-4.

Table 3-23 – Economic Impacts of CAS Sensitivity Tests (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Core PVB	-1154.9	-488.6	-1154.9	-95.4
Core PVC	-1163.4	-715.2	-1163.4	-280.8
Core NPV	**8.4**	**226.6**	**8.4**	**185.4**
CAS1 PVB	-1084.2	-428.7	-1084.2	-49.0
CAS1 PVC	-1213.0	-730.7	-1213.0	-270.5
CAS1 NPV	**128.8**	**302.0**	**128.8**	**221.5**
CAS2 PVB	-1246.1	-544.3	-1246.1	-128.4
CAS2 PVC	-1151.1	-711.5	-1151.1	-282.6
CAS2 NPV	**-95.0**	**167.2**	**-95.0**	**154.2**
CAS3 PVB	-1180.1	-503.8	-1246.1	-104.5
CAS3 PVC	-1151.1	-714.3	-1151.1	-280.9
CAS3 NPV	**-29.0**	**210.5**	**-95.0**	**176.5**

3.7.19. These results indicate relatively low levels of sensitivity in either the PVB or the PVC based on the use of the alternative CASs, but as there is a relatively fine balance between benefits and costs the potential impacts on NPVs are more significant.

Figure 3-4 – Economic Impacts of Sensitivity Tests (£m, 2010 PV, market prices)



Uncertainties specific to the proposed interventions

3.7.20. In addition to uncertainties surrounding CAS above, other potential variations to demand response that are specific to the proposed interventions have also been assessed in the OBC, either qualitatively or quantitatively. Findings from these assessments are summarised below:

Table 3-24 – Summary of Qualitative Assessment of Scheme Specific Uncertainties

Source of Uncertainties	Findings
Impacts of working from home	This is already covered by the Behavioural Change CAS so no additional assessment is required in addition to what is outlined in the previous section.
Seasonality of active mode demand	The impact of the Making Connections Programme is in part dependent on the level of mode shift of trips from car to active modes. The extent of this mode shift would be influenced by the varying willingness of people to walk and cycle at different times of year in different weather conditions. These impacts are not well suited to modelling. Overall, the aggregated forecast annual or 60-year impacts are still deemed reasonable to represent the average condition throughout the year. At present, more disaggregated forecasts, such as forecasts for specific months, are not required, which is likely subject to more seasonal variations. No additional assessment is therefore planned

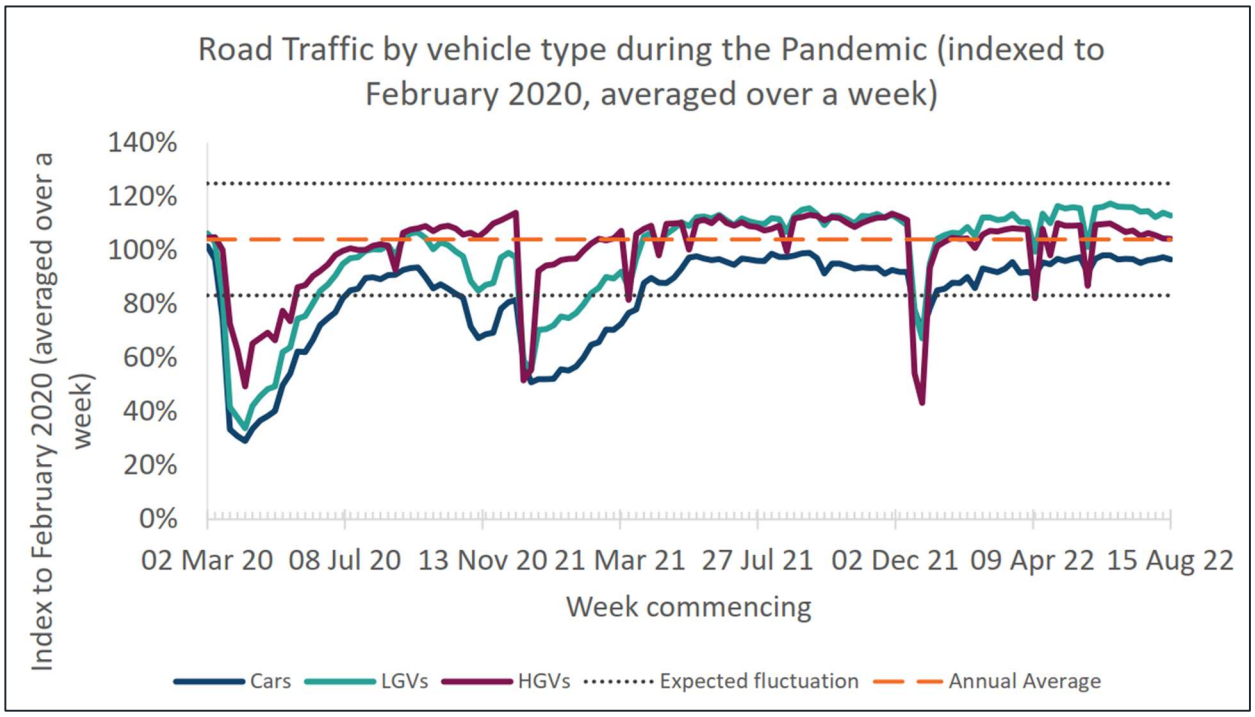
Source of Uncertainties	Findings
Freight demand / behaviour response	it is likely that freight companies would seek to minimise their costs by reducing the number of vehicles required to pay the area charge and that the number of vehicles currently moving in and out of the cordon area may over-represent the number which would eventually be charged. Fleets may be redistributed to ensure smaller numbers of vehicles operate within Cambridge, making a larger number of trips each within the city, or alternative vehicle types such as bike couriers may be used for smaller deliveries. Adjustments to address these potential changes are best dealt with in the financial analysis informing the Financial Dimension, which would cover the financial viability of the proposed interventions
Weekend and off-peak demand	traffic impacts during the non-charging period (as a result of the charge scheme during the weekday) would be qualitatively assessed as CSRM2 does not cover weekend or off-peak periods. The potential displacement of demand to non-charging periods would vary by time period and journey purpose. For time periods where congestion charge is proposed in all options (such as AM and PM peak periods), the scope for displacement is limited as the majority of journeys are for commuting, business or education purposes, which are less flexible than other purposes.
Recovery of travel demand post the COVID pandemic	This is assessed quantitatively and reported in the remainder of this subsection

3.7.21. The last but also potentially the most significant uncertainty is to do with recovery of travel demand in the baseline scenario post the COVID pandemic. CSRM2 has a pre-COVID base year and then the first forecast year is from 2026, so the decline in travel demand during the pandemic has not been explicitly captured in the transport model. Therefore, the risk associated with travel demand recovery post COVID is that the real-world travel demand in the selected forecast years (2026 and 2041) may be materially lower than what was represented in the forecast models. This potential discrepancy would have implications on the forecast behavioural changes and demand (and revenue) related to the proposed STZ.

3.7.22. National Road Traffic Projections 2022 (NRTP2022) reported the road traffic level by different vehicle types from the start of the pandemic to August 2022 as seen in the figure below, where car traffic has remained lower than pre-pandemic levels while particularly LGV traffic has overpassed it.

3.7.23. The report mentioned that in February 2022, traffic (not freight traffic) was 8% lower than 2019 level. Since a 3% background growth would have been expected for all vehicle types over two years, February 2022 traffic was approximately 11% lower than what would have been expected to be without the pandemic.

Figure 3-5 – Changes in Road Traffic During the Pandemic (National)



3.7.24. In addition to the national evidence, local data in Cambridge city has also been assessed using monitored traffic counts on sites within the local road network in 2019, 2020, 2022 and 2023. It is clear from the assessment that local traffic has decreased and that there is clearly 'lost growth' during the pandemic. However, there is no clear pattern of changes by time of day, direction, or routes.

3.7.25. Across the sites with observed data, the reduction in car traffic to or from city centre varies between 5% to 9% in the AM and PM periods in October 2022, in comparison with October 2019. The corresponding reduction during the IP period is about 2% to 3%.

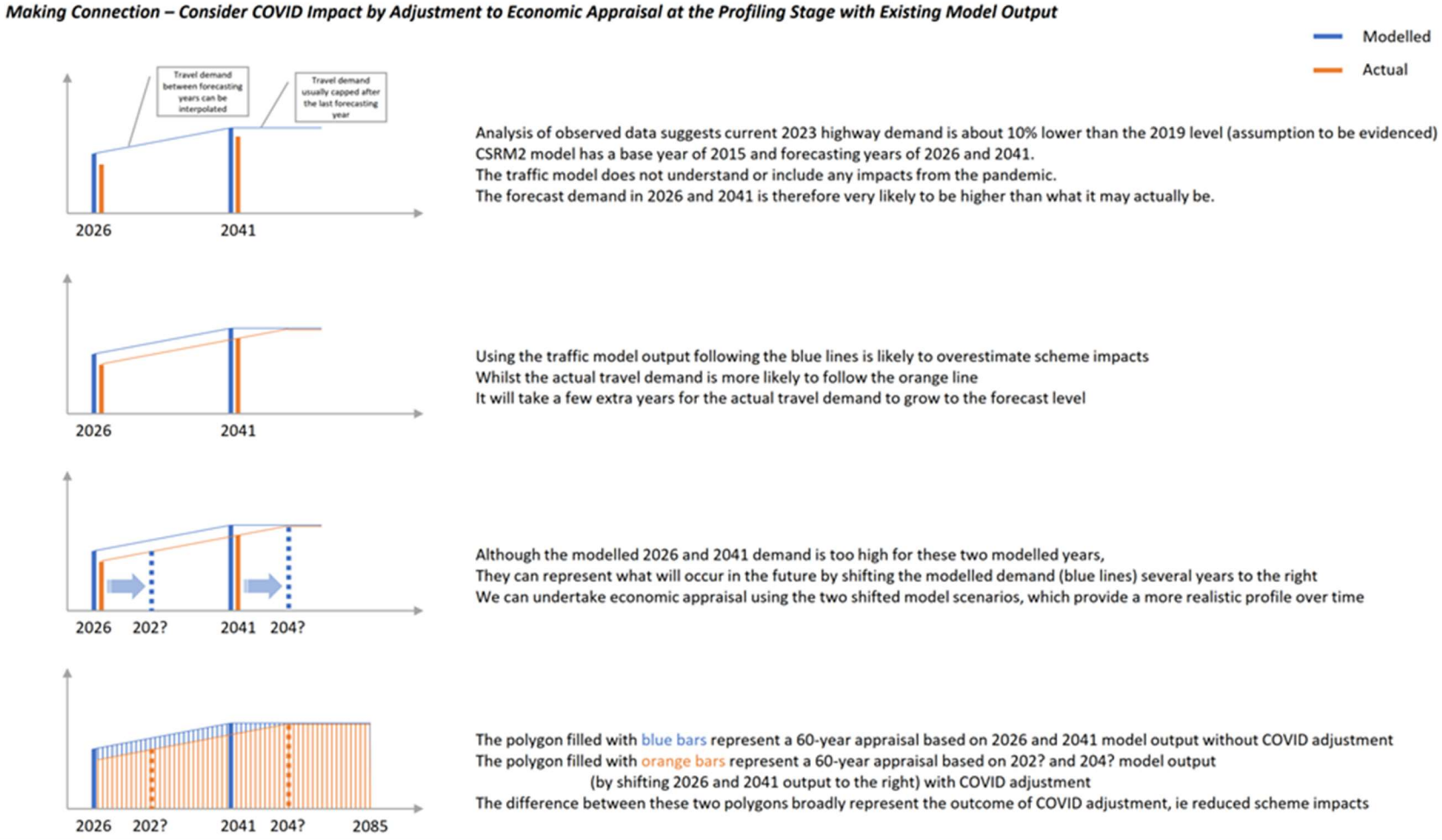
3.7.26. Over the same period, the reduction in goods vehicle traffic is over 20% towards the city centre in the PM peak and away from the city centre in the AM peak. The reduction during the IP period is between 4% and 9%.

3.7.27. The findings summarised above are based on limited local data available for comparison of pre- and post-pandemic conditions in Cambridge. It is also recognised that information is missing for some key routes and there were also major disruptions or roadworks that might have contributed to the data observed. Overall, a potential gap of 10% in car traffic was assumed, i.e., the current actual travel demand could be up to 10% lower than what it was before the COVID-19 pandemic. This assumption was discussed with the CSRM2 team and informed similar sensitivity tests in several investment cases for transport schemes in Cambridge.

3.7.28. The finding from the assessment summarised above suggests that the forecast demand in 2026 and 2041 from CSRM2 is potentially higher than what it might actually be, as travel demand may have not fully recovered to pre-COVID level.

3.7.29. A sensitivity test was therefore carried out to capture potential impacts from this potential gap in the VfM assessment. To improve efficiency in this analysis, a simplified approach was adopted to infer the forecast economic impacts with adjustment for COVID impacts through interpolating or extrapolating based on model runs that are already prepared (i.e., what would have been expected to be without the pandemic). This approach is similar to what was adopted for CAS1 to CAS3 in the previous section. A graphical illustration of the adopted approach is presented in Figure 3-6.

Figure 3-6 – Illustration of Capturing COVID Impacts on TUBA Assessment Through Interpolation and Extrapolation



3.7.30. Following the approach outlined in Figure 3-6, analysis of forecast car travel demand was undertaken to ascertain how many years' growth was approximately equal to 10% increase in car traffic. This provided a basis to explore which future year(s) that the modelled demand in 2026 and 2041 forecast years were likely to represent if the current forecasts were deemed to overstate traffic in the highway network due to reduced demand post COVID-19 , i.e., what is the gap measured in the number of years between the blue and orange bars in Table 3-6.

3.7.31. Findings from the analysis of CSRM2 future car demand forecasts in the Do Minimum scenarios suggest that a 15-year gap between 2026 and 2041 provides about 13% increase in car travel demand (to, from or within Cambridge) on an average weekday, as shown in Table 3-25. Assuming a constant growth rate between 2026 and 2041, interpolation between these two years suggested by 2037 the car traffic would be 10% higher (on an average day). Therefore, for the purpose of this sensitivity test, it was assumed that the current 2026 and 2041 forecasts potentially better represented what would happen in 2037 and 2052, if the model forecasts were about 10% higher than what the real-world demand would be at the same forecast year.

Table 3-25 – Illustration of 10% Difference in Forecast Growth in Car Traffic Based on CSRM2 Model

	Total modelled car demand to, from or within the charge area in Do Minimum			
Year	**AM**	**IP**	**PM**	**All Day**
2026	73,793	143,848	91,071	308,713
2041	81,269	166,543	101,293	349,105
Difference in %	10.1%	15.7%	11.2%	13.1%

3.7.32. Following the assumption above, the sensitivity test about the COVID impact on travel demand was undertaken by re-profiling the forecast impacts over the 60-year appraisal period. Instead of using the 2026 and 2041 forecasts in the designated forecast years, they were shifted to the right by 11 years in the profiling process, i.e., representing 2037 and 2052 forecast years, in the sensitivity test.

3.7.33. To maintain the 60-year appraisal period starting at 2026, benefits and revenues have been extrapolated back from 2041 using the rate of growth between the two forecast years.

3.7.34. As in the case of the CAS sensitivity tests the impacts of COVID have been assessed through TUBA but not across all other areas of economic analysis.

3.7.35. Table 3-26 presents the outcome of this analysis showing the PVB, PVC and NPV under the Core growth assumptions and the COVID adjusted assumptions.

Table 3-26 – Economic Impacts of COVID Sensitivity Tests Based on Conventional User Impacts Only (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Core PVB	-1,155	-489	-1,155	-95
Core PVC	-1,163	-715	-1,163	-281
Core NPV	**8**	**227**	**8**	**185**
COVID PVB	-1,399	-644	-1,399	-191
COVID PVC	-1,111	-699	-1,111	-290
COVID NPV	**-288**	**55**	**-288**	**99**

3.7.36. These results indicate a higher level of disbenefit in the COVID adjusted scenario. This arises because the lower traffic levels post-COVID result in lower levels of existing highway congestion and therefore the decongestion impacts of the STZ would generate lower levels of time saving benefits.

3.7.37. As a result of this change the all-day charge scenarios move from being broadly neutral (based on this limited range of benefits) to having an adverse impact of nearly £300 million.

3.7.38. However, the sensitivity tests presented in Table 3-26 did not cover additional benefits, which amount to approximately £600 million benefit at Level 1 (such as positive impacts on safety and health) and another £100 million benefit at Level 2 (such as reliability impacts). Therefore, the results in Table 3-26 do not suggest that benefits after allowing for COVID impacts on traffic would be negative, only that they would be less positive than would be the case based on demand levels in the CSRM2 transport model.

Uncertainties Surrounding Costs

3.7.39. Forecasts of costs have been developed to include optimism bias uplifts to represent what are currently considered the most likely eventual spend. However, this only represents a central point within a possible range of costs.

3.7.40. Sensitivity testing has been applied to consider the impacts of a 10% increase or decrease in either capital investments or operational costs. A test is also set out to indicate the impact of applying the uplift on capital costs forecast by the QRA of 7% in place of optimism bias.

3.7.41. Results of this testing in Table 3-27 indicate a low level of sensitivity to variations in capital costs as costs form a relatively small part of the total PVC. The tested variations to operating costs have an impact of up to +/-£100m on the NPV in the All Day charge scenario, with lower impacts in other scenarios.

Table 3-27 – Present Value of Costs (£m, 2010 PV, market prices)

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Capital Investment	52	50	52	50
Opex and WLC	153	122	153	122
Bus Improvement Measures	742	395	742	299
Sustainable Travel Measures	172	78	172	66
Total Cost	**1,119**	**644**	**1,119**	**536**

	Consultation Scenario	Scenario 1	Scenario 2	Scenario 3
Total Revenue	-2,282	-1,360	-2,282	-817
Present Value of Cost	**-1,163**	**-715**	**-1,163**	**-281**
Level 2 PVB	-461	-138	-461	189
Net Present Value	**703**	**577**	**703**	**470**
+10% Capital Cost				
Present Value of Cost	-1,158	-710	-1,158	-276
Net Present Value	**697**	**572**	**697**	**465**
-10% Capital Cost				
Present Value of Cost	-1,169	-720	-1,169	-286
Net Present Value	**708**	**582**	**708**	**475**
+10% Operating Cost				
Present Value of Cost	-1,057	-656	-1,057	-232
Net Present Value	**596**	**518**	**596**	**422**
-10% Operating Cost				
Present Value of Cost	-1,270	-775	-1,270	-329
Net Present Value	**809**	**636**	**809**	**519**
Replace Optimism Bias on CAPEX with QRA at 7%				
Present Value of Cost	-1170	-722	-1170	-287
Net Present Value	**709**	**584**	**709**	**477**

3.8 Value for Money Statement

3.8.1. VfM assessment was undertaken in accordance with the DfT Value for Money Framework. It included consideration of all monetised and non-monetised impacts, and sensitivity analyses to determine the level of confidence in the central assessment. Important areas of uncertainty that could affect the VfM categorisation were also explored.

3.8.2. As has been identified in development of the OBC, it is forecast that options considered are likely to return negative costs and benefits. This is a result of the revenue from the area charging element of the scheme offsetting the relatively low implementation and operating cost. Furthermore, the impact of the area charge on users is also in a similar level of magnitude to decongestion benefits.

It is therefore necessary to consider the VfM categories which may occur when revenues exceed costs, as set out in the VfM Framework, and as illustrated in Table 3-28.

Table 3-28 – VfM categories when cost savings are generated

VfM Category	Description
Very High (and Financially Positive)	Proposal generates benefits to wider society and 'pays for itself' in the long-run since outlays are less than revenues and cost-savings combined.
Economically Efficient Cost Savings	Cost savings outweigh benefit losses and thus overall public value is increased, implying value for money.
Potentially Efficient Cost Savings	Benefit losses outweigh cost savings, but only to a limited extent. As a result, if the money returned to the budget were spent on proposals representing at least Medium value for money, public value would increase overall. The ultimate outcome is therefore likely to represent value for money.
Poor (but Financially Positive)	Proposal results in benefit losses that outweigh cost savings to a greater extent. In these cases, even if the money returned was spent on a Medium value for money proposal, it would not lead to an overall increase in public value. Whilst there may be strong strategic, financial, management or commercial reasons for proceeding with these proposals, they are not considered to have a strong economic case.

3.8.3. Assessment in the OBC to date suggests that all scenarios (as listed in Table 3-2) generate material behavioural changes that shift travel demand to sustainable transport modes. The forecast outlays in the appraisal period are less than the forecast revenue generated, so all scenarios deliver ongoing net revenue to invest.

3.8.4. Technical evidence suggests that Scenario 2 (£5 all day charge) is best performing against the established scheme objectives, particularly in terms of the aspired behavioural changes. It is also recognised that this scenario does not fully address concerns recognised in the Autumn 2022 consultation and financial impacts on business, particularly after the free days offered in the early years phase out.

3.8.5. On the other hand, Scenario 3 (£3 peak charge) is the most challenging due to the lower level of revenue forecast in the early years, and therefore has less headroom to offer further discounts such as free days to the public. The forecast behavioural changes, although material, are also the lowest out of all scenarios assessed. This is the result of relatively lower charge proposed, but is also constrained by the limited headroom in the net revenue available to fund more substantial improvements in public transport and active mode measures in order to encourage higher modal shift.

3.8.6. Scenario 1 (£5 peak charge) appears to offer a balanced outcome compared with the other scenarios. The potential positive behavioural changes are not as high as Scenario 1 but still very substantial. Meanwhile, it is able to offer more DERs to address concerns from the

consultation (compared with Scenario 1) and would generate higher net ongoing revenue (than Scenario 3) to invest in public transport and other sustainable transport measures in order to facilitate and safeguard the behavioural changes driven by the proposed area charge.

3.8.7. Based on DfT's categorisation of VfM, as set out in Table 3-28, the Consultation Scenario, Scenario 1 and Scenario 2 would all be classed as demonstrating "Economically Efficient Cost Savings", in that while each results in benefit losses they generate a larger cost saving leading to a positive NPV. The VfM of Scenario 3 would be considered "Very High (and Financially Positive)" as it generates a positive benefit while also returning a cost saving. Each of these ratings should be considered within the context of the limitations of this economic assessment however.

3.8.8. Further to this monetised impact the Business Impact Assessment (Appendix F) has considered the likely impact on different business sectors and in particular has examined the impacts of different DERs on businesses to identify how the proposed scenarios perform in this respect. This analysis has suggested that the peak period £5 charge is most likely to minimise adverse impacts of the charge on local businesses, with provision of free days to users reducing the risk of loss of custom, while discounts to small and medium sized enterprises would help to mitigate costs.

3.8.9. Retail and logistics sectors have been identified as being most at risk if no mitigating measures are put in place. In particular smaller businesses would be most disadvantaged during the early years of operation and so measures to reduce these impacts are recommended.

4 Commercial Dimension

4.1 Purpose

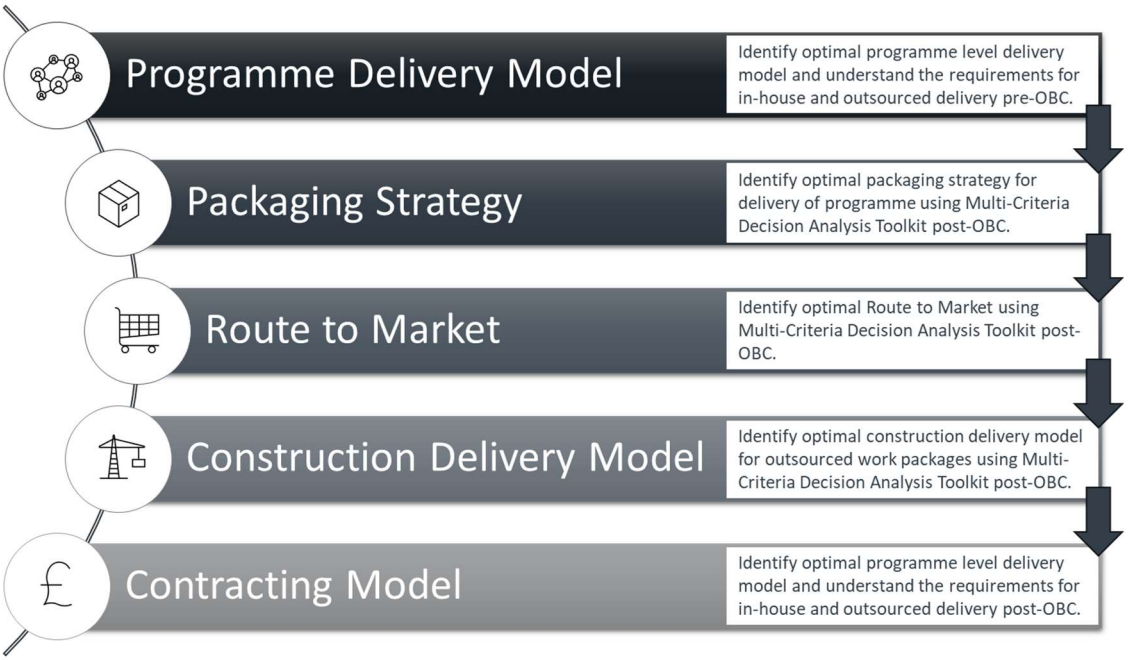
4.1.1. The Commercial Dimension provides evidence of the commercial viability of Making Connections and describes the delivery model, commercial strategy and procurement strategy that would be used to engage the market. It provides evidence on the appropriateness of the selected delivery model and the approach to risk allocation and transfer, contract and implementation timescales and the approach to managing the contract.

4.2 Introduction

4.2.1. This Commercial Dimension is developed through the iterative consideration of a number of key decisions which direct CCC's approach to developing a suitable delivery model, packaging strategy, most appropriate route to market and contracting model.

4.2.2. These individual and successive decisions hinge on several permutations and a balanced approach to these complex decisions. Figure 4-1 introduces the Making Connections commercial approach and key decisions which are needed to inform the Making Connections programme commercial strategy.

Figure 4-1 – Making Connections Commercial Approach



4.2.3. Progress against these decisions and subsequent key considerations would be discussed throughout this Commercial Dimension. Ultimately, each step in this approach would support CCC to deliver their procurement objectives and align the programme with best practice, and key organisational and national policies.

4.2.4. The Commercial Dimension is primarily focused on the procurement and commercial strategy for the STZ and Sustainable Travel Measures (STM). CPCA are separately developing an independent Commercial Dimension as part of its Bus Reform Outline Business Case which is solely focused on the development of an appropriate commercial strategy for the Bus Network Improvements and its selected delivery model.

4.2.5. CPCA's Bus Reform Outline Business Case would support the development of the bus network improvements throughout CPCA's region. Whilst acknowledging this interface, this Commercial Dimension summarises the current commercial status of the Cambridge bus network in Section 4.12, and likely areas for improvement in Section 4.13, but does not cover the procurement and commercialisation of the bus network improvements.

Structure of the Commercial Dimension

4.2.6. The Commercial Dimension has been developed in line with the structure highlighted in Table 4-1. This approach builds on current industry best practice provided in the Construction and Sourcing Playbooks recently published by UK Government.

Table 4-1 – Commercial Dimension Structure

Content	Description	Section
Procurement Timelines	Consideration to the key procurement milestones in the Making Connections programme	4.3
Programme Component Architecture	The component architecture provides a systems view of the varying elements within the programme organised as a framework. This section of the case introduces the component architecture which needs to be delivered for the programme	4.4
Output Specification	The outputs of the Making Connections programme are captured from the design, development, and operational phases for the STZ and STM	4.5
Outline Procurement Strategy	In this section how national, local and regional policy, CCC's procurement objectives and developments in procurement policy would align as part of the outline procurement strategy for the Making Connections programme	4.6
Programme Delivery Model	Introducing the programme delivery model - the form of structural and commercial arrangements to be deployed to meet the Sponsor's requirements.	4.7
Assumptions, constraints & dependencies	Identification of the key programme assumptions, constraints and dependencies for consideration as part of the Commercial Dimension of the programme.	4.8
Programme Contracting Model	The contracting model considers how the programme would contract the supply chain to deliver the programme. This section discusses the contracting options available to CCC.	4.9
Works Packaging Strategy	The Making Connections programme packaging strategy considers how the programme components would be grouped into manageable work packages or units to facilitate planning, scheduling, procurement, and execution of the programme.	4.10
Routes to Market	A discussion on the potential routes to market for the sourcing of consultancy and construction services to deliver the output-based specification.	4.11
Summary of Current Bus Commercial Structure	The section considers the bus commercial structure	4.12

Content	Description	Section
Scope for Bus Commercial Improvements	The section considers the bus commercial improvements	4.13
Contracting Strategy	The contracting strategy would consider the role the supply chain would play, how it would be paid and the proposed risk allocation between the contract parties in the delivery of the Making Connections programme.	4.14
Human Resources Issues	Introducing any human resource issues which are anticipated implementing the delivery and contracting models.	4.15
Contract Management	This section considers the contract management arrangements associated with the delivery of the STZ and STM.	4.16
Summary	This section would summarise the content of this Commercial Dimension	4.17

4.3 Procurement Timescales

4.3.1. Table 4-2 summarises the programmes procurement timelines. Post OBC the delivery models would be refined further, and a strategy developed. Following this, the delivery models would need to be market tested to get feedback.

4.3.2. There are likely to be multiple procurements on the programme, timescales for which will be informed by market testing. Procurement would likely need to start in Q1/Q2 2024 with an end date to be confirmed.

Table 4-2 – Procurement Timescales

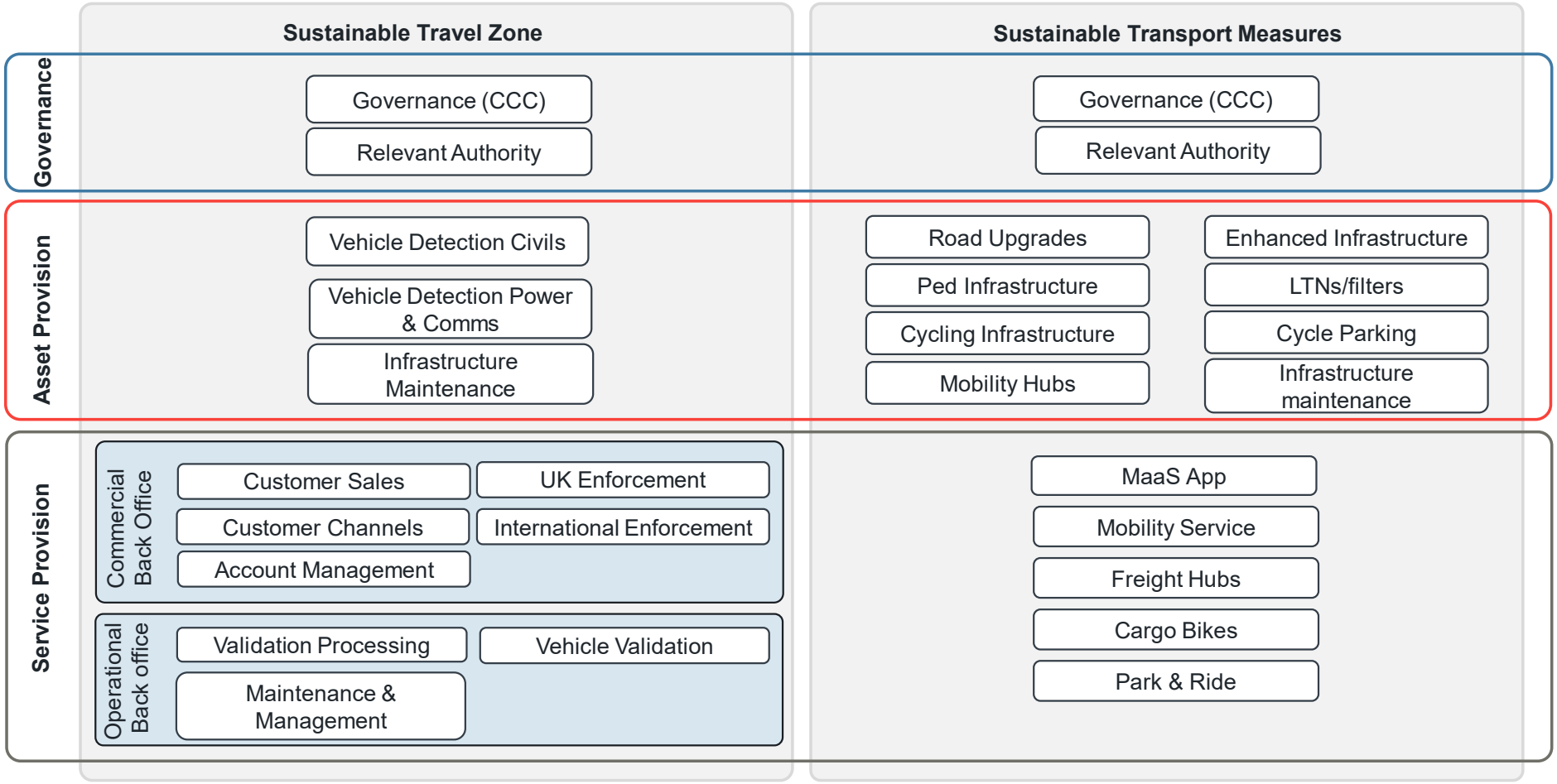
Milestone	Date
Delivery model refinement & delivery strategy development	Q3/Q4 2023
Market testing	Q4 2023
Procurement start	Q1/Q2 2024

4.4 Programme Component Architecture

4.4.1. The component architecture provides a systems view of the varying elements within the programme organised as a framework. This framework enables a greater level of detail when considering potential delivery model approaches for the programme by considering whether specific components can be delivered using an in-house, under a hybrid model or through an outsourced model.

4.4.2. The STZ and STM component architectures are broken down into three thematic category groups of governance components, asset provision and service provision. Grouping the components by these three thematic category groups allows the architecture to be made consistent, supports the development of the work package strategy and supports a deeper understanding of the complexity of the delivery environment. The programme component architecture is captured in Figure 4-2 below.

Figure 4-2 – STZ and STM Component Architecture



4.5 Output-Based Specification

4.5.1. This section summarises the requirement in terms of outcomes and outputs. The Commercial Dimension is based on the delivery of strategic outcomes and outputs, against which alternative procurement and contractual options are assessed. It outlines how the proposed scheme would be procured and its commercial strategy.

4.5.2. The output-based specification summarises the scheme's functional requirements in terms of outputs. These outputs have been developed considering the component architecture of the delivery model assessment and are presented in Table 4-3 and Table 4-4.

Table 4-3 – Sustainable Travel Zone (STZ) – Output-based Specification

Phase	Outputs
Design and planning	• Design of the civil infrastructure for the vehicle detection assets • Design of the power and communications for the vehicle detection asset • Development of the business case for the STZ • Advanced works, including site investigations and any associated utility diversions • All associated planning applications
Construction	Construction of the vehicle detection infrastructure which includes: • Installation of the vehicle detection assets • Power assets to energise and run the detection infrastructure
Operation and maintenance services	Maintenance and operation of the vehicle detection infrastructure and associated back-office services: • Operation of account management and customer sales channels • UK enforcement and international enforcement services • Vehicle detection and validation processing infrastructure • Maintenance of vehicle detection infrastructure

Table 4-4 – Sustainable Transport Measures – Output-based Specification

Phase	Outputs
Design and planning	• Design of the civil infrastructure for the STM • Development of business cases for each element of the STM • Advanced works, including site investigations and any associated utility diversions • Design of the MaaS app • All associated planning applications
Construction	Construction of the STM infrastructure which includes: • Installation of infrastructure e.g. Low Traffic Neighbourhoods • New cycle hub infrastructure • Development of the MaaS app

Phase	Outputs
Operation and maintenance services	Maintenance and operation of the STM infrastructure, and all associated back-office services: • Maintenance of the new infrastructure • Maintenance of the new services

4.6 Outline Procurement Strategy

4.6.1. CCC's capital investments and sustainable procurement strategy aims to deliver CCC's vision to create a "greener, fairer and more caring Cambridgeshire". The sustainable procurement strategy outlines how the Council would align to local, regional, and national policy requirements in a sustainable manner, committing CCC to:

- Support local businesses and the third sector;
- Increasing delivery of social value;
- Contributing to the Council's Net Zero targets;
- Delivering best value outcomes; and
- Having robust, compliant, and transparent procurement processes.

4.6.2. The Making Connection programme's vision for procurement seeks to achieve the best possible social value outcomes, support the climate ambitions of the partnering organisations, give value for money targets and legal compliance for the stakeholder organisations involved.

4.6.3. CCC's procurement vision aligns to the Commercial Playbooks published by the Cabinet Office. The four different Commercial Playbooks, which apply to Central Government Departments and their Arm's Length Bodies, set out principles, rules and guidelines with the aim of maximising the value-added potential while supporting the growth and capability of internal organisations.

4.6.4. In June, the Cabinet Office published Procurement Policy Note (PPN) 06/23. This PPN provides guidance on the application of the Commercial Playbooks to Central Government departments and Arm's Length Bodies. It presents an advancement in the government's procurement policy while consolidating the findings from previous PPNs. It brings together lessons learned from the past and aims to systematically change the government's approach to risk, sustainability, and innovation.

4.6.5. The PPN further clarifies the policies and guidance published as part of the Playbooks. It places emphasis on the in scope organisations to adopt the polices driven by the Playbooks to support better outcomes and value for money in the delivery of interventions for the public and advises that the playbooks are considered best practice for the Local Government sector.

Procurement Objectives

4.6.6. The procurement objectives for the programme are identified in Table 4-5. These would support the selection and definition of an optimal procurement strategy – including route to market – and later considerations to the commercial strategy.

4.6.7. These objectives have been ranked to support further analysis of the most appropriate option, in line with the programme's key procurement considerations.

Table 4-5 – Procurement Objectives

Rank	Procurement Objective	Considerations
1	Deliver social value outcomes in line with local and national policies	Ensure the scheme is developed with social value at the centre of decision-making considerations, including involvement of local and regional supply chain, diversity and inclusion and other elements of community engagement.
2	Deliver environmental outcomes in line with local and national policies	Ensure the scheme is developed in a sustainable way that minimises the impact on the environment i.e. carbon reduction, social value, local supply chain involvement etc.
3	Deliver value for money for the programme	Ensure appropriate Value for Money while allowing innovation and consideration of whole-life costs.
4	Appropriately allocate risks to the organisation best place to manage the uncertainties	Ensure risk is allocated fairly based on who is best able to manage risk, appetite to retain risk or incentivise a contractor to manage project risk.

Outcome-Based Approach

4.6.8. An outcome-based approach is a transformational shift in the delivery of projects in the construction industry, focussing on the whole life value, performance, sustainability and cost of the service delivered.

4.6.9. The Construction Playbook sets out best practice guidance to support the delivery of projects with an outcome-based approach. It sets out a clear methodology, focussing on clear and measurable outcomes at the outset of a project that contribute to the Government's social, economic and environmental policies. Delivering projects in line with this guidance would drive continuous best practice in the industry, unlocking innovation across the supply chain whilst understanding the ambitions of the contracting authority.

4.6.10. CCC would develop outcomes for the Making Connections programme which align to the organisation's procurement strategy. These outcomes would be measured through the construction and operation of the programme, supporting better outcomes. An outcome-based delivery strategy would be considered in further detail in parallel with the construction delivery model, contracting model and work packaging strategies post OBC.

4.7 Programme Delivery Model

4.7.1. A Delivery Model Assessment (DMA) is the process of identification the optimal delivery model for a project or programme. For this programme, the DMA included a series of steps. These were to develop an understanding of the delivery environment complexity, compile a long list of delivery model options based on the component architecture, capture and prioritise CCC's delivery model strategic and operational evaluation criteria. The outcome of this exercise was an initial delivery model recommendation for the STZ and STM.

Delivery Environment Complexity Analytic (DECA)

4.7.2. The DECA is a project management tool that is designed to help identify and manage the complex environments that exist within large-scale projects. It was created by the National Audit Office (NAO) in 2013 to help define the level of complexity in the delivery environment and support the identification of the Making Connections strategic risks profile.

4.7.3. The strategic risk outputs of the DECA have been incorporated into the risk management process for the programme. Capturing the complexities and strategic risks as part of the DECA supports the development of a delivery model which addresses or mitigates some of these key challenges.

Delivery Model Long List

4.7.4. A long list of potential delivery model approaches was developed based on the component architectures for the STZ and STM. The long lists are captured in Figure 4-3 and Figure 4-4. These figures capture the long lists developed with shortlisted delivery models highlighted with a yellow outline. The shortlisting was achieved by assessing the delivery model long list against a list of critical success factors. Non-compliance to this list resulted in the elimination of the delivery model from further assessment. This process prevented any non-deliverable delivery models passing through to the final evaluation assessment.

Figure 4-3 – STZ Delivery Model Long List

Component	Sub-component	In-house	Hybrid 1	Hybrid 2	Hybrid 3	Hybrid 4	Hybrid 5	Hybrid 6	Hybrid 7	Outsourced	Capability	Capacity	Preferable delivery approach
Governance		I	I	I	I	I	I	I	I	I			**In-house delivery**
Governance	N/A										✓	✓	CCC as both Client and Local Transport and Highway Authority will be responsible for governance and assurance.
Relevant Authority	N/A										✓	✓	
Asset Provision (Construction and Maintenance)		I	H	H	I	I	H	H	O	O			**Hybrid/Outsourced delivery**
Vehicle Detection Civils	N/A										✗	✗	CCC do not have direct labour capability and capacity to construct and deliver infrastructure assets. CCC regularly outsource the construction and maintenance of their assets.
Power & Comms	N/A										✗	✗	
Civils Maintenance	N/A										✗	✗	
Service Provision		I	H	H	H	H	H	O	H	O			**Hybrid/Outsourced delivery**
Operational Back Office	Validation Processing										✓	✗	International enforcement outsourced CCC have capability for UK Enforcement, Customer sales and payments, and channels. Validation Processing, Vehicle Detection, Maintenance & management outsourced – no in-house capability
	Vehicle Detection										✓	✗	
	Maintenance & Management										✗	✗	
Commercial Back Office	Customer Sales and Payment										✗	✗	
	Customer Channels										✗	✗	
	Account Management										✗	✗	
	UK Enforcement										✓	✓	
	International Enforcement										✗	✗	

Figure 4-4 – STM Delivery Model Long List

Component	Sub-component	In house	Hybrid 1	Hybrid 2	Hybrid 3	Hybrid 4	Hybrid 5	Hybrid 6	Hybrid 7	Outsourced	CCC Capability	CCC Capacity	Preferable delivery approach
Governance		I	I	I	I	I	I	I	I	I			**In-house delivery**
Governance	N/A										✓	✓	CCC as Client and Local Highways and Transport authorities are responsible for governance
Relevant Authority	CCC										✓	✓	
Asset Provision (Construction and Maintenance)		I	O	I	H	H	H	H	H	O			**Outsourced Delivery**
Infrastructure Delivery	Road Upgrades										✗	✗	CCC do not have a direct labour organisation which has capability and capacity to construct and deliver infrastructure assets. CCC regularly use outsourced construction services to deliver new assets. CCC also currently use outsourced contractors to maintain infrastructure assets across the county due to limited in-house capability and capacity.
	Ped Infrastructure										✗	✗	
	Cycling Infrastructure										✗	✗	
	Enhanced Infrastructure										✗	✗	
	LTNs/filters										✗	✗	
	Cycle Parking										✗	✗	
	Mobility Hubs										✗	✗	
Infrastructure Maintenance	N/A										✗	✗	
Service Provision		I	I	O	I	O	O	H	O	O			**Outsourced delivery**
MaaS App	N/A										✗	✗	CCC as the local Transport authority will take on the Client Role outsource the delivery of these services to the market.
Mobility Service	N/A										✗	✗	
Freight Hubs	N/A										✗	✗	
Cargo Bikes	N/A										✗	✗	
Park & Ride	N/A										✗	✗	

Strategic and Operational Evaluation Criteria

4.7.5. Evaluating and selecting an optimal delivery model requires assessing potential delivery model approaches against a set of strategic and operational evaluation criteria for the delivery model. This approach enables the objective assessment of which delivery model would be considered optimal for the Making Connections programme. It adopts an analytical, evidence-based approach which ensures the selection of an optimal delivery model is aligned with an organisation's outcomes.

4.7.6. These criteria were discussed and agreed with the CCC Working and Steering groups to enable an objective assessment and comparison of the shortlisted delivery model approaches. The criteria also align best practice guidance in the Sourcing Playbook. The strategic and operational criteria are captured in Table 4-6.

Table 4-6 – Making Connections Strategic and Operational Evaluation Criteria

Criteria	Description
C1 – Service Delivery	How well would the delivery model guarantee ongoing service quality, innovation and continuous improvement? How complex would the management structures be? How difficult would it be to manage any SLAs and KPIs?
Criteria C2 – Transition & Mobilisation	How easy would it be to transfer existing services into the new model? If this is a new service, what challenges would you face setting up and mobilising the service? Consider issues such as recruitment (or TUPE implications), timescales and systems developments.
Criteria C3 – Strategy & Policy	How well does the delivery model aligns with departmental and government strategies and policies? How would it ensure delivery of strategic objectives, such as SME engagement, equalities or social value?
Criteria C4 – People & Assets	Would the capabilities and skillsets needed, and existing capacity (internal or in the external market) be available? What flexibility would you need (e.g., if volumes change) and how well can the delivery option meet these needs? What would the training and recruitment impact be? What other investments may be required and who would own any assets (including intellectual property)?
Criteria C5 – Risk & Impact Profile	Identify the commercial and operational risks that may impact the delivery of services. Who is best placed to manage these risks and which delivery model best mitigates these risks? Identify the risks that may impact the value profile. Who is best placed to manage these risks and what impact would this have on where activities sit?

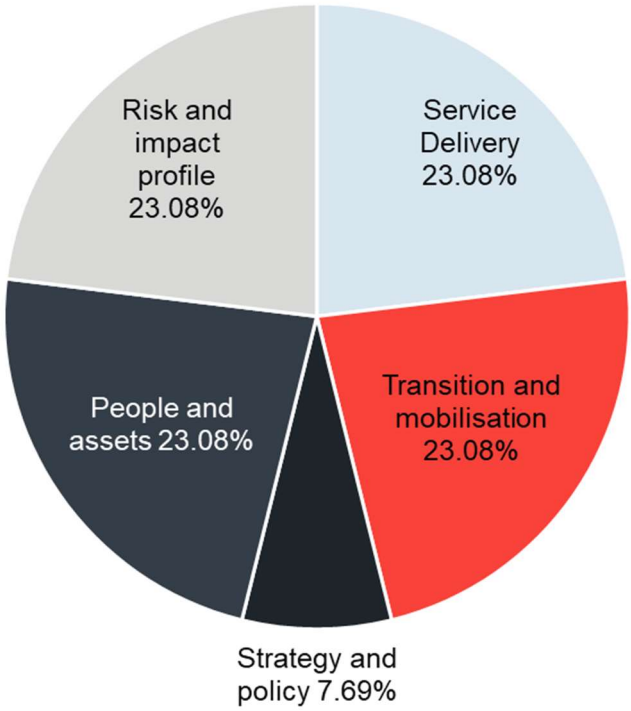
Evaluation Criteria Prioritisation

4.7.7. A workshop was held with senior decision-makers to debate which operational and strategic criteria would have the greatest influence on the delivery model decision and their relative importance. This prioritisation allowed the organisational priorities to be reflected in the emerging delivery model recommendation.

4.7.8. Undertaking a pairwise comparison exercise for the criteria, the outcome of this ranking exercise is captured in Figure 4-5. This figure highlights that a number of the criteria –

Service Delivery, People & Assets, Transition & Mobilisation and Risk & Impact Profile all have equally rate.

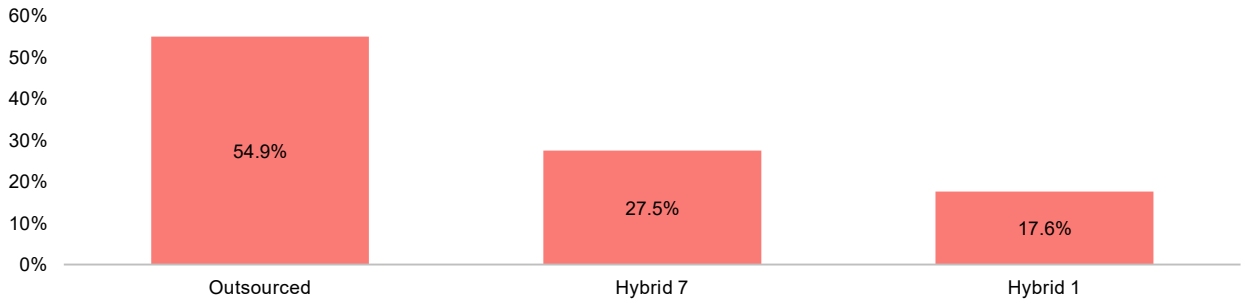
Figure 4-5 – Output of the Evaluation Criteria Prioritisation



Optimal Delivery Model Selection

4.7.9. In summary, this initial assessment highlights a strong weighting towards an outsourcing model for the delivery of the STZ and STMs (see Figure 4-6). This initial conclusion is based on industry best practice commercial advisory work that supported the series of workshops held with senior officers. An outsourcing approach mitigates the concern regarding limited capability and capacity within CCC to in-house the provision of many of the components.

Figure 4-6 – Results of the STZ Delivery Model Multi-Criteria Analysis



4.7.10. This initial recommendation is likely driven by the outsourced model's performance in meeting the Transition & Mobilisation, People & Assets and Risk & Impact Profile criteria – all of which are highly important criteria to CCC.

4.7.11. From the STM perspective, the outsourced model continues the business-as-usual approach which CCC have used to deliver similar interventions throughout the County.

4.8 Assumptions, Constraints and Dependencies

4.8.1. In developing the initial delivery models for the STM and STZ, several assumptions and constraints have been captured. Each of these would be tracked and managed throughout the development of the procurement and commercial strategies. No dependencies of note have been captured while developing the commercial and procurement strategy.

Assumptions

4.8.2. Table 4-7 captures the assumptions considered while developing the commercial and procurement strategy for STZ and STM. These assumptions feed into the risk and assumptions management process for the programme.

Table 4-7 – Commercial and Delivery Model Assumptions

Assumption ref	Assumption	Justification
A1	There would be market appetite to implement the proposed delivery model	Without market testing, it is assumed that there would be the market appetite to implement the delivery model proposed. If untrue, the delivery model would need to be re-visited or altered as the programme develops, potentially slowing the FBC programme. The Delivery Model would be market tested post-OBC.
A2	There would be market appetite to develop and deliver the proposed work packaging strategy proposed	Without market testing, it is assumed that there would be the market appetite to implement the delivery model proposed. If untrue, CCC may not achieve best possible value for money from their procurement exercises. The work packaging strategy is to be market tested post OBC.
A3	Changes in the political landscape may impact the delivery model	During the lifecycle of programme, the political and policy landscape could change. This could drive a change in direction to in-source more delivery or outsource more to the supply chain, thus impacting the delivery model decisions made at the OBC stage.

Constraints

4.8.3. The following constraints have been captured while developing the commercial and procurement models for STZ and STM. Table 4-8 lists these constraints.

Table 4-8 – Commercial and Delivery Model Constraints

Reference	Constraints	Justification
C1	CCC's capacity to manage the outsourced delivery models	CCC would be constrained by their internal capacity to manage all commercial arrangements of an outsourced delivery model
C2	CCC capability to manage the outsourced delivery models	CCC would be constrained by their internal capability to manage all commercial arrangements of the outsourced delivery model
C3	CCC's systems and processes	CCC would be constrained by their internal systems and processes to manage all commercial arrangements of the outsourced delivery model
C4	Existing commercial arrangements for asset and maintenance services	If there is a change in the delivery model from the existing, the existing commercial arrangements would need to be updated or changed.

4.9 Programme Contracting Model

4.9.1. The appropriate contracting model for the Making Connections programme would depend on several factors. This would include the level of specification maturity, risk allocation and alignment to CCC's procurement objectives.

4.9.2. Table 4-9 summarises the range of contracting models available to CCC and the advantages and disadvantages of both. This longlist would be taken forward for further consideration post-OBC.

Table 4-9 – Programme Contracting Models

Procurement Strategy	Advantages	Disadvantages
Public Ownership		
Traditional Single Stage Consultant develops design in partnership with Client before competitive tenders are invited and before the main works contract is let. The Contractor appointed to deliver works (possibly including some level of Contractor design post-award) under a lump sum or a re-measurable contract.	• Established procurement route • The client develops the specification, manages risk and retains control and flexibility to change the specification • Award of contract on the lowest price basis /best value demonstrating Value for Money (potentially using quantities which may vary at completion) • Construction costs can be accurately determined in advance • The Contractor assumes responsibility and financial risk for the delivery of the design	• No incentive for a Contractor to innovate • No link between design and construction or Contractor input to design. • The nature of risks is not fully realised at the point of award resulting in the potential for an increase in outturn cost and delays with completion. • A detailed design is required in advance of procurement. • The sequential nature of design/construction extends the delivery duration • Can create an adversarial relationship between the contract parties • Further detailed design post contract award may result in programme delays
Design and Build The main Contractor is appointed to design and construct the works. They act as a single point of responsibility for delivering the project. Either a single-stage or two-stage tender process can be used to procure and appoint.	• Integration of design and construction leads to efficiencies in cost and time • Single point of responsibility for the Client resulting in lower a potentially reduced Client risk profile • Stimulates innovation, reducing cost • Price certainty can be obtained before commencement • Risks are identified and allocated during the procurement phase	• Detailed design, specification or requirements are required • There is reduced competition with fewer companies interested • The Contractor takes on greater risk and price risk into the estimate (increasing scheme costs) • Lack of flexibility to change the specification • In-contract scope change can be expensive • Delay to the delivery programme to allow for Contractor design development • Quality may be overridden by cost-efficiency • Limited design liability

Procurement Strategy	Advantages	Disadvantages
Management Contracting The works are constructed by several different contractors who are contracted to a management contractor. The management Contractor is generally appointed by the client early in the design process	• Overlap of design and construction leads to time efficiencies • Management Contractor and works Contractors can contribute to design development • Works packages can be let competitively within shorter procurement windows and market reflective pricing at different stages • Allows for scope changes later in delivery with lower impact due to phased delivery approach of trade packages of work	• A high-quality design brief is required as design completion would overlap construction • Lack of price certainty before letting construction contract • Experienced management Contractor required to secure successful delivery • Delays to design completion can impact the schedule and be costly • Procurement of works Contractors can impact on schedule
Construction Management The client appoints a design team and Construction Manager to oversee the delivery of the works. The works are then constructed by several different trade Contractors. The Construction Manager role is to manage, programme and coordinate the design and construction	• Time-saving due to overlap between design and construction • Contractors and trades can contribute to the design phase • Clear roles and responsibilities • The direct contractual relationship between client and trade Contractors results in increased price/cashflow certainty • Allows for scope changes later in delivery within lower impact due to phased delivery approach of trade packages of work	• Price and time certainty is not available until all work packages have been let • A detailed and clear brief is required to ensure quality delivery • An experienced delivery team is required • High levels of informed and pro-active communication management are required for successful delivery
Partnering / Alliancing Development of cooperative and collaborative relationships to improve project delivery performance. Usually combined with a traditional construction procurement strategy to align clients and Contractors	• Reduction in the number of contractual disputes once collaborative relationships established • Allows for early supply chain involvement in the project • Based on an open book style and a win/win approach • Greater levels of design integration within the construction process	• Success depends on all partners acting in a similar spirit and abiding by the rules • Requires additional client inputs and resources compared to more traditional projects • There is a potential learning curve for inexperienced parties

4.9.3. This selection of the optimal construction delivery model would be explored further post-OBC in parallel with the packaging strategy development. A multi-criteria decision-making tool would be used to inform the selection of the contracting model.

4.10 Work Packaging Strategy

4.10.1. The packaging strategy refers to the process of breaking down the components of a project or programme into manageable work packages or units. This facilitates planning, scheduling, procurement, and execution of the programme. It involves a review to group activities or tasks which could be related or similar packages. By dividing the project into smaller, more manageable units, work packaging allows for better planning and allocation of resources, reduces dependencies, and enables parallel work streams to progress simultaneously.

4.10.2. The purpose of the work packaging strategy for the Making Connections programme is to facilitate efficiency, coordination, and productivity for the programme. The packaging strategy would consider a risk-based approach and is underpinned by the STZ and STM component architectures.

4.10.3. The outcome of this risk-based exercise might suggest potential benefits, in either grouping work packages, or breaking them down further. This approach is in-line with best practice considered by the IPA Route map's procurement module.

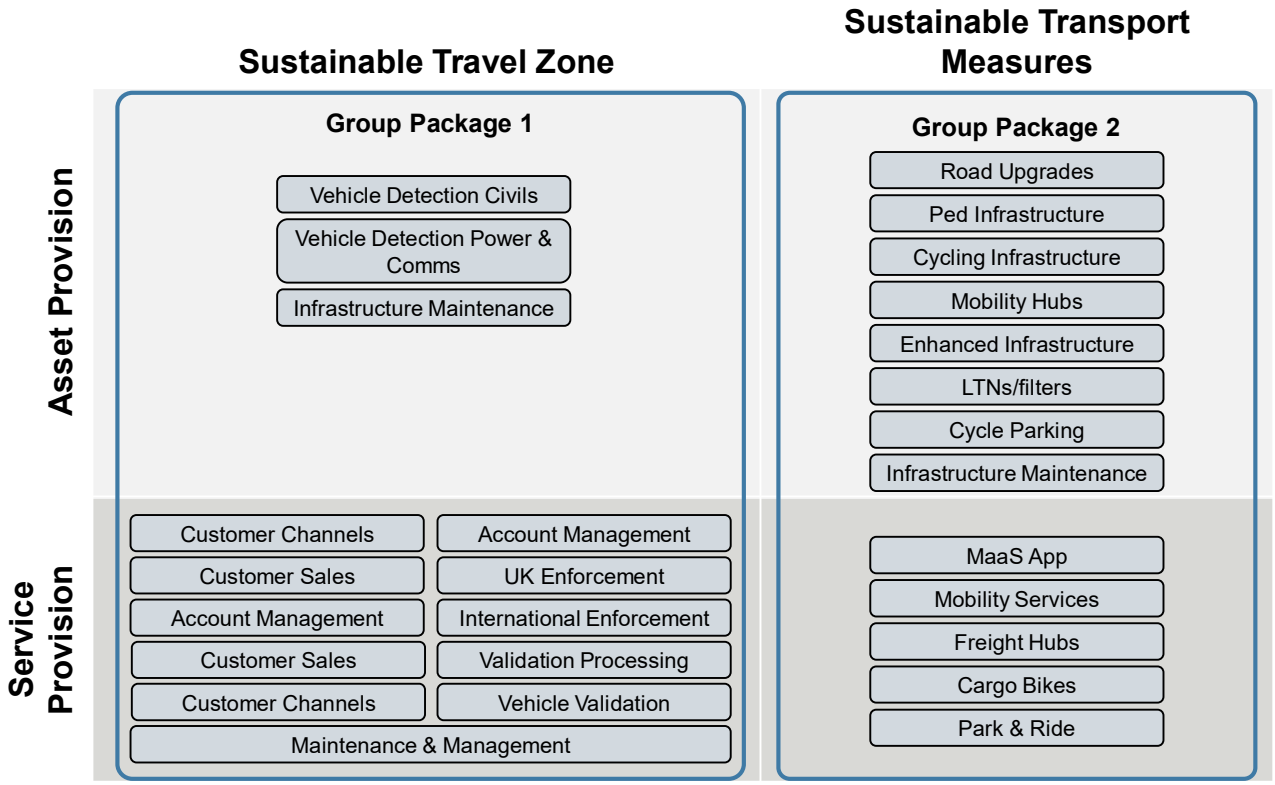
Outline Work Packaging Strategy

4.10.4. Two outline packaging proposals have been identified for the Making Connections programme. These have been developed on the basis that the STM and STZ would both largely be outsourced to the supply chain for delivery.

Option A – Vertical Packaging Strategy

4.10.5. A vertical packaging strategy groups both the asset and service provision components by STM and STZ 'projects'. The result of this is the grouping of the asset and service components. This is captured in Figure 4-7.

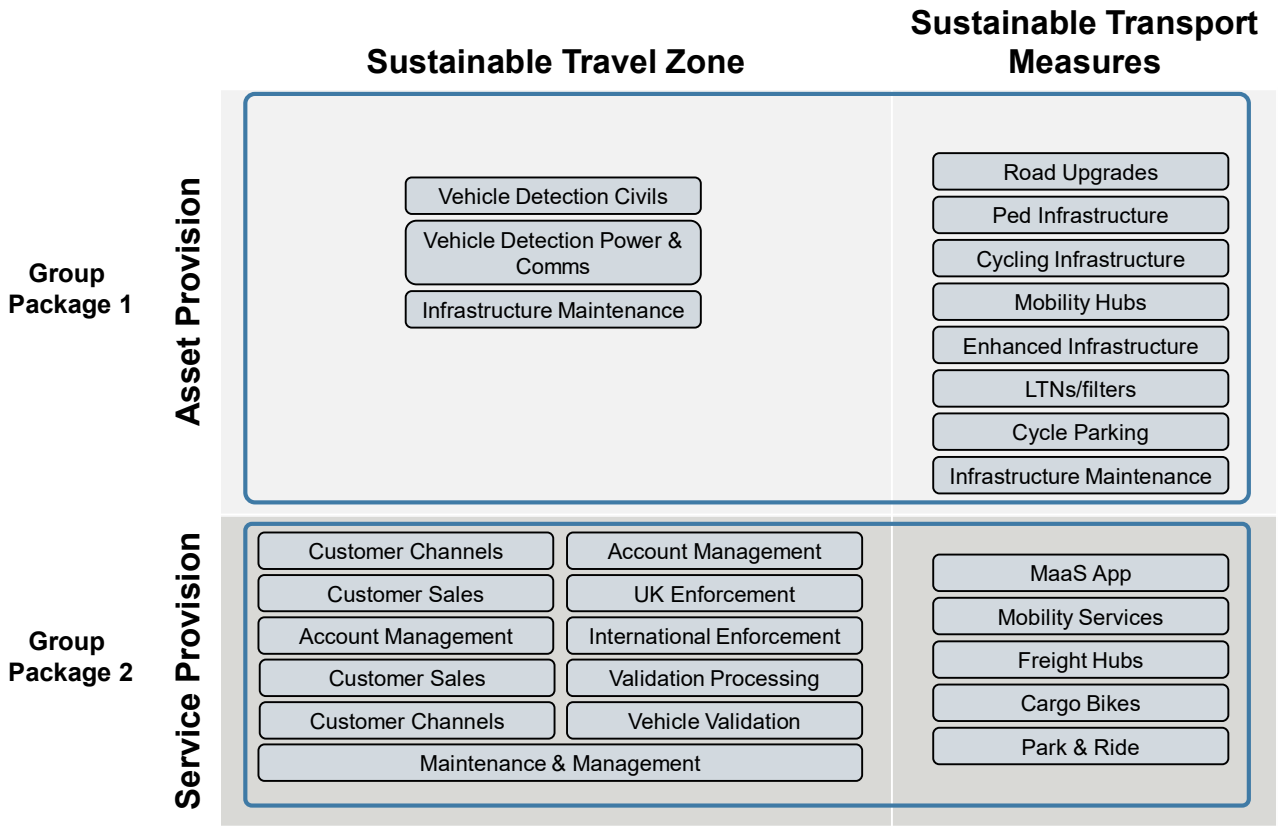
Figure 4-7 – Option A - Vertical Packaging Strategy



Option B – Horizontal Packaging Strategy

4.10.6. A horizontal packaging strategy would compile the asset provision components from both STZ and STM together and service provision components from both the STM and STZ together. This is captured in Figure 4-8.

Figure 4-8 – Option B - Horizontal Packaging Strategy



4.10.7. Post-OBC Option B would be explored further. Grouping the components by asset and service provision would favour the capability and capacity of the market. The Option A packaging strategy would likely reduce the value for money that CCC can achieve through the procurement process due to the need to traditional asset providers to partner with traditional service providers, likely where it is not needed.

4.10.8. The packaging strategy would be refined following a market testing exercise post-OBC.

4.11 Routes to Market

4.11.1. The size and complexity of the Making Connections programme provides several different routes to market for the procurement the Making Connections programme. This could include a new procurement exercise under the Public Contract Regulations (PCR) 2020 or the use of an existing framework.

4.11.2. A PCR compliant procedure would allow CCC to explore an open procedure, restricted procedure, competitive dialogue procedure or competitive procedure with negotiation. This

would provide CCC with flexibility to create a new framework to deliver the outputs of the programme. A supplier could qualify for the works through direct award or a later mini-competition for the packages of work.

4.11.3. Several factors would inform the choice of the most appropriate route to market. This would include the work packages being procured, how the route to market influences the risk allocation and pricing approach of the contract strategy and ensuring the route aligns with CCC's procurement objectives.

4.11.4. Likewise, CCC have access to existing frameworks. These existing frameworks would give CCC access to pre-qualified contractors to deliver the scheme, potentially offering the programme procurement speed and compliance. The existing frameworks available to CCC are captured over the following pages. These are separated by Consultancy and Construction frameworks.

PCR 2015/2020 Procurement Procedures

4.11.5. The new 'Find a Tender Service' (FTS) is the new UK e-notification service where notices for new procurements are required to be published in place of the Official Journal of the European Union's Tenders Electronic Daily (OJEU/TED).

4.11.6. This new publication applies to all public sector tenders valued above £4,733,252 (for infrastructure projects) which must be advertised.

4.11.7. Four options within the FTS procurement process have been considered:

- Open Tender
- Restricted Tender
- Competitive with Negotiation
- Competitive Dialogue

4.11.8. These are described as follows:[130]

Open Procedure

4.11.9. This procedure is often used for the procurement of commodity products which do not require a complex tender process in order to be purchased.

4.11.10. This procedure allows an unlimited number of interested parties to tender against defined parameters. There are no restrictions (e.g., pre-qualification) on the parties who are permitted to tender, meaning that some parties may not be suitable to carry out the work. This procedure is straightforward and transparent but can attract many potential bidders (which would require a greater degree of assessment and resource requirements).

[130] Adapted from https://www.procurementjourney.scot/sites/default/files/documents_library/Issue%20ITT%20-%20OJEU%20Process%20Timescales%20Document.pptx

Restricted Procedure

4.11.11. This is a two-stage procedure. The first stage allows the contracting authority to set the minimum criteria relating to technical, economic and financial capabilities that the potential bidders must satisfy. Following evaluation of the responses to the first stage, typically five bidders (unless fewer qualify) are invited to tender in the second stage.

Competitive Dialogue

4.11.12. This procedure is appropriate for complex contracts where contracting authorities:

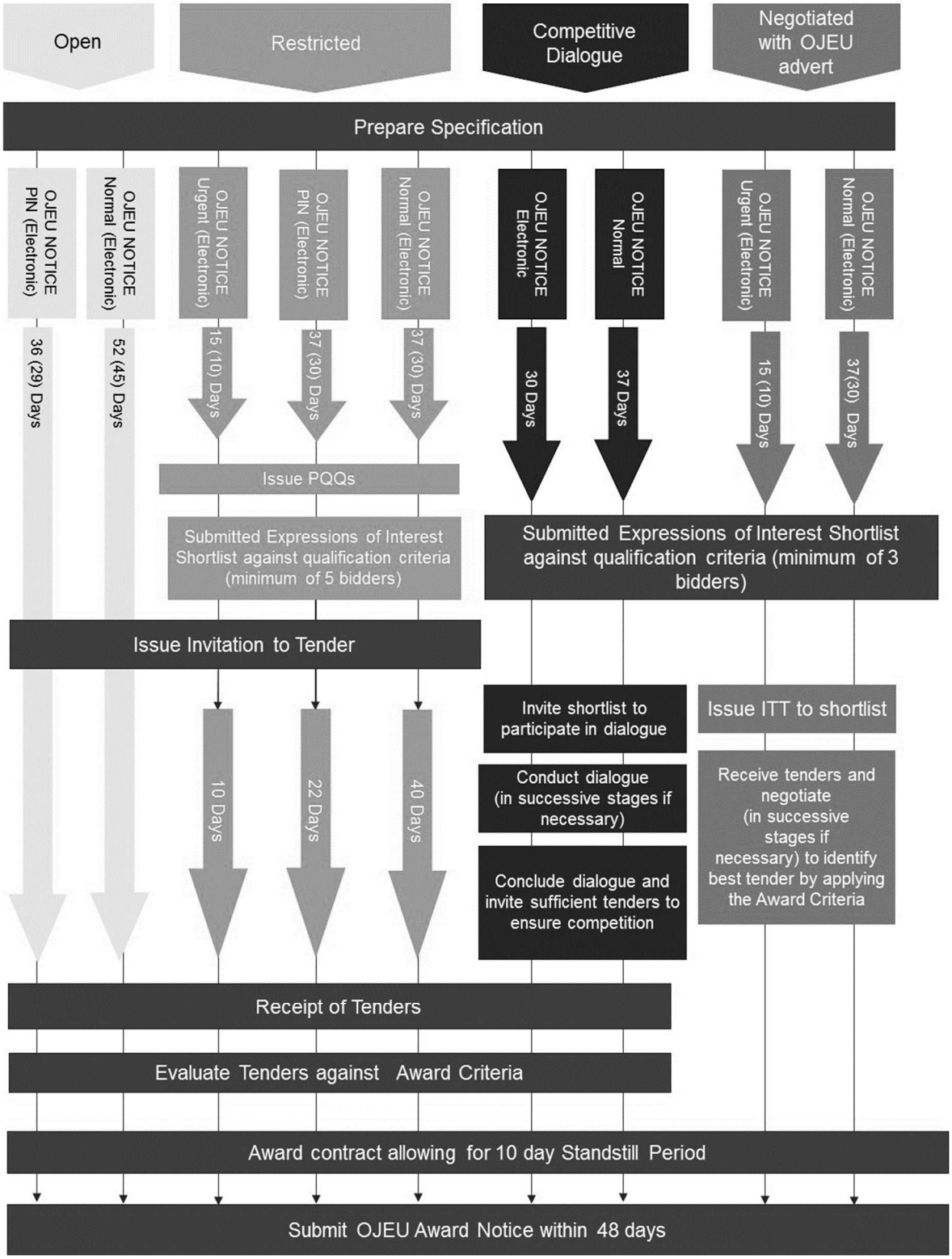
- are not objectively able to define the technical means capable of satisfying their needs or objectives, and/or
- are not objectively able to specify the legal and/or financial make-up of a project.

4.11.13. This is a multi-stage procedure. The first stage is a pre-qualification to select the potential bidders to participate in the dialogue. In the second stage the contracting authority enters a dialogue with the potential bidders to identify and define the means best suited to satisfying their needs.

4.11.14. Any aspect of the contract may be discussed, including technical requirements for the works to be delivered and the commercial/contractual arrangements to be used. The dialogue may be conducted in successive phases with the remaining bidders being invited to tender. By the end of the dialogue phase the contracting authority's requirements would have been determined such that the scheme can be tendered. In the final stage, the remaining bidders from the dialogue phase are invited to tender for the scheme.

4.11.15. This procedure is used in more limited circumstances described in the Regulations and if the client is very clear about the requirement and does not wish to discuss alternative solutions then there is no need for dialogue.

Figure 4-9 – Public Contract Regulations 2015 - Procurement Routes



Competitive Procedure with Negotiation

4.11.16. This procedure is intended to be used where minimum requirements can be specified but negotiations with bidders may be needed to improve the initial tenders. The grounds for using this procedure are as follows:

- Where needs cannot be met without adaptation of readily available solutions.
- Where the contract includes design or innovative solutions.
- Where the requirement is complex in nature, in its legal and financial make-up or because of its risks.
- Where the technical specifications cannot be established with enough precision.
- In the case of unacceptable/irregular tenders.

4.11.17. Within this procedure, bidders initially submit tenders based on the information issued by the contracting authority. The contracting authority is then able to review the tenders it has received and negotiate with the bidders, following which the tenders would be resubmitted.

4.11.18. This procedure can only be used in the very limited circumstances described in the Regulations, generally where it is not possible to use either the Open or Restricted Tender route and would not be applicable to the award of the scheme. It may be appropriate where:

- The contracting authority is unable to produce an ITT / specification without discussing its needs in detail with suppliers (but iterative discussions with bidders should allow a detailed solution to be specified).
- Where the solution is likely to be particularly complex and would require dialogue with bidders to conclude. The competitive dialogue procedure is generally used for complex procurements such as PFI / PPP projects.

The Procurement Bill

4.11.19. With the UK's departure from the European Union, the Cabinet Office is taking the opportunity to update public procurement legislation to improve the way it is regulated. This legislation is currently passing through Parliament with a 'go-live' date assumed during Q3 of 2024.

4.11.20. For Making Connections, these changes would potentially impact the way the programme undertakes a competitive tendering exercise. As a result, the timelines in Figure 4-2 would likely change. These impacts need to be monitored post-OBC and considered as part of the route to market selection.

Existing Frameworks

4.11.21. The frameworks accessible to CCC have been split by consultancy and construction services. These are shown in the tables below.

Table 4-10 – Consultancy Routes to Market

Consultancy Route	Overview	Value & Lots	Key Stakeholders
Eastern Shires Purchasing Organisation (ESPO)	ESPO is a public sector professional buying organisation (PBO), offering products and services across multiple framework categories. This includes Buildings, Energy, People & Professional Services and many others. Most of these frameworks are available free to use for Local Authorities, including People & Professional Services.	ESPO's Consultancy Services framework is arranged into 10 different lots and sub-lots. Each lot has access to many providers with experience delivering under that category. Where specialist advice is needed, a specific lot is available to address strategic projects.	Over 100 suppliers are on the framework with appropriate track record and experience to support the delivery of services.
Crown Commercial Services (CCS)	CCS is responsible for the legal framework for public sector procurement for the UK Government. CCS provides professional procurement services to the public sector to enable organisations to deliver improved value for money in their commercial activities and provide professional support, advising on technical issues, energy-saving and environmental improvements. Such quality and effectiveness should be achieved through competition.	The framework is arranged in 11 lots of varying levels of complexity and value of work from £0 – £3m up to £80m+.	£30 Bn Construction works and Associated Services 2 / Procure 23 (CWAS2/P23) Contract Was Awarded to 34 Suppliers for a period of 4.5 year
Joint Professional Services Framework (JPSF)	JPSF is Framework for use by Cambridgeshire County Council, the Greater Cambridge Partnership and the Cambridgeshire and Peterborough Combined Authority, to support transport infrastructure delivery.	N/A	N/A

Table 4-11 – Construction Routes to Market

Construction Route	Overview	Value & Lots	Key Stakeholders
Eastern Highways Alliance (EHA)	The EHA, Eastern Highways Framework 3 (EHF3), awarded in October 2020, covers 10 councils and includes schemes worth up to £30m such as roundabouts, cycle paths, new roads, and other infrastructure. Nine successful contractors have been awarded places on the framework, including	The framework is split into 3 lots of value £0 to £1.5 million, £1 million to £4.5 million and over £4 million respectively.	The EHA is led by Essex County Council on behalf of the EHA.

Construction Route	Overview	Value & Lots	Key Stakeholders
SCAPE	The Scape Civil Engineering and Infrastructure Framework is available to any local authority, Local Enterprise Partnership, and the wider public sector across England, Wales and Northern Ireland. It has been designed to accelerate infrastructure projects. Services qualifying for SCAPE include Site Investigation, Highways, Bridges, Structures, Flood Defence, Coastal Protection, Car Parks, Public Space.	The scope of the framework includes the following services with a project value between £50k and £100m+	Balfour Beatty was appointed as principal contractor to the £4bn framework in 2022.
Pagabo	Pagabo offers numerous frameworks in the Medium and Major Works, Demolition and Land Preparation, Civils and Infrastructure, Developer Led, Professional Services, Refit and Refurbishment, Furniture Solutions, Food Broker Services, Utilities Supply, ICT Solutions across Public and Private Sector Procurement Framework.	Pagabo is split across 19 different lots with unrestricted project value. Suppliers can be appointed nationally using Lot 1, or individually through Lots 2-19. This framework would run until April 2024.	The framework includes over 70 carefully selected providers across 7 regional areas.

4.12 Summary of Current Bus Commercial Structure

4.12.1. This section summarises the current situation in respect of the bus network including the regulatory model, service providers, vehicles, depots, and fares.

Regulatory Model

4.12.2. In common with most of the UK outside London, bus services in the Cambridge travel-to-work area are currently provided under the deregulated model established by the Transport Act 1985. The premise is that bus operators would provide the majority of bus services without subsidy in a contestable market. Bus operators are able to introduce new services, and amend or withdraw existing services, in response to changes in the market for bus travel or indeed in response to changes in the cost of provision or actions of competitors, subject to registration with the Traffic Commissioners.

4.12.3. The Transport Act recognises that some services considered socially necessary are not commercially viable and permits Local Transport Authorities (LTAs) to procure these under contracts and to provide subsidy.

Service Providers

4.12.4. Stagecoach East is the major provider of bus services in the Cambridge travel-to-work area, both commercially and under contract to the Cambridgeshire and Peterborough Combined Authority (CPCA) and other LTAs.

4.12.5. Whippet Coaches (part of the Ascendal Group) provides services under contract to the CPCA and the University of Cambridge. Stephensons of Essex is the other medium-sized operator. Since October 2022 it has run services between Ely, Soham, Newmarket and Cambridge both commercially and under contract to the CPCA.

4.12.6. A few small operators (such as Dews Coaches, A2B Bus and Coach, Big Green Bus Company) are also in the market, providing services under contract to the CPCA.

Vehicles

4.12.7. At present bus operators fund their own fleet renewal, except in very particular circumstances. Outright ownership rather than leasing is the most common model in the deregulated market.

4.12.8. Of the current fleet of around 210 vehicles in the Cambridge travel-to-work area, 32 buses are now zero-emission at the tail-pipe following a successful 'ZEBRA' bid to government. These buses are operating primarily on the Cambridge Park and Ride services. In addition, 9 zero-emission buses are due to enter service in 2023 with Whippet Coaches on the 'Universal' service for the University of Cambridge. The remainder are diesel buses, the majority conforming to Euro standards IV, V and VI. The CPCA has an ambition for all buses to be zero emission by 2030.

Depots

4.12.9. Stagecoach East has two depots, one in Cambridge (Cowley Road) and one at Fenstanton, with an outstation at Haverhill. Whippet Coaches' depot is also at Fenstanton. The approximate allocation of vehicles at present is around 120 at Stagecoach's Cambridge depot (including the outstation), around 40 at Stagecoach's Fenstanton depot and around 10 at Whippet's Fenstanton depot employed on services in the Cambridge travel-to-work area.

4.12.10. Stagecoach's Cowley Road depot is known to be space-constrained and is subject to medium to long-term proposals to regenerate the Cowley Road area as envisaged in the draft Northeast Cambridge Area Action Plan. There is therefore a significant need for depot expansion to accommodate the c. 180 additional buses required by Making Connections bus network envisaged at consultation. Further, conversion to zero-emission would require investment in facilities to provide energy to battery-electric or hydrogen-electric buses.

Fares

4.12.11. Bus operators are currently able to specify the fares that they charge. The major operator, Stagecoach East, sets broadly two types of fare:

- A single fare which changes according to distance – though are currently subject to the Department for Transport's capped fare scheme. The maximum fare value increases from £2.00 to £2.50 in November 2023, and this runs to November 2024; and
- A zone-based fare that applies to period products such as weekly tickets. Only two zones apply to the Cambridge travel-to-work area – one for Cambridge (Cambridge Megarider)

and the surrounding villages, and one beyond (Cambridge Megarider Plus). These are heavily discounted compared to the single fares that applied before the DfT's capped fare scheme.

4.12.12. Stagecoach applies a discount of around one-third to fares for passengers under 19.

4.12.13. Most fares on other bus services are broadly similar, but with some variation – for instance, some operators apply the young person's discount to passengers under 16 rather than under 19, and different approaches apply to the periodicity of season tickets. Fares on 'Universal', procured by the University of Cambridge and operated by Whippet Coaches, are significantly lower.

4.12.14. There is also a multi-operator fare, available as a day ticket and weekly ticket, across Cambridgeshire. Some services are excluded, and the price is at a significant premium over own-operator tickets, particularly for journeys within Cambridge.

4.12.15. Elderly and disabled people travel for free off-peak (defined as any time between 09:30 and 23:00 on weekdays, and any time at weekends). Bus operators are reimbursed for these journeys under the 'no better off, no worse off' principle.

4.13 Scope for Bus Commercial Improvements

4.13.1. This section summarises the commercial improvements proposed in respect of the existing bus network, congestion charging and complementary measures.

4.13.2. Bus Improvement Measures include considerations in respect of service output, vehicle acquisition and fare reductions.

Service Output

4.13.3. The bus service proposition for Making Connections is based on that developed by SYSTRA in its 'Future Bus Network Concept' of 2020 on behalf of the CPCA. With some modifications this formed the basis of public consultation by GCP at the end of 2022.

4.13.4. It represents a very significant increase in bus service output (a more than doubling of estimated doubling of bus hours and bus kilometres) while the number of vehicles required to service the network doubles from around 180 to around 360 buses.

4.13.5. Around 45 of these additional buses are required to provide services on the three busways currently being promoted by the GCP: Water beach to Cambridge, Cambourne to Cambridge and Cambridge and Southeast. It assumed that these three schemes and the busway services would be delivered independently of Making Connections. That leaves a balance of 135 buses required to deliver the additional services for Making Connections.

Table 4-12 – The Estimated Scale of Change with Making Connections

DERs	October 2022 Bus Network	Making Connections Baseline*	Making Connections Consultation Network
Fleet Vehicle Requirement	178	212	359
Annual bus km (m)	12.1	15.8	32.8
Annual bus hours ('000)	633	826	1,702

*Note: Making Connections baseline consists of the bus network in operation as at 31 October 2022 plus the three proposed busway schemes (C2C, Waterbeach – Cambridge and CSETS) plus services between Cambridge South West Travel Hub and Cambridge city centre.

4.13.6. It can be seen that the Making Connections consultation network increases the size of the fleet by around 150 buses over the Making Connections baseline, split in round terms:

- 100 for Cambridge city and interurban services, including those on existing busways.
- 15 for additional services on the three busways currently being promoted by GCP (in addition to the 45 estimated to be required for a basic level of service); and
- 35 for rural connector and demand-responsive transport buses.

Vehicle Acquisition

4.13.7. The CPCA has an ambition for the entire local bus fleet to be zero-emission by 2030. Whilst this ambition is separate from Making Connections, the procurement strategy for Making Connections needs to be developed with this objective in mind.

4.13.8. Discussion with the CPCA suggests that a grant-funding model is currently preferred to achieve a fleet conversion to zero-emission. A leasing model is more likely to deliver the speed and scale of change required to achieve a zero-emission fleet. This is based on two broad factors:

- The uncertainty associated with a competitive bidding process to central Government for grant funding; and
- The fact that ZEBRA is only intended to be one-off seedcorn rather than wholesale funding. It funds up to 75% of difference between a diesel bus and zero-emission bus capex and 75% of the charging equipment capex. It does not fund mid-life costs (notably battery replacement) or fleet renewal.

Depots

4.13.9. A strategy for the expansion in bus depot capacity to accommodate the increased numbers of buses focuses on areas where it is likely to be easier to recruit a suitable labour force and distributes depots around the Making Connections area. However, there would remain a significant requirement to base buses to service needs in Cambridge. New depots should be developed and owned by the CPCA to remove a barrier to market entry for operators who are not active in the Making Connections area.

Fares

4.13.10. *Making Connections* proposes to reduce and simplify existing fares. This introduces several issues around: income generation, ease of passenger use (considering prospective as well as established bus users), and the impact on bus journey speeds; the latter in particular would be influenced by the technologies available for fare collection. These would need to be addressed in the range of ticket products offered, the method of retail, and the fare values chosen for each fare product.

4.13.11. The current *Making Connections* proposition is that a £1.00 single fare is charged for journeys within Cambridge and £2.00 for journeys outside Cambridge, or for journeys from outside Cambridge into Cambridge.

4.13.12. The following assumptions have been applied in the associated Financial Dimension:

- The £1.00 fare applies to the current Stagecoach 'Cambridge Megarider' zone; and
- The current concessional fare structure is retained, with fares on period and under-19 tickets falling by the same proportion as now, and reimbursement for free concessions (estimated to be around 20% - 25% of the total) also falling by the same proportion.

4.13.13. LTAs have an obligation to provide the English National Concessionary Travel Scheme at off-peak times; powers to extend this concession (by provision in the AM peak or to companions of disabled passholders); and powers to provide a concession to young people under the age 16 and to those aged 16 – 19 in further education.

4.13.14. LTAs also have powers under retained European Union legislation to subsidise capped public transport fares (EU 2007/1307). These are the powers that we understand that Government is utilising to deliver the current £2.00 (from November 2023 £2.50) capped fare scheme in England. However, there are no powers of compulsion, which is why not all operators participate in the government's scheme.

4.13.15. LTAs have access to powers to make multi-operator ticketing schemes, subject to statutory guidance by the Competition and Markets Authority (the so-called 'block exemption'). This guidance limits the extent to which LTAs can influence the price of multi-operator tickets. However, agreements made under Enhanced Partnerships are not subject to these restrictions, and by inference this can be used to influence the price of operator 'own product' tickets. However, this can only be done with the agreement of the Partnership (for example, an operator might agree to a fare reduction in response to the introduction of bus priority measures).

4.13.16. Cambridge and Peterborough Combined Authority (CPCA) is currently developing a business case on bus reform across the authority area. At the time of writing, the Outline Business Case is due to be subject to audit in the autumn of 2023 with public consultation late in 2023 / early 2024, with a Mayoral decision on whether to proceed expected in June 2024.

4.13.17. It is then currently expected that bus reform would be implemented in at least two tranches (likely to be based on geographical areas), with the first tranche by December 2024 and the second tranche by November 2025.

4.13.18. Successful delivery of bus reform would require the CPCA to:

- Specify bus services – routes, service durations, frequencies; and
- Specify ticketing products and fares.

4.13.19. Clearly, both of these activities would be in response to the funds that the CPCA has available, and a potential process sees:

- CPCA designs and continually reviews its bus proposition, including the element that is in addition to 'business as usual' and funded by the road user charge; and
- Cambridgeshire County Council (as operator of the road user charge) makes funds available to the CPCA for the elements of the bus service proposition funded by the road user charge, and in return, CPCA provides assurance to CCC on how the funds have been applied.

4.13.20. There are two scenarios where the CPCA may not be able to rely on bus reform to deliver the bus service and fare changes associated with Making Connections:

- The programme for decision-making and/or implementation is delayed; or
- Enhancements to the bus service and fares are required in advance of the current proposed timescale – i.e. before December 2024 (first tranche) or November 2025 (second tranche).

4.13.21. The principle behind an EP is that local authorities and bus operators negotiate enhancements to the bus service offer, recognising that each side may have to go beyond business as usual to deliver enhancements that would benefit bus users and attract more passengers. For instance, an LTA may commit to delivering bus priority measures, and in return bus operators may commit to increasing services or participating in a multi-operator ticketing scheme. Whilst these commitments are negotiated, once agreed they become legally enforceable on both sides.

4.13.22. With its existing powers under EU1370/2007, the CPCA could continue the existing DfT capped fare scheme beyond its current expected expiry of November 2024, or could offer an enhanced capped fare (such as £1 within Cambridge). However, it would need to make an Enhanced Partnership to be able to enforce operator participation in the capped fare scheme.

4.13.23. Similarly, an Enhanced Partnership is the simplest and most flexible means of delivering a multi-operator scheme (or, preferably, one based on interoperable fares).

4.13.24. The machinery devised under the Transport Act 1985 remains the process for securing bus services in addition to those which are provided commercially. The main mechanism is bus service tendering, but regulations made under the Act allow LTAs to procure a proportion of bus services by direct award. Where the spend is more than £600,000 a year, LTAs may

spend up to 25% by direct award – otherwise known as 'de minimis'. This is a useful means of delivering enhancements to commercial services – such as higher frequencies, or evening and Sunday enhancements. It means that the passenger's relationship (fares and information) remains with one bus operator. Many of the service changes proposed by Making Connections fall into this category.

4.13.25. To illustrate this, a package of improvements focused on 'access to Addenbrooke's Hospital' is recommended. In a low-spend scenario, around £2.1m of spend is on service enhancements best delivered by direct award, as these are frequency and service duration enhancements, and around £2m has the potential to be tendered. Assuming no change to the CPCA's current spend (both by tender and by 'de minimis'), it would be possible to spend around £1.7m by direct award and remain within the limit for 'de minimis' – leaving a gap of around £400,000 that it would potentially be difficult for the CPCA to disburse.

4.13.26. One means of mitigating the potential downsides of tendering for enhancements on existing bus services is to ensure that an interoperable ticketing scheme is in place. This removes the potential for passengers to have to pay separately for travel on the tendered service and on the commercial service. A commitment under an EP for operators to advertise each other's services on the same route or corridor addresses the issue that having more than one operator on a bus route complicates passenger information. This makes tendering for early morning and late evening enhancements more acceptable. It doesn't, however, overcome the commercial difficulty involved in tendering a frequency enhancement. In the example set out above, it makes only a small difference to the scope to secure services by 'de minimis''.

4.14 Commercial Strategy

4.14.1. The commercial strategy outlines how the client intends to contract with the supply chain. It summarises the role the supply chain would play, how it would be paid and the proposed risk allocation between the contract parties. The following section introduces CCC's approach to risk allocation, discusses their pricing approach and introduces the preferred payment mechanism for the programme.

4.14.2. When selecting a preferred contracting model, the programme would consider the advantages and disadvantages of each model against the proposed Target Operating Model for the asset and service and the proposed delivery model for its development. The contracting model for the operations and maintenance phase can be selected once the Target Operating Model is fully defined.

Contracting Model

4.14.3. The selection of a preferred contracting model should be informed by the client's appetite towards risk, the clarity and detail of its requirements, the capability and capacity of the market and the overall scheme contract packaging.

Form of Contract

4.14.4. For civil engineering works in the UK, there are two main forms of contract: The New Engineering and Construction (NEC) Contract suite of contracts; or the Institution of Civil Engineers (ICE) Conditions of Contract, which since August 2011 has been rebadged as the Infrastructure Conditions of Contract (ICC). These two options are discussed in more detail below.

New Engineering and Construction (NEC) Contract

4.14.5. The NEC Contract is a modern-day suite family of contracts that facilitates the implementation of sound project management principles and practices as defining legal relationships.

4.14.6. Key to the successful use of NEC is users adopting the desired behaviours from each party. The main aspect of this transition is moving away from a reactive and hindsight-based decision-making arrangement to one that is foresight based encouraging a creative environment with pro-active and collaborative relationships.

4.14.7. The contract has been developed to make improvements to more traditional forms of contract under three fundamental main headings:

- Flexibility – can be used in a wide variety of commercial situations for procuring a diverse range of works, services, and supply in any location.
- Clarity and simplicity – NEC contracts are written in ordinary language using words, which are in common use to promote understanding.
- Stimulus to good management – designed so that its implementation contributes to rather than detract from the effectiveness of the management of the work.

4.14.8. The NEC suite of contracts is broken down into three areas Works, Service and Supply. The table below outlines the suite of NEC Contracts and guidance on when to use each.

Table 4-13 – Types of NEC Works Contracts

NEC Contract	Abbreviation	When to use it
NEC Engineering and Construction Contract	ECC	For the appointment of a contractor for engineering and construction work, including any level of design responsibility.
NEC Engineering and Construction Subcontract	ECS	As a subcontract to the ECC, for the appointment of a subcontractor for engineering and construction work.
NEC Engineering and Construction Short Contract	ECSC	As an alternative to the ECC, for the appointment of a contractor for straightforward engineering and construction work which does not require sophisticated management techniques and imposes only low risk on both the client and contractor.
NEC Engineering and Construction Short Subcontract	ECSS	As a subcontract to the ECC or ECSC, for the appointment of a subcontractor for straightforward engineering and construction work which does not require sophisticated management techniques and

NEC Contract	Abbreviation	When to use it
		imposes only low risk on both the contractor and subcontractor.
NEC Design Build and Operate Contract	DBOC	For the appointment of a contractor to design, build and operate or maintain as asset over a defined period.
NEC4 Service Contracts	-	Services contracts available to appoint suppliers for the delivery of professional services with varying complexity, risk profile and timeframes.

Adapted from NEC4 Establishing a procurement and Contract Strategy – Volume 1

4.14.9. For single one-off complex engineering and construction projects with Contractor designed elements, the NEC Engineering and Construction Contract is usually selected as it provides a contract which provides a variety of options with different approaches to pricing, risk management, payment and delivery. The NEC ECC has six main options which are outlined in Table 4-14.

Table 4-14 – NEC ECC Main Options

Main Option	When to use it
Option A – Priced contract with activity schedule	This option is suited to projects where the scope is well defined, and a Contractor can price detailed activities. The Contractor bears the financial and delivery risk of Providing the Works in accordance with the Scope.
Option B – Priced contract with bill of quantities	This option is also suited to projects where the scope is well defined, and a Contractor can price detailed activities. However, it includes a remeasurement payment mechanism to assess the Price of work completed where the Scope included the scope of work but does not include detailed quantities. The Contractor bears the financial and delivery risk of Providing the Works in accordance with the Works Information and the agreed rates and the Client bears the financial risk of fluctuations in quantities of work completed.
Option C – Target contract with activity schedule	This option is used where the extent of the work to be done is not completely defined and uncertainty and high levels of delivery risk are present. Both client and contractor share the financial risk. Payment is based on the completion of activities on an activity schedule.
Option D – Target contract with bill of quantities	This option is also used where the extent of the work to be done is not completely defined and uncertainty and high levels of delivery risk are present. Both client and contractor share the financial risk. Payment is based on a re-measurable bill of quantities.
Option E – Cost reimbursable	This option is used when the works required cannot be defined sufficiently to inform even a target price. The Client bears the financial risk as the scope is not clearly defined prior to commencing the contract. The Contractor is paid their 'Defined Cost' plus fee.
Option F – Management contract	This option is used when a management contracting approach is required. The Contractor is paid a fee based on the work completed by Subcontractors and bears the risk of subcontractor's delivery in line with the Scope.

Adapted from NEC4 Establishing a procurement and Contract Strategy – Volume 1

4.14.10. Where a service needs to be delivered over a defied period of time, the NEC4 Service Contract is available. There are seven Service Contracts which is shown in Table 4-15.

Selection of the appropriate option depends on several factors, including type of service and risk profile.

Table 4-15 – NEC4 Service Contract Options

Main Option	When to use it
PSC	This option is used for the appointment of a supplier to provide professional services. Its use is not limited to projects where other NEC contracts are being used.
PSS	This option is used for the appointment of a subcontractor to provide professional services.
PSSC	This option is used as an alternative to the PSC, PSSC can be used for the appointment of a supplier for the provision of straightforward professional services which do not require sophisticated management techniques and impose only low risk on both parties.
FMC	This option is used for the appointment of a supplier for a definite period to manage and provide facilities management services.
FMS	This option is used for the appointment of a subcontractor for a defined period to manage and provide facilities management services. The FMS can be used as a subcontract to several other NEC4 contracts.
FMSC	This option is used as an alternative to the FMC, for the appointment of a supplier for a defined period to manage and provide straight forward facilities management services which do not require sophisticated management techniques and impose only low risk on both parties.
FMSS	This option is used for the appointment of a subcontractor for a defined period to manage and provide straightforward facilities management services which do not require sophisticated management techniques and impose only low risk on both parties.

Infrastructure Conditions of Contract (ICC)

4.14.11. The ICE Conditions of Contract were republished by Thomas Telford in 2011 as the Infrastructure Conditions of Contract (ICC). The standard suite of ICC contracts is outlined in Table 4-16 below.

Table 4-16 – Types of ICC Works Contracts

ICC Contract	When to use it
ICC Design and Construction Version	In this version, the contractor is responsible for the design and construction of the works. Contracts are lump sum with no remeasurement.
ICC Target Cost Version	This version encourages the contractor to be more involved in early design and planning. It provides incentivisation for both the employer and contract to share profits or loss compared to the agreed Target cost.
ICC Term Version	This version uses work orders to accommodate rolling renewal and replacement works and is based on re-measurement or lump-sum payment.
ICC With Quantities Version	This version is shorter than the measurement version and is intended for Engineer/Consultant designed works whilst acknowledging and providing for an element of Contractor design.

ICC Measurement Version	This version is based on traditional engineer designed, contractor-built works. Payment is on a remeasurement basis.
ICC Minor Works Version	Shortened version to cover minor works.

Risk Allocation

4.14.12. CCC's approach to risk allocation is driven by the organisations collective experience of major project delivery, including recent experience delivering highways schemes. The authority's appetite and desires are to promote an approach to risk allocation which is open and allocates the risk based on the party best placed to manage the identified commercial risks.

4.14.13. Table 4-17 considers CCC's risk allocation position.

Table 4-17 – Risk Allocation Table

Risk theme	**Allocation**		
Description	Client	Shared	Supply chain
Data accuracy – Inaccurate/ incomplete data may be provided to bidders during the procurement exercise leading to inaccurate pricing or solution	x		
Inflation risk - the cost of supplier's 'inputs' might rise over time due to inflation			x
Performance risk - risks that the services may not be delivered to the requisite performance/availability levels			x
Volume/Demand risk - Risk that the actual usage of the service varies from the levels forecast	x		
Currency risk - Risk that the cost of supplier's inputs would rise due to fluctuations in foreign exchange rates			x
Changes in the law risk - Risk that a specific change in law affects the supplier's ability to deliver any aspect of the contract to requirement time, budget and performance		x	
Solution/Design risk - Risk that the services have/project has not been designed adequately for the purpose required	x		
Delivery risk - Risk that the design and build phase of the project runs behind the planned timescales		x	
Scope change risk - Risk of a change in requirements or scope over the course of the Project			x
Supplier default risk - Risk of losses to the Contracting Authority as a result of supplier defaults e.g. data loss		x	
Termination risk - Risk that the programme would terminate (or partially terminate) the contract early i.e. before the end of the initial contract term		x	
Subcontractor insolvency risk - Risk that a subcontractor within the supplier's or subcontractors' supply chain becomes insolvent during the contract Term			x

Industrial action risk - Risk of industrial action by any of the supplier's staff			x
Unforeseen events risk (force majeure) - risk of unforeseen events affecting the supplier's ability to deliver any aspect of the contract to requirement time, budget and performance		x	

4.14.14. Currently, it is assumed that CCC would own the data accuracy, volume/ demand, Solution/Design risks, where appropriate. These risks are likely to be best placed managed and mitigated by CCC, rather than the supply chain.

4.14.15. For risks associated with inflation, performance, and currency, CCC would look to transfer these risks to the supply chain. CCC would also seek to share the risk of change in the law with the supply chain on an individual case by case basis. Where the change is uncontrollable by the supply chain, CCC would take ownership.

Pricing Approach & Payment Mechanism

4.14.16. CCC's approach to pricing and payment mechanisms would depend on the complexity and size of the work packages which develop. Again, this is based on recent delivery experience and CCC's desire to achieve value for money and apportion risk appropriately.

4.14.17. The pricing approach is driven by the degree of control sought over how something is delivered. Where the level of control sought is higher, an input-based approach is more likely to be appropriate while the greater the level of innovation sought is likely to drive an outcome-based approach.

Table 4-18 – Different Pricing Approaches

Pricing Approach	Description	Level of Risk Transfer to the Supplier
Firm Price	Charges would not be subject to increase due to indexation	High
Fixed Price	Charges would be subject to increase due to indexation	Medium / High
Cost Plus	Allows for the supplier to recover all actual costs incurred for the management and delivery of the services including overheads with an additional profit margin applied	Low
Time & Materials (T&M)	As for cost plus but T&M is normally based on a pre-agreed rate card plus an agreed profit applied to costs	Low

4.14.18. Previously, CCC have tended to agree fixed and firm price contracts in delivering smaller packages of works. This has been driven by the appetite to complete detailed design before inviting contractors to price delivery. Where the complexity has increased, a target cost approach has been preferential – supporting the promotion of innovation from the supply

chain. The payment mechanism is used to allocate the burden of delivery risk and incentivise the supplier to deliver to time and quality. The most appropriate would consider the outcomes of the risk allocation exercise while also understanding the following:

- Whether the pricing applies to inputs or outputs/outcomes (along this range, there is increasing risk transfer to suppliers, their payment being increasingly contingent on results).
- Whether the pricing applies to projects (with suppliers incentivised to deliver on time and budget e.g. by applying delay payments applied for late delivery of milestones) or for services (with suppliers incentivised to deliver expected quality by applying service credits for underperformance.

Table 4-19 – Payment Mechanisms

Payment Mechanism	Description	Level of Risk Transfer to the Supplier
Volume Based	The amount paid to the supplier varies according to how much the service is used, typically on a price per unit basis (but can be combined with a fixed element to cover any fixed costs)	Low to High
Payment by Results (Outcome based contracting)	A variant on the volume-based payment mechanism but rather than the amount paid to the supplier varying by usage, the amount paid varies by outcome achieved by the supplier	Medium to High
Guaranteed maximum price with target cost (Target Cost Incentive Fee)	Based on a 'target cost' and a 'guaranteed maximum price,' under this mechanism, there is gain and pain share between the parties depending on the extent to which there is a difference between actual costs and the target cost. The supplier is wholly responsible for costs above the guaranteed maximum price.	Medium to High

4.14.19. CCC's preferred payment approach is to agree either a schedule of lump sums or a Guaranteed Maximum Price with Target Cost Incentive Fee for asset delivery depending on the work package type and complexity. This approach would involve a "gain and pain" share between the parties, with incentivisation payments based on performance.

4.15 Human Resources Issues

4.15.1. The potential for human resource issues would be explored in further detail post-OBC during the development of the STM and STZ delivery models. With the proposed delivery model for STM following existing outsourcing practices it is current assumed that there would be no human resource issues in the implementation of the delivery model.

4.16 Contract Management

4.16.1. The outsourced contracts for the STZ and STM would be delivered in line with existing CCC contract management processes and procedures. Further detail on applicable processes and procedures would be confirmed at FBC.

4.17 Summary of Commercial Dimension

4.17.1. This Commercial Dimension summarises the procurement and contract strategies for the Making Connections programme. It considers the procurement objectives and an initial procurement model which aligns to the sustainable procurement policy of CCC and supports the development and delivery of the programme.

4.17.2. Following a delivery model assessment, an outsourced model has been proposed for further development post OBC for the STZ and STM. In parallel with the delivery model assessment, an initial work packaging strategy and a contract delivery model long list have been developed. These would be refined post-OBC in line with the contracting strategy development.

4.17.3. With the initial proposal to outsource the STZ and STM, no human resource issues are currently envisaged. However, this would need to be iterated as the delivery model is refined further.

5 Financial Dimension

5.1 Introduction

5.1.1. The Financial Dimension outlines the expected costs, funding arrangements and overall affordability of the Making Connections programme.

5.1.2. The Outline Business Case (OBC) Financial Dimension would:

- Summarise the source of funding available to the Making Connections programme;
- Outline the projected affordability of the proposed Sustainable Travel Zone by analysing its estimated costs, revenues and risks;
- Demonstrate that the proposed Bus Improvement Measures and Sustainable Transport Measures can, net of Sustainable Travel Zone expenditure, ultimately be funded from a combination of the GCP City Deal funding and the net financial proceeds of the STZ;
- Show how the proposed STZ generates adequate funding for Bus Improvement Measures and Sustainable Transport Measures whilst balancing the affordability challenges of road users, particularly during the early (implementation) years of the scheme; and
- Provide a high level commentary on any potential subsidy control implications.

Inherent uncertainties in revenue and cost estimating have been reflected in a range of sensitivities to measure potential upside and downside scenarios.

5.2 What is Required at this Stage?

5.2.1. The DfT's Transport Business Case Guidance outlines the areas that should be completed in the OBC Financial Dimension. Table 5-1 indicates where these requirements are met in this document.

Table 5-1 – Contents of the Financial Dimension

Content	DfT Requirements	Section
Introduction to Affordability	Outline the approach taken to assess affordability	0
Budget and Funding Cover	Provide analysis of the budget and funding cover for the proposal: set out, if relevant, details of other funding sources (for example, third-party contributions, fees).	5.4
Costs	Provide details of the expected whole life costs, when they would occur, breakdown and profile of costs by those parties on whom they fall and any risk allowance that may be required.	5.8

5.2.2. Additionally, in Section 5.11 of the Financial Dimension, a high-level commentary on any potential subsidy control implications is included. This would be updated at the Final Business Case (FBC) stage together with the addition of commentary on any potential tax and accounting considerations.

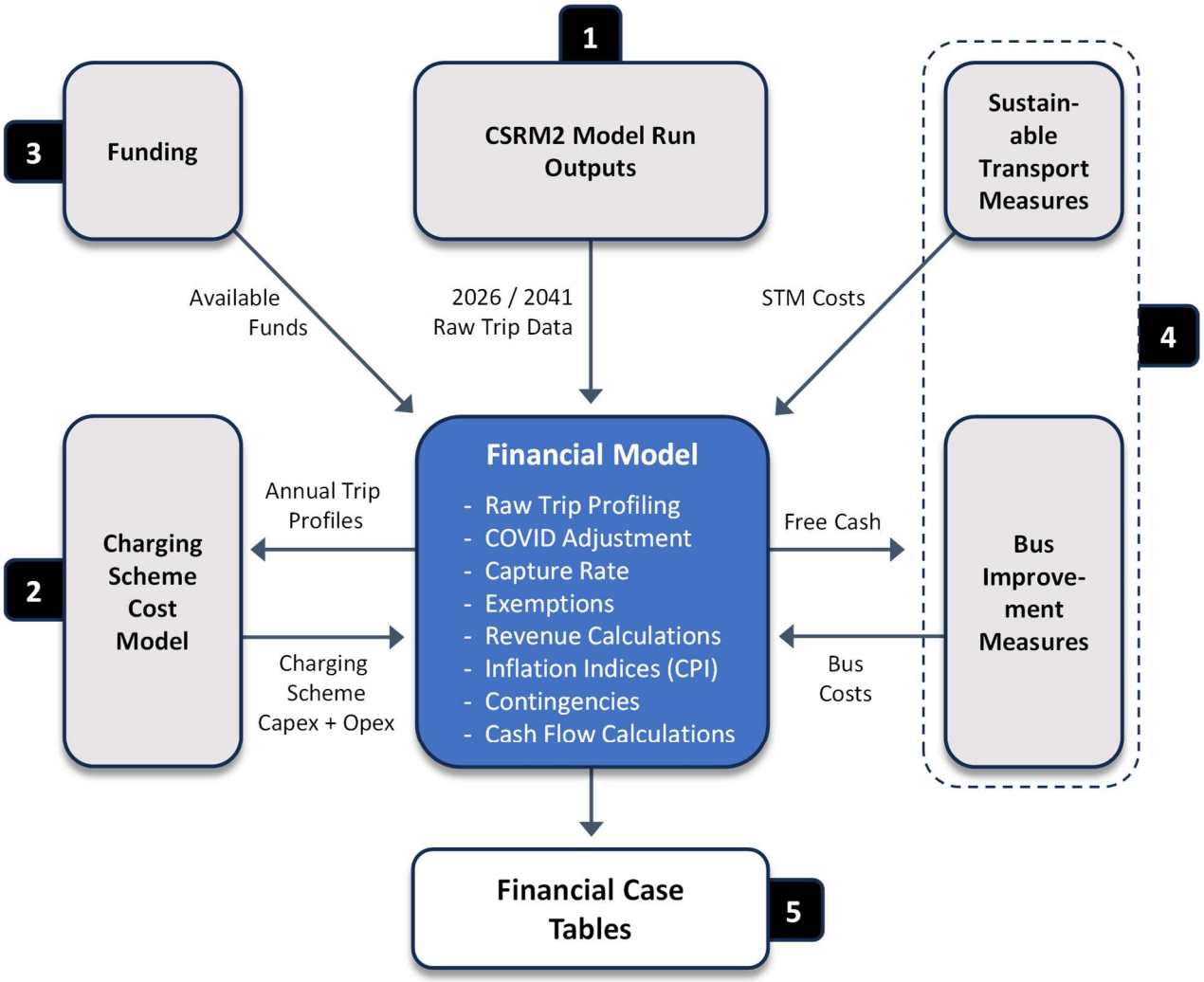
5.3 Financial Dimension Approach

5.3.1. The analysis outlined in this Financial Dimension is underpinned by a financial model developed specifically to assess the affordability of, and the net revenues generated by, the STZ. The financial model is fed by a range of assumptions in respect of trip volumes, daily charges, revenues, capital costs and operating costs.

5.3.2. Separately, high level cost estimates have been developed for the Bus Improvement Measures and the Sustainable Transport Measures and these are compared against the aggregate of the funding remaining after the STZ capital expenditure and the operating income generated by the STZ. A bottom-line net cash flow position is then calculated for the Making Connections programme to determine what, if any, funding shortfall remains.

5.3.3. A summary of the flow of data, including calculations carried out within the financial model itself, is shown in Figure 5-1.

Figure 5-1 – Financial Data Flow Chart



5.3.4. Data is summarised here for the initial period of the Making Connections programme and covers a period from 2024 to 2036 such that a minimum of 10 years of Sustainable Travel Zone revenues are shown in every scenario.

5.3.5. All values included in the Financial Dimension, including totals, are taken from source data outputs and then rounded to the nearest one decimal place.

5.4 Funding Assumptions

5.4.1. The key assumptions with regard to funding sources is that all initial funding would come from the GCP City Deal funds.

5.4.2. The first £50 million of the GCP City Deal funding is assumed to be sunk investment in the Bus Improvement Measures, i.e., it is non-recoverable. The forecast funding requirement over and above this £50 million in the initial years would also come from the GCP City Deal funding. This additional funding would be recoverable from STZ net revenues, repayable to GCP before the end of 2029 to allow delivery of wider programme commitments. After 2030, when GCP may cease to exist, there would be further income which would offset the initial £50 million but the assumption is that this would be allocated to future Sustainable Travel Measures over and above those currently planned.

5.4.3. Modest reserving of free cash is applied in some periods and used to fund expenditures in future periods. This approach allows for the forecast expenditure on Bus Improvement Measures and Sustainable Transport Measures to be smoothed.

5.4.4. Net revenues raised from the STZ are hypothecated in line with the Transport Act 2000 powers for spending associated with achievement of the County Council's local transport policies such as the bus improvement measures and the STMs.

5.4.5. No additional sources of funding are identified as being required in the current Financial Dimension.

5.5 Sustainable Travel Zone Financial Assumptions

5.5.1. The Financial Dimension provides summaries of five discrete scenarios: the Consultation Proposal, Scenario 1, Scenario 1A, Scenario 2, and Scenario 3.

Inflation Assumptions

5.5.2. Inflation assumptions are the same for all scenarios. The consumer price index (CPI) is applied to revenues and costs based upon historic and forecast CPI values by the Office for Budget Responsibility (OBR).

5.5.3. Actual data and forecast CPI data are produced by the OBR on a quarterly basis in respect of the previous twelve months. The financial model applies a four-quarter average in respect of each modelled year. A long-term rate of 2% is assumed for 2028 and beyond.

5.5.4. Key inflation assumptions are listed in Table 5-2 below:

Table 5-2 – Key Inflation Assumptions

Inflation (Annual %)	2023	2024	2025	2026	2027	2028+
Consumer Price Index (OBR)	6.2%	0.9%	0.1%	0.5%	1.6%	2.0%

5.5.5. Daily charge rates are first inflated in 2030 (with an assumed base date of 2027) and every three years thereafter.

5.5.6. Sustainable Travel Zone costs are inflated every year with an assumed base date of 2022.

Trip and Revenue Assumptions

5.5.7. Key trip and revenue assumptions relevant to each scenario are listed in Table 5-3 below.

Table 5-3 – Key Trip and Revenue Assumptions

Trip and Revenue Assumption	Consultation Proposal	Scenario 1	Scenario 1A	Scenario 2	Scenario 3
Days per Year of Charge	252	252	252	252	252
First Year of Charge	2026	2027	2027	2026	2027
Time of Day of Charge	2026: AM peak 2027+: All day	2027+: AM/PM peaks	2027+: AM/PM peaks	2026: AM peak 2027+: All day	2027+: AM/PM peaks
Daily Charge Rate (at Base Date)	Car £5.00 LGV £10.00 HGV £50.00	Car £5.00 LGV £10.00 HGV £50.00	Car £5.00 LGV £10.00 HGV £50.00	Car £5.00 (+ light vans) LGV £10.00 HGV £50.00	Car £3.00 LGV £10.00 HGV £50.00
Daily Trips (before discounts / exemptions)	AM Peak	AM/PM Peaks	AM/PM Peaks	AM Peak	AM/PM Peaks
	2026 2041 Car 26,798 32,751 LGV 5,861 7,072 HGV 791 818	2026 2041 Car 44,294 55,034 LGV 7,623 9,199 HGV 881 933	2026 2041 Car 44,294 55,034 LGV 7,623 9,199 HGV 881 933	2026 2041 Car 26,798 32,751 LGV 5,861 7,072 HGV 791 818	2026 2041 Car 54,855 65,408 LGV 7,630 9,211 HGV 895 967
	Total 33,450 40,641	Total 52,798 65,166	Total 52,798 65,166	Total 33,450 40,641	Total 63,380 75,586
	All Day			All Day	

Trip and Revenue Assumption	Consultation Proposal	Scenario 1	Scenario 1A	Scenario 2	Scenario 3
	2026 2041 Car 67,944 87,484 LGV 14,998 18,105 HGV 1,863 1,970			2026 2041 Car 67,944 87,484 LGV 14,998 18,105 HGV 1,863 1,970	
	Total 84,805 107,559			Total 84,805 107,559	
COVID Trip Adjustment	All daily trips are reduced by 10% to reflect post-COVID trip reductions	All daily trips are reduced by 10% to reflect post-COVID trip reductions	All daily trips are reduced by 10% to reflect post-COVID trip reductions	All daily trips are reduced by 10% to reflect post-COVID trip reductions	All daily trips are reduced by 10% to reflect post-COVID trip reductions
License Plate Read Charge Exemption	5% of all trips are assumed to be exempt from the charge due to a failure to accurately record the licence plate	5% of all trips are assumed to be exempt from the charge due to a failure to accurately record the licence plate	5% of all trips are assumed to be exempt from the charge due to a failure to accurately record the licence plate	5% of all trips are assumed to be exempt from the charge due to a failure to accurately record the licence plate	5% of all trips are assumed to be exempt from the charge due to a failure to accurately record the licence plate
Global Exemption (proxy for discounts, exemptions and reimbursements)	20% of all trips are assumed to be exempt from the charge	20% of all trips are assumed to be exempt from the charge	20% of all trips are assumed to be exempt from the charge	20% of all trips are assumed to be exempt from the charge	20% of all trips are assumed to be exempt from the charge
Hospital Charge Exemption (patients, visitors and staff parking – cars only)	None	2,750 car trips per day (693,000 per year) are assumed to be exempt from the charge	None	None	2,750 car trips per day (693,000 per year) are assumed to be exempt from the charge

Trip and Revenue Assumption	Consultation Proposal	Scenario 1	Scenario 1A	Scenario 2	Scenario 3
Free Days Exemption (applies only to car trips that are attached to an account)	None	None	2027+: 50 days per year	2026: 180 days per year 2027: 180 days per year 2028: 100 days per year 2029: 50 days per year 2030+: 0 days per year	2026: 180 days per year 2027: 180 days per year 2028+: 0 days per year
SME Daily Charge Discount	None	None	50% daily charge discount applied to 57% of LGV trips 50% daily charge discount applied to 35% of HGV trips	None	None
Penalty Charge Notices	Revenues and costs associated with PCNs are excluded from cash flows	Revenues and costs associated with PCNs are excluded from cash flows	Revenues and costs associated with PCNs are excluded from cash flows	Revenues and costs associated with PCNs are excluded from cash flows	Revenues and costs associated with PCNs are excluded from cash flows
Risk Adjustment	Net revenues are reduced by a 20% contingency	Net revenues are reduced by a 20% contingency	Net revenues are reduced by a 20% contingency	Net revenues are reduced by a 20% contingency	Net revenues are reduced by a 20% contingency

5.5.8. Gross trip volumes for the years 2026 and 2041 have been determined from traffic modelling outputs with trip volumes between 2026 and 2041 calculated using straight-line interpolation.

5.5.9. Estimated annual Sustainable Travel Zone chargeable trips over the period to 2036 are shown in Table 5-4 below:

Table 5-4 – Estimated annual Sustainable Travel Zone chargeable trips

Annual Net Chargeable Trips (millions of trips)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Summary of All Scenarios														
Consultation Proposal	0.0	0.0	5.8	14.9	15.1	15.4	15.7	15.9	16.2	16.4	16.7	17.0	17.2	166.3
Scenario 1	0.0	0.0	0.0	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.5	9.7	9.8	91.9
Scenario 1A	0.0	0.0	0.0	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	70.7
Scenario 2	0.0	0.0	3.2	7.1	8.5	11.7	15.7	15.9	16.2	16.4	16.7	17.0	17.2	145.6
Scenario 3	0.0	0.0	0.0	6.5	5.9	10.7	10.8	10.9	11.1	11.2	11.4	11.5	11.6	101.6

Annual Chargeable Trips (millions of trips)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Consultation Proposal														
Cars	0.0	0.0	6.8	17.5	17.8	18.1	18.4	18.8	19.1	19.4	19.7	20.1	20.4	196.0
LGVs	0.0	0.0	1.5	3.8	3.9	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.3	42.1
HGVs	0.0	0.0	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5.0
Gross Chargeable Trips	**0.0**	**0.0**	**8.4**	**21.8**	**22.1**	**22.5**	**22.9**	**23.3**	**23.7**	**24.0**	**24.4**	**24.8**	**25.2**	**243.2**

Annual Chargeable Trips (millions of trips)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Consultation Proposal														
COVID Adjustment	0.0	0.0	-0.8	-2.2	-2.2	-2.3	-2.3	-2.3	-2.4	-2.4	-2.4	-2.5	-2.5	-24.3
Licence Plate Read Exemption	0.0	0.0	-0.4	-1.0	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.1	-1.1	-1.1	-10.9
Global Exemption	0.0	0.0	-1.4	-3.7	-3.8	-3.9	-3.9	-4.0	-4.0	-4.1	-4.2	-4.2	-4.3	-41.6
Hospital Charge Exemption (n/a)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Free Days Exemption (n/a)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SME Discount (n/a)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Chargeable Trips	**0.0**	**0.0**	**5.8**	**14.9**	**15.1**	**15.4**	**15.7**	**15.9**	**16.2**	**16.4**	**16.7**	**17.0**	**17.2**	**166.3**

Annual Chargeable Trips (millions of trips)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 1														
Cars	0.0	0.0	0.0	11.3	11.5	11.7	11.9	12.1	12.2	12.4	12.6	12.8	13.0	121.5
LGVs	0.0	0.0	0.0	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	20.7
HGVs	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.3
Gross Chargeable Trips	**0.0**	**0.0**	**0.0**	**13.5**	**13.7**	**13.9**	**14.1**	**14.3**	**14.6**	**14.8**	**15.0**	**15.2**	**15.4**	**144.5**

Annual Chargeable Trips (millions of trips)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 1														
COVID Adjustment	0.0	0.0	0.0	-1.4	-1.4	-1.4	-1.4	-1.4	-1.5	-1.5	-1.5	-1.5	-1.5	-14.4
Licence Plate Read Exemption	0.0	0.0	0.0	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-6.5
Global Exemption	0.0	0.0	0.0	-2.3	-2.3	-2.4	-2.4	-2.5	-2.5	-2.5	-2.6	-2.6	-2.6	-24.7
Hospital Charge Exemption	0.0	0.0	0.0	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-6.9
Free Days Exemption (n/a)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SME Discount (n/a)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Chargeable Trips	**0.0**	**0.0**	**0.0**	**8.5**	**8.7**	**8.8**	**9.0**	**9.1**	**9.3**	**9.4**	**9.5**	**9.7**	**9.8**	**91.9**

Annual Chargeable Trips (millions of trips)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 1A														
Cars	0.0	0.0	0.0	11.3	11.5	11.7	11.9	12.1	12.2	12.4	12.6	12.8	13.0	121.5
LGVs	0.0	0.0	0.0	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	20.7
HGVs	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.3
Gross Chargeable Trips	**0.0**	**0.0**	**0.0**	**13.5**	**13.7**	**13.9**	**14.1**	**14.3**	**14.6**	**14.8**	**15.0**	**15.2**	**15.4**	**144.5**

Annual Chargeable Trips (millions of trips)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 1A														
COVID Adjustment	0.0	0.0	0.0	-1.4	-1.4	-1.4	-1.4	-1.4	-1.5	-1.5	-1.5	-1.5	-1.5	-14.4
Licence Plate Read Exemption	0.0	0.0	0.0	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-6.5
Global Exemption	0.0	0.0	0.0	-2.3	-2.3	-2.4	-2.4	-2.5	-2.5	-2.5	-2.6	-2.6	-2.6	-24.7
Hospital Charge Exemption (n/a)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Free Days Exemption	0.0	0.0	0.0	-2.6	-2.7	-2.7	-2.8	-2.8	-2.8	-2.9	-2.9	-3.0	-3.0	-28.2
SME Discount *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Chargeable Trips	**0.0**	**0.0**	**0.0**	**6.6**	**6.7**	**6.8**	**6.9**	**7.0**	**7.1**	**7.2**	**7.3**	**7.4**	**7.5**	**70.7**

*Note: the price elasticity of demand for LGVs and HGVs is assumed to be close to zero and therefore there is no change to trip volumes

Annual Chargeable Trips (millions of trips)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 2														
Cars	0.0	0.0	6.8	17.5	17.8	18.1	18.4	18.8	19.1	19.4	19.7	20.1	20.4	196.0
LGVs	0.0	0.0	1.5	3.8	3.9	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.3	42.1
HGVs	0.0	0.0	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5.0
Gross Chargeable Trips	**0.0**	**0.0**	**8.4**	**21.8**	**22.1**	**22.5**	**22.9**	**23.3**	**23.7**	**24.0**	**24.4**	**24.8**	**25.2**	**243.2**

Annual Chargeable Trips (millions of trips)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 2														
COVID Adjustment	0.0	0.0	-0.8	-2.2	-2.2	-2.3	-2.3	-2.3	-2.4	-2.4	-2.4	-2.5	-2.5	-24.3
Licence Plate Read Exemption	0.0	0.0	-0.4	-1.0	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.1	-1.1	-1.1	-10.9
Global Exemption	0.0	0.0	-1.4	-3.7	-3.8	-3.9	-3.9	-4.0	-4.0	-4.1	-4.2	-4.2	-4.3	-41.6
Hospital Charge Exemption (n/a)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Free Days Exemption	0.0	0.0	-2.6	-7.7	-6.7	-3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-20.7
SME Discount (n/a)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Chargeable Trips	**0.0**	**0.0**	**3.2**	**7.1**	**8.5**	**11.7**	**15.7**	**15.9**	**16.2**	**16.4**	**16.7**	**17.0**	**17.2**	**145.6**

Annual Chargeable Trips (millions of trips)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 3														
Cars	0.0	0.0	0.0	14.0	14.2	14.4	14.5	14.7	14.9	15.1	15.2	15.4	15.6	148.0
LGVs	0.0	0.0	0.0	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	20.7
HGVs	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.3
Gross Chargeable Trips	**0.0**	**0.0**	**0.0**	**16.2**	**16.4**	**16.6**	**16.8**	**17.0**	**17.2**	**17.4**	**17.6**	**17.8**	**18.0**	**171.0**

Annual Chargeable Trips (millions of trips)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 3														
COVID Adjustment	0.0	0.0	0.0	-1.6	-1.6	-1.7	-1.7	-1.7	-1.7	-1.7	-1.8	-1.8	-1.8	-17.1
Licence Plate Read Exemption	0.0	0.0	0.0	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-7.7
Global Exemption	0.0	0.0	0.0	-2.8	-2.8	-2.8	-2.9	-2.9	-2.9	-3.0	-3.0	-3.0	-3.1	-29.2
Hospital Charge Exemption	0.0	0.0	0.0	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-6.9
Free Days Exemption	0.0	0.0	0.0	-3.9	-4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-8.5
SME Discount (n/a)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Chargeable Trips	**0.0**	**0.0**	**0.0**	**6.5**	**5.9**	**10.7**	**10.8**	**10.9**	**11.1**	**11.2**	**11.4**	**11.5**	**11.6**	**101.6**

5.5.10. The estimated annual Sustainable Travel Zone revenues net of discounts, exemptions and risk adjustments over the period to 2036 are shown in Table 5-5 below:

Table 5-5 – Estimated annual Sustainable Travel Zone Revenues*

STZ Net Revenues (£ millions indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Consultation Proposal	0.0	0.0	32.0	81.6	82.8	84.1	90.5	91.8	93.1	100.2	101.6	103.0	110.8	971.6
Scenario 1	0.0	0.0	0.0	45.0	45.7	46.3	49.9	50.6	51.3	55.2	55.9	56.7	60.9	517.5
Scenario 1A	0.0	0.0	0.0	33.2	33.6	34.1	36.6	37.1	37.6	40.4	40.9	41.4	44.5	379.4
Scenario 2	0.0	0.0	21.7	50.6	56.2	69.1	90.5	91.8	93.1	100.2	101.6	103.0	110.8	888.7
Scenario 3	0.0	0.0	0.0	28.9	27.6	39.1	42.0	42.5	43.0	46.2	46.7	47.2	50.7	414.0

*These exclude the 20% revenue contingency. Should this not be needed in part, or fully, then it would mean there is additional money available for investment in transport.

5.5.11. The Consultation Proposal and Scenario 2 are both all-day schemes and therefore have the highest revenues, with the latter scenario being the lower of the two due to the scenario-specific exemptions and discounts.

5.5.12. Scenarios 1, 1A and 3 are all lower due to the charge being applied only during AM and PM peaks. Scenarios 1A and 3 are the lowest due, primarily, to the impact of scenario-specific exemptions and discounts (which are particularly pronounced in Scenario 1A) and, in the case of Scenario 3, a lower daily charge for cars.

5.5.13. The highest revenue scenario is approximately 2.5 times higher than the lowest revenue scenario which results in significant differences across the scenarios in terms of the amount of free cash available to fund Bus Improvement Measures and Sustainable Transport Measures.

5.5.14. The total impact over the period to 2036 of each discount, exemption and risk adjustment on overall Sustainable Travel Zone revenues is shown in Table 5-6 below:

Table 5-6 – Total Impact on Sustainable Travel Zone Revenues of Discounts, Exemptions and Risk Adjustments

STZ Net Revenues (£ millions indexed, risk adjusted)	Consultation Proposal		Scenario 1		Scenario 1A		Scenario 2		Scenario 3	
	£m	%	£m	%	£m	%	£m	%	£m	%
Cars	1,054.6	59.4%	655.3	65.5%	655.3	65.5%	1,054.6	59.4%	478.5	57.9%
LGVs	453.1	25.5%	222.8	22.3%	222.8	22.3%	453.1	25.5%	223.0	27.0%
HGVs	267.9	15.1%	122.1	12.2%	122.1	12.2%	267.9	15.1%	125.0	15.1%
Total Gross Revenue (~2036)	**1,775.6**	**100.0%**	**1,000.2**	**100.0%**	**1,000.2**	**100.0%**	**1,775.6**	**100.0%**	**826.5**	**100.0%**
COVID Adjustment	-177.6	-10.0%	-100.0	-10.0%	-100.0	-10.0%	-177.6	-10.0%	-82.6	-10.0%
Licence Plate Read Exemption	-79.9	-4.5%	-45.0	-4.5%	-45.0	-4.5%	-79.9	-4.5%	-37.2	-4.5%
Global Exemption	-303.6	-17.1%	-171.0	-17.1%	-171.0	-17.1%	-303.6	-17.1%	-141.3	-17.1%
Hospital Charge Exemption	0.0	0.0%	-37.3	-3.7%	0.0	0.0%	0.0	0.0%	-22.4	-2.7%
Free Days Exemption	0.0	0.0%	0.0	0.0%	-151.8	-15.2%	-103.6	-5.8%	-25.4	-3.1%
SME Discount	0.0	0.0%	0.0	0.0%	-58.0	-5.8%	0.0	0.0%	0.0	0.0%
Risk Adjustment	-242.9	-13.7%	-129.4	-12.9%	-94.8	-9.5%	-222.2	-12.5%	-103.5	-12.5%
Total Net Revenue (~2036)	**971.6**	**54.7%**	**517.5**	**51.7%**	**379.4**	**37.9%**	**888.7**	**50.1%**	**414.0**	**50.1%**

*Note: % values are relative to the relevant total gross revenue amount

Sustainable Travel Zone Cost Assumptions

5.5.15. Sustainable Travel Zone costs have been generated based on the level of detail for the scheme designs and architecture of this OBC. Inflation, a 40% capital cost risk adjustment and a 10% operating cost risk adjustment have been added to those estimates for the purpose of this Financial Dimension.

5.5.16. Capital costs between different scenarios are broadly the same. The estimated Sustainable Travel Zone capital costs over the period to 2036 are shown in Table 5-7 below:

Table 5-7 – Estimated annual Sustainable Travel Zone Capital Costs

STZ Capital Costs (£ millions indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Consultation Proposal	0.0	28.4	1.2	1.2	1.2	1.2	1.2	3.4	3.4	3.4	3.4	3.4	0.0	51.6
Scenario 1	0.0	0.0	28.4	1.3	1.3	1.3	1.3	1.3	3.5	3.5	3.5	3.5	3.5	52.0
Scenario 1A	0.0	0.0	28.3	1.3	1.3	1.3	1.3	1.3	3.5	3.5	3.5	3.5	3.5	51.9
Scenario 2	0.0	28.3	1.2	1.2	1.2	1.2	1.2	3.4	3.4	3.4	3.4	3.4	0.0	51.4
Scenario 3	0.0	0.0	28.4	1.3	1.3	1.3	1.3	1.3	3.5	3.5	3.5	3.5	3.5	51.9

5.5.17. The scenario-specific options described above have almost no impact on the size of the Sustainable Travel Zone and therefore capital costs are broadly similar across all scenarios.

5.5.18. Operating costs between different schemes differ largely due to differences in assumed trip-related transaction volumes and contact channel costs. The estimated annual Sustainable Travel Zone operating costs over the period to 2036 are shown in Table 5-8 below:

Table 5-8 – Estimated annual Sustainable Travel Zone Operating Costs

STZ Operating Costs (£ millions indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Consultation Proposal	0.0	0.6	12.4	13.8	11.7	10.3	9.1	9.3	9.6	9.8	10.1	10.4	10.6	117.7
Scenario 1	0.0	0.0	0.6	11.7	9.8	8.7	7.8	7.1	7.3	7.5	7.7	7.9	8.0	84.0
Scenario 1A	0.0	0.0	0.6	9.1	7.9	7.6	7.2	7.0	7.2	7.3	7.5	7.7	7.9	77.0
Scenario 2	0.0	0.6	10.0	11.1	9.9	9.2	8.6	8.8	9.0	9.3	9.5	9.7	10.0	105.7
Scenario 3	0.0	0.0	0.6	11.0	9.2	8.5	7.8	7.4	7.5	7.7	7.9	8.1	8.3	83.9

Net Cash Flow and Funding Needs

5.5.19. The estimated Sustainable Travel Zone net cash flows and funding requirements over the period to 2036 are shown in Table 5-9 below:

Table 5-9 – Sustainable Travel Zone Cash Flow and Funding Need

STZ Cash Flow and Funding Need (£ millions indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Summary of All Scenarios														
Consultation Proposal Cash Flow	0.0	-29.0	18.4	66.6	69.9	72.6	80.2	79.1	80.2	87.0	88.1	89.3	100.2	802.4
Consultation Proposal Funding Need	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0

STZ Cash Flow and Funding Need (£ millions indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Summary of All Scenarios														
Scenario 1 Cash Flow	0.0	0.0	-29.0	32.1	34.7	36.4	40.8	42.2	40.5	44.2	44.8	45.4	49.4	381.5
Scenario 1 Funding Need	0.0	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0
Scenario 1A Cash Flow	0.0	0.0	-28.9	22.8	24.4	25.3	28.2	28.9	27.0	29.6	29.9	30.3	33.1	250.5
Scenario 1A Funding Need	0.0	0.0	28.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.9
Scenario 2 Cash Flow	0.0	-28.9	10.5	38.3	45.1	58.7	80.7	79.7	80.7	87.6	88.7	89.9	100.8	731.7
Scenario 2 Funding Need	0.0	28.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.9
Scenario 3 Cash Flow	0.0	0.0	-29.0	16.6	17.2	29.4	32.9	33.9	32.0	35.0	35.4	35.7	39.0	278.2
Scenario 3 Funding Need	0.0	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0

STZ Cash Flow and Funding Need (£ millions indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Consultation Proposal														
STZ Operating Income *	0.0	-0.6	19.6	67.8	71.1	73.8	81.4	82.5	83.6	90.4	91.5	92.6	100.2	853.9
STZ Capital Costs **	0.0	-28.4	-1.2	-1.2	-1.2	-1.2	-1.2	-3.4	-3.4	-3.4	-3.4	-3.4	0.0	-51.6
Net STZ Cash Flow	0.0	-29.0	18.4	66.6	69.9	72.6	80.2	79.1	80.2	87.0	88.1	89.3	100.2	802.4

STZ Cash Flow and Funding Need (£ millions indexed, risk adjusted)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Consultation Proposal														
STZ Funding Need	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0

*Note: Net STZ revenues minus operating costs

**Note: Including annual reserving

STZ Cash Flow and Funding Need (£ millions indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 1														
STZ Operating Income *	0.0	0.0	-0.6	33.4	35.9	37.6	42.1	43.4	44.0	47.7	48.2	48.8	52.9	433.4
STZ Capital Costs **	0.0	0.0	-28.4	-1.3	-1.3	-1.3	-1.3	-1.3	-3.5	-3.5	-3.5	-3.5	-3.5	-52.0
Net STZ Cash Flow	0.0	0.0	-29.0	32.1	34.7	36.4	40.8	42.2	40.5	44.2	44.8	45.4	49.4	381.5
STZ Funding Need	0.0	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0

*Note: Net STZ revenues minus operating costs

**Note: Including annual reserving

STZ Cash Flow and Funding Need (£ millions indexed, risk adjusted)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Scenario 1A														

STZ Operating Income *	0.0	0.0	-0.6	24.1	25.7	26.5	29.4	30.1	30.4	33.1	33.4	33.7	36.6	302.3
STZ Capital Costs **	0.0	0.0	-28.3	-1.3	-1.3	-1.3	-1.3	-1.3	-3.5	-3.5	-3.5	-3.5	-3.5	-51.9
Net STZ Cash Flow	0.0	0.0	-28.9	22.8	24.4	25.3	28.2	28.9	27.0	29.6	29.9	30.3	33.1	250.5
STZ Funding Need	0.0	0.0	28.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.9

*Note: Net STZ revenues minus operating costs

**Note: Including annual reserving

STZ Cash Flow and Funding Need (£ millions indexed, risk adjusted)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Scenario 2														
STZ Operating Income *	0.0	-0.6	11.7	39.5	46.3	59.9	82.0	83.0	84.1	91.0	92.1	93.3	100.8	783.1
STZ Capital Costs **	0.0	-28.3	-1.2	-1.2	-1.2	-1.2	-1.2	-3.4	-3.4	-3.4	-3.4	-3.4	0.0	-51.4
Net STZ Cash Flow	0.0	-28.9	10.5	38.3	45.1	58.7	80.7	79.7	80.7	87.6	88.7	89.9	100.8	731.7
STZ Funding Need	0.0	28.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.9

*Note: Net STZ revenues minus operating costs

**Note: Including annual reserving

STZ Cash Flow and Funding Need (£ millions indexed, risk adjusted)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Scenario 3														

STZ Operating Income *	0.0	0.0	-0.6	17.9	18.4	30.7	34.2	35.2	35.5	38.5	38.8	39.2	42.4	330.1
STZ Capital Costs	0.0	0.0	-28.4	-1.3	-1.3	-1.3	-1.3	-1.3	-3.5	-3.5	-3.5	-3.5	-3.5	-51.9
Net STZ Cash Flow	0.0	0.0	-29.0	16.6	17.2	29.4	32.9	33.9	32.0	35.0	35.4	35.7	39.0	278.2
STZ Funding Need	0.0	0.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0

*Note: Net STZ revenues minus operating costs **Note: Including annual reserving

5.5.20. The total estimated funding required for the Sustainable Transport Zone is in the region of £29 million for all scenarios, including inflation and risk adjustments.

5.5.21. Notwithstanding significant differences in individual net cash flows between scenarios, every scenario generates sufficient net cash flows to support the upfront funding requirements.

5.6 Bus Improvement Measures Financial Assumptions

5.6.1. Inflation included in the calculation of Bus Improvement Measures costs is assumed to be the same as the values assumed for Charging Infrastructure.

5.6.2. Bus improvement measures include considerations in respect of service output, vehicle acquisition and fare reductions. These measures are described in more detail in the Commercial Dimension.

Network Improvements

5.6.3. It is currently assumed that the cost of providing the service enhancements is net of estimated revenue and that new vehicles are purchased through a lease or equivalent financial arrangement where the cost to the GCP is spread over the life of the asset – these amounts are included in the cost table further below.

Fare Reductions

5.6.4. The Making Connections programme proposes to reduce and simplify existing fares. To provide a consistent set of assumptions for the assessment of the scenarios a 25 % reduction in fares has been applied.

5.6.5. We recognise that, depending on the final scheme selected, there may be a need to revise the service specification to fund the £1/2 fares proposal.

5.6.6. £1/£2 fares are affordable in all scenarios, apart from during the ‘ramp up’ period of Scenario 3, where there is insufficient funding without other sources being identified due to the high cost of providing 100 free days and the subsequent reduction in funding available to spend on bus service improvements.

5.6.7. The exact amount of funding available would be dependent on final decisions around charging hours, charge levels and the scale of discounts, exemptions and reimbursements.

5.6.8. Further work beyond the OBC would need to be undertaken by CPCA to establish the programme of bus investment, including the final proposition on bus fares.

Cost Assumptions

The estimated cost of Bus Improvement Measures over the period to 2036 are shown in Table 5-10 below.

Table 5-10 – Bus Improvement Measures Costs

Bus Improvement Measures Costs (£ millions, indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Consultation Proposal	5.0	10.0	21.0	65.0	65.0	65.0	65.0	64.0	65.0	71.5	72.4	74.0	80.0	722.9
Scenario 1	10.0	10.0	15.0	25.0	25.0	33.0	33.5	34.5	33.5	36.5	37.0	37.5	40.0	370.5
Scenario 1A	5.0	8.0	15.0	17.5	23.0	23.0	23.0	23.5	22.5	23.5	24.0	24.0	26.0	258.0
Scenario 2	5.0	10.0	10.0	35.0	45.0	51.0	65.0	64.0	65.0	71.5	72.4	74.0	80.0	647.9
Scenario 3	5.0	8.0	10.0	11.0	18.0	30.0	28.0	28.0	27.5	29.0	29.0	29.0	30.5	283.0

5.7 Sustainable Transport Measures Financial Assumptions

5.7.1. Inflation included in the calculation of Sustainable Transport Measures costs is assumed to be the same as the values assumed for Charging Infrastructure.

5.7.2. At this stage, an illustrative package of options has been developed for sustainable transport measures (see Appendix L). The exact allocation of funding and programme of measures would be further developed post-OBC. Given the nature of the sustainable transport measure programme, it is flexible and would be adjustable should changes need to be made to the future funding profiles.

Cost Assumptions

The estimated cost of Sustainable Transport Measures over the period to 2036 are shown in Table 5-11 below.

Table 5-11 – Sustainable Transport Measures Costs

Sustainable Transport Measures Costs (£ millions, indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Consultation Proposal	0.0	0.0	0.4	1.4	1.4	14.0	15.0	15.0	15.0	15.0	15.0	15.0	20.0	127.2
Scenario 1	0.0	0.0	0.2	0.4	1.5	3.5	7.0	7.5	7.0	7.5	7.5	7.5	9.0	58.6
Scenario 1A	0.0	0.0	0.2	0.5	0.5	0.5	5.0	5.0	4.5	6.0	6.0	6.0	7.0	41.2
Scenario 2	0.0	0.0	0.4	1.4	1.4	14.0	15.0	15.0	15.0	15.0	15.0	15.0	20.0	127.2
Scenario 3	0.0	0.0	0.2	0.4	0.4	0.6	5.0	5.9	4.5	6.0	6.0	6.5	8.0	43.5

5.8 Total Net Cash Flow Summary

5.8.1. A total net cash flow summary table (Table 5-12) has been calculated based upon the estimated revenue and cost summaries above.

Table 5-12 – Total Net Cash Flow Summary

Total Net Cash Flow (£ millions, indexed, risk adjusted)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Consultation Proposal														
STZ Operating Income	0.0	-0.6	19.6	67.8	71.1	73.8	81.4	82.5	83.6	90.4	91.5	92.6	100.2	853.9
STZ Capital Costs *	0.0	-28.4	-1.2	-1.2	-1.2	-1.2	-1.2	-3.4	-3.4	-3.4	-3.4	-3.4	0.0	-51.6
Bus Improvement Measures Costs	-5.0	-10.0	-21.0	-65.0	-65.0	-65.0	-65.0	-64.0	-65.0	-71.5	-72.4	-74.0	-80.0	-722.9
Sustainable Transport Measures Costs	0.0	0.0	-0.4	-1.4	-1.4	-14.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-20.0	-127.2
Net Cash Flow (before Funding / Cash Reserves **)	**-5.0**	**-39.0**	**-3.0**	**0.3**	**3.5**	**-6.4**	**0.2**	**0.1**	**0.2**	**0.5**	**0.8**	**0.3**	**0.2**	**-47.6**
GCP £50m Investment	5.0	10.0	21.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0
Funding from Repayable Sources / Cash Reserves	0.0	29.0	0.0	0.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.4
Repayment of Repayable Sources / Cash Reserves	0.0	0.0	-18.0	-14.3	-3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-35.4
Net Cash Flow (after Funding / Cash Reserves)	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.0**	**0.2**	**0.1**	**0.2**	**0.5**	**0.8**	**0.3**	**0.2**	**2.4**

Total Net Cash Flow (£ millions, indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Consultation Proposal														
Cumulative Cash Flow (after Funding / Cash Reserves)	0.0	0.0	0.0	0.0	0.3	0.3	0.4	0.5	0.7	1.2	2.0	2.2	2.4	

*Note: Including annual reserving

**Note: Cash reserves retain a portion of free cash flows to be applied against future expenditures

Total Net Cash Flow (£ millions, indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 1														
STZ Operating Income	0.0	0.0	-0.6	33.4	35.9	37.6	42.1	43.4	44.0	47.7	48.2	48.8	52.9	433.4
STZ Capital Costs *	0.0	0.0	-28.4	-1.3	-1.3	-1.3	-1.3	-1.3	-3.5	-3.5	-3.5	-3.5	-3.5	-52.0
Bus Improvement Measures Costs	-10.0	-10.0	-15.0	-25.0	-25.0	-33.0	-33.5	-34.5	-33.5	-36.5	-37.0	-37.5	-40.0	-370.5
Sustainable Transport Measures Costs	0.0	0.0	-0.2	-0.4	-1.5	-3.5	-7.0	-7.5	-7.0	-7.5	-7.5	-7.5	-9.0	-58.6
Net Cash Flow (before Funding / Cash Reserves)	**-10.0**	**-10.0**	**-44.2**	**6.7**	**8.2**	**-0.1**	**0.3**	**0.2**	**0.0**	**0.2**	**0.3**	**0.4**	**0.4**	**-47.6**
GCP £50m Investment	10.0	10.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0

Total Net Cash Flow (£ millions, indexed, risk adjusted)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Scenario 1														
Funding from Repayable Sources / Cash Reserves	0.0	0.0	29.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4
Repayment of Repayable Sources / Cash Reserves	0.0	0.0	0.0	-21.7	-7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-29.4
Net Cash Flow (after Funding / Cash Reserves)	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.3**	**0.2**	**0.0**	**0.2**	**0.3**	**0.4**	**0.4**	**2.4**
Cumulative Cash Flow (after Funding / Cash Reserves)	0.0	0.0	0.0	0.0	0.5	0.5	0.8	1.0	1.1	1.3	1.6	2.0	2.4	

*Note: Including annual reserving

**Note: Cash reserves retain a portion of free cash flows to be applied against future expenditures

Total Net Cash Flow (£ millions, indexed, risk adjusted)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Scenario 1A														
STZ Operating Income	0.0	0.0	-0.6	24.1	25.7	26.5	29.4	30.1	30.4	33.1	33.4	33.7	36.6	302.3
STZ Capital Costs *	0.0	0.0	-28.3	-1.3	-1.3	-1.3	-1.3	-1.3	-3.5	-3.5	-3.5	-3.5	-3.5	-51.9
Bus Improvement Measures Costs	-5.0	-8.0	-15.0	-17.5	-23.0	-23.0	-23.0	-23.5	-22.5	-23.5	-24.0	-24.0	-26.0	-258.0

Total Net Cash Flow (£ millions, indexed, risk adjusted)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Scenario 1A														
Sustainable Transport Measures Costs	0.0	0.0	-0.2	-0.5	-0.5	-0.5	-5.0	-5.0	-4.5	-6.0	-6.0	-6.0	-7.0	-41.2
Net Cash Flow (before Funding / Cash Reserves **)	**-5.0**	**-8.0**	**-44.1**	**4.8**	**0.9**	**1.7**	**0.2**	**0.4**	**0.0**	**0.1**	**-0.1**	**0.3**	**0.1**	**-48.7**
GCP £50m Investment	5.0	8.0	15.0	17.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0
Funding from Repayable Sources / Cash Reserves	0.0	0.0	29.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.1
Repayment of Repayable Sources / Cash Reserves	0.0	0.0	0.0	-22.3	-5.4	-1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-29.1
Net Cash Flow (after Funding / Cash Reserves)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.2**	**0.4**	**0.0**	**0.1**	**-0.1**	**0.3**	**0.1**	**1.3**
Cumulative Cash Flow (after Funding / Cash Reserves)	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.8	0.8	0.9	0.8	1.1	1.3	

*Note: Including annual reserving

**Note: Cash reserves retain a portion of free cash flows to be applied against future expenditures

Total Net Cash Flow (£ millions, indexed, risk adjusted)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total
Scenario 2														
STZ Operating Income	0.0	-0.6	11.7	39.5	46.3	59.9	82.0	83.0	84.1	91.0	92.1	93.3	100.8	783.1
STZ Capital Costs *	0.0	-28.3	-1.2	-1.2	-1.2	-1.2	-1.2	-3.4	-3.4	-3.4	-3.4	-3.4	0.0	-51.4
Bus Improvement Measures Costs	-5.0	-10.0	-10.0	-35.0	-45.0	-51.0	-65.0	-64.0	-65.0	-71.5	-72.4	-74.0	-80.0	-647.9
Sustainable Transport Measures Costs	0.0	0.0	-0.4	-1.4	-1.4	-14.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-20.0	-127.2
Net Cash Flow (before Funding / Reserves **)	**-5.0**	**-38.9**	**0.1**	**1.9**	**-1.3**	**-6.3**	**0.7**	**0.7**	**0.7**	**1.1**	**1.4**	**0.9**	**0.8**	**-43.3**
GCP £50m Investment	5.0	10.0	10.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0
Funding from Repayable Sources / Reserves	0.0	28.9	0.0	0.0	1.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.6
Repayment of Repayable Sources / Reserves	0.0	0.0	-10.1	-26.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-36.6
Net Cash Flow (after Funding / Reserves)	**0.0**	**0.0**	**0.0**	**0.4**	**0.0**	**0.0**	**0.7**	**0.7**	**0.7**	**1.1**	**1.4**	**0.9**	**0.8**	**6.7**
Cumulative Cash Flow (after Funding / Reserves)	0.0	0.0	0.0	0.4	0.4	0.4	1.2	1.8	2.5	3.6	5.0	5.9	6.7	

*Note: Including annual reserving

Note: Cash reserves retain a portion of free cash flows to be applied against future expenditures **Total Net Cash Flow (£ millions, indexed, risk adjusted)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**Total**
Scenario 3														
STZ Operating Income	0.0	0.0	-0.6	17.9	18.4	30.7	34.2	35.2	35.5	38.5	38.8	39.2	42.4	330.1
STZ Capital Costs *	0.0	0.0	-28.4	-1.3	-1.3	-1.3	-1.3	-1.3	-3.5	-3.5	-3.5	-3.5	-3.5	-51.9
Bus Improvement Measures Costs	-5.0	-8.0	-10.0	-11.0	-18.0	-30.0	-28.0	-28.0	-27.5	-29.0	-29.0	-29.0	-30.5	-283.0
Sustainable Transport Measures Costs	0.0	0.0	-0.2	-0.4	-0.4	-0.6	-5.0	-5.9	-4.5	-6.0	-6.0	-6.5	-8.0	-43.5
Net Cash Flow (before Funding / Cash Reserves **)	**-5.0**	**-8.0**	**-39.2**	**5.2**	**-1.2**	**-1.2**	**-0.1**	**0.0**	**0.0**	**0.0**	**0.4**	**0.2**	**0.5**	**-48.3**
GCP £50m Investment	5.0	8.0	10.0	11.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0
Funding from Repayable Sources / Cash Reserves	0.0	0.0	29.2	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.4
Repayment of Repayable Sources / Cash Reserves	0.0	0.0	0.0	-16.2	-14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-30.4
Net Cash Flow (after Funding / Cash Reserves)	**0.0**	**0.0**	**0.0**	**0.0**	**0.6**	**0.0**	**-0.1**	**0.0**	**0.0**	**0.0**	**0.4**	**0.2**	**0.5**	**1.7**

Cumulative Cash Flow (after Funding / Cash Reserves)	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	1.0	1.2	1.7	

*Note: Including annual reserving

**Note: Cash reserves retain a portion of free cash flows to be applied against future expenditures

5.9 Risks and Sensitivities

5.9.1. A range of sensitivity tests were carried out on variables that could impact the net cash flows generated by the Sustainable Travel Zone.

5.9.2. Sensitivities were mostly carried out on Scenario 1 and Scenario 2 to provide an indication of the impact on an AM/PM peak charging scenario (Scenario 1) and an all-day charging scenario (Scenario 2). Sensitivities that could specifically impact other scenarios (such as the application of free days) were carried out on those additional scenarios.

5.9.3. The sensitivities measure the impact on total net cash flows over the period to 2036. Outputs are presented in both real 2023 terms and percentage terms that compare the movements to the unsensitised scenario. The sensitivity analysis assumes that contingency amounts included in the base scenarios are not applied to offset downside sensitivity results.

5.9.4. Contingency amounts are also shown in the summary table (also in real 2023 terms). To the extent that these can, in practice, be applied to offset downside sensitivity cases then the impact on net cash flows would be less than shown, or zero. If offsetting is not possible then net cash flows, and consequently the funds available for Bus Improvement Measures and Sustainable Transport Measures, would be impacted.

5.9.5. The results of the sensitivities are outlined in Table 5-13.

Table 5-13 – Sensitivity Test Outcomes

Total Net Cash Flow Impacts (£ millions, real 2023)		**Scenario 1**		**Scenario 2**		**Scenario 3**	
		£	**%**	**£**	**%**	**£**	**%**
Unsensitised Net Cash Flows		314.2	n/a	601.6	n/a	227.0	n/a
Base Case Contingencies	Revenue	107.6	n/a	184.1	n/a	85.79	n/a
	Capital Cost	13.0	n/a	13.0	n/a	13.02	n/a
	Operating Cost	6.4	n/a	8.1	n/a	6.42	n/a
Economic Sensitivities [1]	CPI +1% / year	-19.5	-6.2%	-33.4	-5.5%		
	CPI -1% / Year	20.3	6.5%	34.8	5.8%		
	Cost Index +1% / year	-8.5	-2.7%	-9.5	-1.6%		
Trip Volume Sensitivities	+10%	53.5	17.0%	87.5	14.5%		
	-10%	-53.5	-17.0%	-87.5	-14.5%		
	Return to Pre-COVID [2]	43.3	13.8%	73.5	12.2%		

Total Net Cash Flow Impacts (£ millions, real 2023)		Scenario 1		Scenario 2		Scenario 3	
		£	%	£	%	£	%
Sustainable Travel Zone Cost Sensitivities	Capex +10%	-3.3	-1.0%	-3.3	-0.5%		
	Capex -10%	3.3	1.0%	3.3	0.5%		
	Opex +10%	-6.4	-2.0%	-8.1	-1.4%		
	Opex -10%	6.4	2.0%	8.1	1.4%		
	Both Costs +10%	-9.7	-3.1%	-11.4	-1.9%		
	Both Costs -10%	9.7	3.1%	11.4	1.9%		
Account Take-up Sensitivities [3]	+20%	8.0	2.5%	-6.8	-1.1%		
	+10%	4.0	1.3%	-3.4	-0.6%		
	-10%	-4.0	-1.3%	3.4	0.6%		
Trips per Account Sensitivities	Higher Trips / Account			2.8	0.5%	1.7	0.7%
	Lower Trips / Account			-3.6	-0.6%	-2.2	-1.0%
Free Days Sensitivity [4]	50 Days Indefinitely	-85.4	-27.2%	-126.0	-20.9%	-63.3	-27.9%

Supporting Notes:

1 Net cash flows are negatively impacted by higher CPI inputs over the measured period because revenues escalate more slowly during the early years of the scheme (revenue inputs have a base date of 2027 whereas cost inputs have a base date of 2022). Over the long term it is expected that this trend would reverse given the annual ratio of revenues to costs.

2 This sensitivity reduces the 10% COVID trip discount by 2 percentage points each year starting in 2028 until the trip discount reaches zero.

3 This sensitivity produces opposing results for Scenario 1 and Scenario 2. In Scenario 1, higher account take-up delivers positive outcomes due to the lower total costs associated with transactions linked to accounts. In Scenario 2, the lower costs are offset entirely by the fact that a higher number of account holders are now eligible for free days.

4 This sensitivity adds 50 free days per year per account-holding car driver in any year in the base case scenario where that allowance would otherwise be zero.

5.10 Affordability

5.10.1. Revenues generated from the STZ result in positive net cash flows in all periods except for the period containing the initial investment costs, which itself can be easily funded from recoverable GCP City Deal funds.

5.10.2. Sensitivity analysis indicates that the current approach to contingency sizing is adequate to cover a range downside scenarios without reduction to the net cash flow position.

5.10.3. Given the strong net cash flow position of the STZ, it is highly unlikely that any downside scenario could result in an overall loss.

5.10.4. Were any downside scenario to exceed the contingency amounts then less free cash would be available to fund the Bus Improvement Measures and Sustainable Transport Measures. However, these expenditures could be scaled accordingly such that overall affordability is maintained. Forward expenditure commitments should take this into account such that some flexibility remains to scale expenditure should the net cash flow of the Sustainable Transport Zone be less than is forecast.

5.11 Subsidy Control Considerations

Bus Services

5.11.1. The Subsidy Control Act 2022 replaces the previous EU State Aid regime. However, it does not replace the machinery under the Transport Act 1985 for securing local bus services. The 1985 Act assumes that most bus services would be operated on a commercial and potentially competitive basis. It requires local transport authorities to procure any additional local bus services by means of competitive tender, except where the 'de minimis' regulations apply. These regulations allow LTAs with a spend of more than £600,000 per annum to direct award up to 25% of their spend, with no cap on the size of individual contract values.

5.11.2. Many of the 'Making Connections' proposals consist of enhancements to existing services. Should the CPCA pursue franchising then clearly these are straightforward to deliver as the services in their entirety become parts of franchises. However, if the CPCA delays or withdraws from implementation of franchising then the authority would need to revert back to the 1985 Act machinery. This is likely to constrain the delivery of enhancements to existing services, as for various reasons these are generally best delivered using a direct award mechanism. It may favour the early delivery of entirely new services such as the proposed Cambridge orbit routes.

Fares

5.11.3. The legislative basis for the proposed cap on the value of bus fares is retained EU legislation (EU1370/2007). This requires authorities not to over-compensate public transport operators: "the competent authority shall compensate the public service operators for the net financial effect, positive or negative, on costs incurred and revenues generate in complying with the tariff obligations in a way that prevents overcompensation". EU1370/2007 goes on to explain that the net financial effect consists of the costs an operator incurs by complying with a public service obligation, minus any positive financial effects, minus receipts, plus a reasonable profit. This is consistent with the requirements which British LTAs and bus operators are familiar with in regard to reimbursement for concessionary bus travel.

5.11.4. As with services, a franchise regime which specifies fares and is competitive eliminates the need for these considerations.

Zero-Emission Buses

5.11.5. The bus operations costings developed for Making Connections assume that any additional buses required to deliver the Making Connections bus network over and above the existing fleet would be zero-emission. Given the additional capital costs associated with zero-emission buses, it cannot be assumed that bus operators would self-fund these.

5.11.6. In a franchise scenario, the provision of buses of a certain age or type can be specified in the contract specification. In the existing deregulated regime, the provision of resources to commercial bus operators has the potential to represent unfair competitive advantage, even though the provision of those resources is to address market failure (i.e., the inability of bus operators to purchase zero-emission buses and associated infrastructure at market rates). There are a number of ways of overcoming this, one of which is for the LTA to hold a competition for the supply of buses to bus operators. A precedent exists for the provision of subsidy in the form of zero-emission buses and charging equipment (without a competition) to an operator which has been referred to the Subsidy Advice Unit (part of the Competition and Markets Authority) for advice under the Subsidy Control Act 2022. However, the LTA is still responsible for assessing whether the provision of that subsidy is permissible under the Act, and in the circumstances in the Making Connections area consideration should be given to a competitive approach for disbursing new buses in the absence of franchising.

6 Management Dimension

6.1 Purpose

6.1.1. The Management Dimension describes how the scheme would be delivered through project management best practice. It outlines the engagement undertaken with stakeholders, presents the key risks and demonstrates that an appropriate governance structure is in place to oversee the programme.

6.1.2. This Management Dimension includes the current scheme programme and commentary on governance, quality assurance, communications, benefits and risk management and monitoring and evaluation.

Scheme Delivery

6.1.3. The GCP is the local delivery body for the City Deal with central Government, and is responsible for overseeing the development of all schemes funded through the City Deal, including Making Connections. It is proposed that post OBC, CCC, as the local highway authority, fulfils the role of programme delivery body and are responsible for the day-to-day project management. GCP would keep programme level overview through their responsibilities for the City Deal. CCC would thus be responsible for procuring and delivering the proposed charging element of the Sustainable Travel Zone (STZ), and the delivery of the proposed sustainable transport schemes with the support of appointed contractors and partners where appropriate. CPCA, as the local transport authority, has a key role in overseeing the delivery of the proposed bus enhancements. Further detail pertaining to Programme Implementation is set out in Section 6.4.

What is Required at this Stage?

6.1.4. The DfT's transport business case guidance outlines the areas that should be covered in the Management Dimension at the OBC stage. The following table indicates where these requirements are met in this document.

Table 6-1 – Contents of the Management Dimension

Content	DfT Requirements	Management Dimension Section
Programme Reporting	Describe the reporting arrangements including delegated authorities, exception reporting, tolerances and change control.	6.2
Programme Scope	Set out deliverables and decisions that are provided/received from other projects and any constraints: this may include drop-dead delivery dates, resources and circumstances	6.3
Programme Implementation	Summarise the key-work packages, product and work break down structures for executing the work	6.4

Content	DfT Requirements	Management Dimension Section
Programme Plan	Outline a plan with key milestones, progress and include a critical path	6.5
Stakeholder Engagement And Communications	Set out the communications strategy and plans that accounts for all stakeholders, aligning with those outlined in the strategic dimension	6.6
Risk And Issues Management	Provide arrangements for risk management and issues that are likely to affect delivery and implementation	6.7
Lessons Management	Produce a strategy and plan for learning from other proposals, learning throughout the proposal and sharing lessons with other teams	6.8
Benefits Management	Produce a longlist of prioritised benefits and a Benefits Logic Map to show how benefits contribute to strategic objectives.	6.9
Data And Information Security	Explicitly address the protection of critical systems, digital assets and commercially sensitive data	6.10
Carbon Management	Provide a detailed and robust carbon management plan, which reports predicted emissions against baseline values, includes credible mitigation of associated risks, and provides sufficient evidence on the programme team's overall ability to manage and reduce carbon emissions.	6.11

6.2 Programme Reporting

6.2.1. The following section includes details of the reporting arrangements for the Making Connections programme. A summary of the delegated authority, exception reporting, tolerances, and change control processes is provided below:

- **Delegated Authorities:** The programme has established a clear structure of delegated authorities. This means that specific individuals or groups have been appropriately assigned decision-making power and responsibility for different aspects of the programme in line with the GCP's Assurance Framework; these responsibilities are summarised in Table 6-2.
- **Exception Reporting:** The programme follows the system for exception reporting set out in the GCP's Assurance Framework, which means that any significant deviations from the planned activities, budgets, or timelines are reported; this reporting mechanism is set out in the 'Programme Reporting' subsection below.
- **Tolerances:** Tolerances refer to the predefined limits or thresholds within which the programme can operate without requiring formal approval or intervention. These limits, which are explored in the 'Management Methodology' subsection below, are set for various aspects such as budget, schedule, quality, and scope. The defined tolerances provide flexibility for day-to-day management and ensure that significant deviations are escalated and addressed appropriately.
- **Change Control:** The Making Connections Programme has a change control process in place to manage any requested changes to the programme's scope, objectives, or deliverables. The process, which is summarised in the Management Methodology

subsection below, ensures that all changes are evaluated, documented, and approved or rejected based on their impact, feasibility, and alignment with the programme's goals. The change control arrangements thus help maintain the programme's focus and prevent uncontrolled or unauthorised changes.

6.2.2. These reporting arrangements, delegated authorities, exception reporting, tolerances, and change control mechanisms are designed to ensure effective governance, transparency, and control over the implementation of the Making Connections programme; they enable informed decision-making, risk management, and the successful delivery of the programme's objectives.

Management Methodology

6.2.3. The project management and development of the Making Connections programme is aligned with the PRINCE2 methodology and the DfT's Evaluation Guidance for Local Authority Major Schemes Development methodology.

6.2.4. The programme's aims, management processes and resources have been agreed by the Programme Board and are owned by the GCP Project Manager (currently the Director of City Access). The key principles are set out below:

- The overall scope of the programme is set by the GCP Executive Board;
- The programme is governed by a Project Board that receives reports on programme activity including spend, quality and risks;
- The Project Board can request from the Project Manager all information required for it to perform its governing role;
- The Project Manager must present all information to the Transport Projects Board that they consider is required for the Board to perform their governing role; and,
- The Project Manager has full day-to-day responsibility for the delivery of technical work streams and is employed by GCP.

6.2.5. Scheme delivery is being managed in accordance with the structure outlined in Figure 2-1. Table 6-2 outlines the function and reporting relationships of the groups at each management level. Upper management levels that focus on strategic issues are the GCP Executive Board and GCP Joint Assembly. Technical programme-focused management groups are the Programme Board, Programme Manager, Transport Projects Board and the Project Manager.

Table 6-2 – Roles and responsibilities[131]

Management Level	Function
GCP Executive Board	The GCP Executive Board is the key decision-making body, responsible for ensuring the objectives of the Greater Cambridge City Deal are met. The Executive Board is responsible for commissioning projects funded by money provided through the City Deal and for overall control of that programme of investments. The Executive Board includes leaders from each partner organisation and members of the public can participate in meetings, posing questions to be discussed. The Executive Board has the authority to approve recommendations and make decisions related to individual scheme approval, funding release, and project progress monitoring.
GCP Joint Assembly	The Joint Assembly is the strategic, local advisory, and scrutiny body for the GCP Executive Board. The Joint Assembly is composed of elected members from the constituent local authorities and representatives from other constituent organisations. There are 15 members in total; Cambridge City Council (CCC) and South Cambridgeshire District Council (SCDC) have three representatives on the Joint Assembly, with political balance in each Authority's membership reflecting the balance of the political parties on the relevant Council. The Assembly also includes three co-opted members nominated by the business board and three co-opted members nominated by the University of Cambridge. The Joint Assembly's role is to offer expertise and feedback to the Executive Board to assist in decision-making.
Programme Board	Key officers and stakeholders, prioritising schemes, managing programme-level risks and capturing shared benefits.
Programme Manager	Technical and procedural oversight of projects and programme level benefit management. Reports to the Project Boards.
Transport Projects Board	Overall control of each GCP transport project. Senior representatives in line with PRINCE2 requirements.
Project Manager	Day to day management of the project and delivery of technical work streams on behalf of GCP.

6.2.6. The GCP is focused on both programme and project-level governance. Issues of key importance at both the programme and project level are addressed at the highest levels of governance. Issues of a more technical and non-strategic nature are addressed by key officers.

6.2.7. At the programme level, an officer technical group made up of key officers and stakeholders develops the overall scheme prioritisation and seeks to manage programme-level risks and capture shared benefits. The Project Manager, in consultation with the Programme Manager, would raise programme-level issues with the GCP Executive Board and Joint Assembly as required.

6.2.8. At the project level, a Project Team works up scheme details and reports to a Project Manager who guides the overall technical development of the project, in combination with key officers. At project gateways, reports are made to the City Deal Executive Board on progress and to seek decisions on important project-related matters.

[131] Greater Cambridge Partnership (2021). *Governance - Assurance Framework*

Programme Reporting

6.2.9. The fundamental process of capturing change in the Making Connections programme is undertaken through the Programme Status Report. The Programme Status Report is presented at regular meetings of the Project Board and if required can be submitted between Project Boards at the Project Manager's discretion.

6.2.10. The Programme Status Report is the main input to the Project Board and summarises progress and change on the programme. The following list sets out the issues typically covered in the Programme Status Report:

- Schedule management, including key activities and achievements in report period
- Serious issues and actions required by governance body
- Key activities in the forthcoming period
- Programme progress review and reporting on key milestones including RAG rating
- Key issues
- Key risks
- Early warning of change control events
- Budget updates and cost management

Decision Making and Change Control

6.2.11. The GCP decision-making process involves collaboration between elected representatives, advisory committees, officers, and external stakeholders to ensure democratic accountability, strategic oversight, and effective project and programme delivery.

6.2.12. For the varying level of programme decisions that are made in relation to the scheme, the Project Manager has the authority to determine which category a decision falls under, of which there are four types:

- **Key decisions:** these decisions are as defined in the City Deal Assurance Framework and are the major 'gateway' decisions to allow the overall programme to progress. These key decisions form the outer scope of the programme and define its parameters. Key decisions are the responsibility of the Executive Board with advice from the Joint Assembly and Chief Executives;
- **Scope change decisions:** these decisions are those which would take the programme out of scope of the programme parameters agreed at the key decision-making stage and impact cost, quality or time. The Making Connections SRO is responsible for informing the Executive Board of any changes in the scheme's scope, costs, and implementation timescales. The Executive Board then assesses the impact of these changes on the overall scheme programme and collaborates with the SRO to address specific issues;
- **Major decisions within scope:** these decisions are within the agreed programme parameters but are still considered 'major decisions' because they have an impact on cost, quality and time. A major decision is the sole responsibility of the Project Board; and

- **Programme management decisions:** these are decisions which do not impact cost, quality or time e.g. moving budget between work streams. The Project Manager takes these decisions.

Progress, Assurance and Approvals

Assurance and Approvals Pathway

6.2.13. Making Connections is progressing through the GCP's standard approval processes, with all decisions being made by management groups, outlined in Table 6-2, with the appropriate level of authority. There are a number of key milestones in the Project Programme (see Table 6-8) where internal and/or external approvals are required in order for the programme to progress.

6.2.14. As part of the approval process, assurance is carried out at each stage of the programme and at all gateway review points. The assurance process for the Making Connections programme is set out in the City Deal Assurance Framework, which complies with the DfT's requirements for Assurance Frameworks.

GCP Assurance Framework

6.2.15. The Assurance Framework sets out the role of the GCP Joint Assembly in scrutinising GCP Executive Board decisions. The Assurance Framework outlines the proposed membership, responsibilities, processes and principles that would be in place for agreeing and overseeing the delivery of a robust transport infrastructure programme as part of the overall City Deal goals of integrating transport and strategic spatial planning.

6.2.16. The varied membership of the GCP Joint Assembly helps to ensure that it is both independent and sufficiently representative of a variety of viewpoints and stakeholder groups, in order to provide effective scrutiny of decision-making. Local partners are committed to ensuring that robust systems and processes would be in place in line with DfT guidance to develop and agree on a deliverable programme that offers value for money.

Independent Advice

6.2.17. The assurance process for Making Connections includes the involvement of independent advisors who are appointed to provide robust and independent scrutiny of the business case, and the scheme as a whole, at each key decision point.

6.2.18. The role of the independent advisor includes providing advice to the scheme promoters, the GCP Joint Assembly and the GCP Executive Board on whether or not the Making Connections programme should be approved to progress to the next stage of assessment, as well as suggesting any conditions that must be met by the scheme promoter.

6.2.19. SYSTRA is acting as the independent advisor for Making Connections and would review this OBC prior to the Executive Board's formal review and approvals process; hence, Making Connections cannot proceed to the FBC stage prior to receiving the requisite independent scrutiny. A list of documents that have been reviewed by SYSTRA is provided in the following table.

Table 6-3 – Log of Documents Reviewed by SYSTRA

Element	Date Provided	Comments Received
Options Assessment Report (First Version)	August 2022	August 2022
Appraisal Specification Report (First Version)	August 2022	August 2022
Strategic Outline Case	August 2022	August 2022
Appraisal Specification Report (Second Version)	July 2023	August 2023
Options Assessment Report (Second Version)	July 2023	August 2023
Outline Business Case	August 2023	August 2023

Financial Approvals

6.2.20. In terms of financial approvals, the following statements would be prepared as part of the FBC for consideration and approval by the GCP Executive Board:

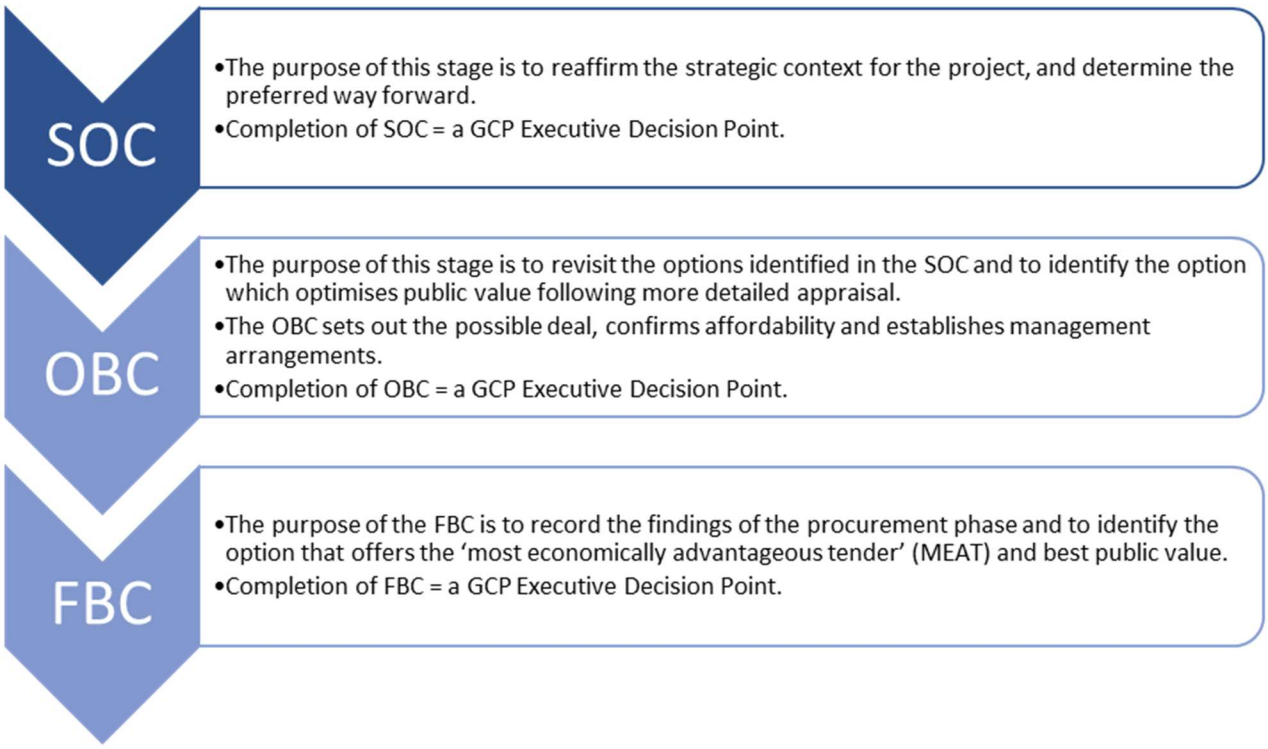
- A budget statement – to show the resource costs over the lifespan of the programme;
- A cash flow statement – to show existing spend, and the cash which would be spent on the preferred option, if it goes ahead; and
- A funding statement – to show the proposed sources of the required funds; this would include the contingencies necessary to ensure there is sufficient financial cover for risks and uncertainties.

Progress Route

6.2.21. The programme is following the three business case stages set out in the HM Treasury's Programme Business Case Guidance; these stages are described below and are shown in Figure 6-1:

- Strategic Outline Case (SOC), consisting of high-level analyses which establish the need for the programme and identify the options to be short-listed;
- Outline Business Case (OBC), containing more detailed analyses of short-listed options to assist with the identification of a preferred option, and setting out the financial, commercial, and management strategies; and
- Full Business Case (FBC), updating the preferred option analyses and confirming the final financial, commercial, and management strategies.

Figure 6-1 – The Three Stages of the Business Case Process[132]



6.2.22. The scheme is currently at the second stage of the business case process, OBC, which would need to be submitted to, and approved by, the GCP Executive Board. If approved, and subject to CCC's decision-taking processes it is anticipated that the scheme would progress to the FBC stage in winter 2023.

6.2.23. The ultimate decision on whether to implement the Sustainable Travel Zone (STZ) sits with CCC; this is because CCC possess the necessary legal powers as the local highway authority.

6.3 Programme Scope, Dependencies and Constraints

6.3.1. The Making Connections programme is formed of three constituent elements; namely, improvements to bus services, the creation of a sustainable travel zone, and investing in other sustainable travel schemes, including smarter travel initiatives.

6.3.2. Making Connections is a constituent part of the City Access programme. City Access is GCP's sustainable transport strategy and forms part of its overarching sustainable transport programme. The sustainable transport programme is composed of four programmes that contribute to the following aims:

- Ease congestion and prioritise greener and active travel, making it easier for people to travel by bus, rail, cycle or on foot to improve average journey time;

[132] HM Treasury (2018). *Programme Business Case Guidance*

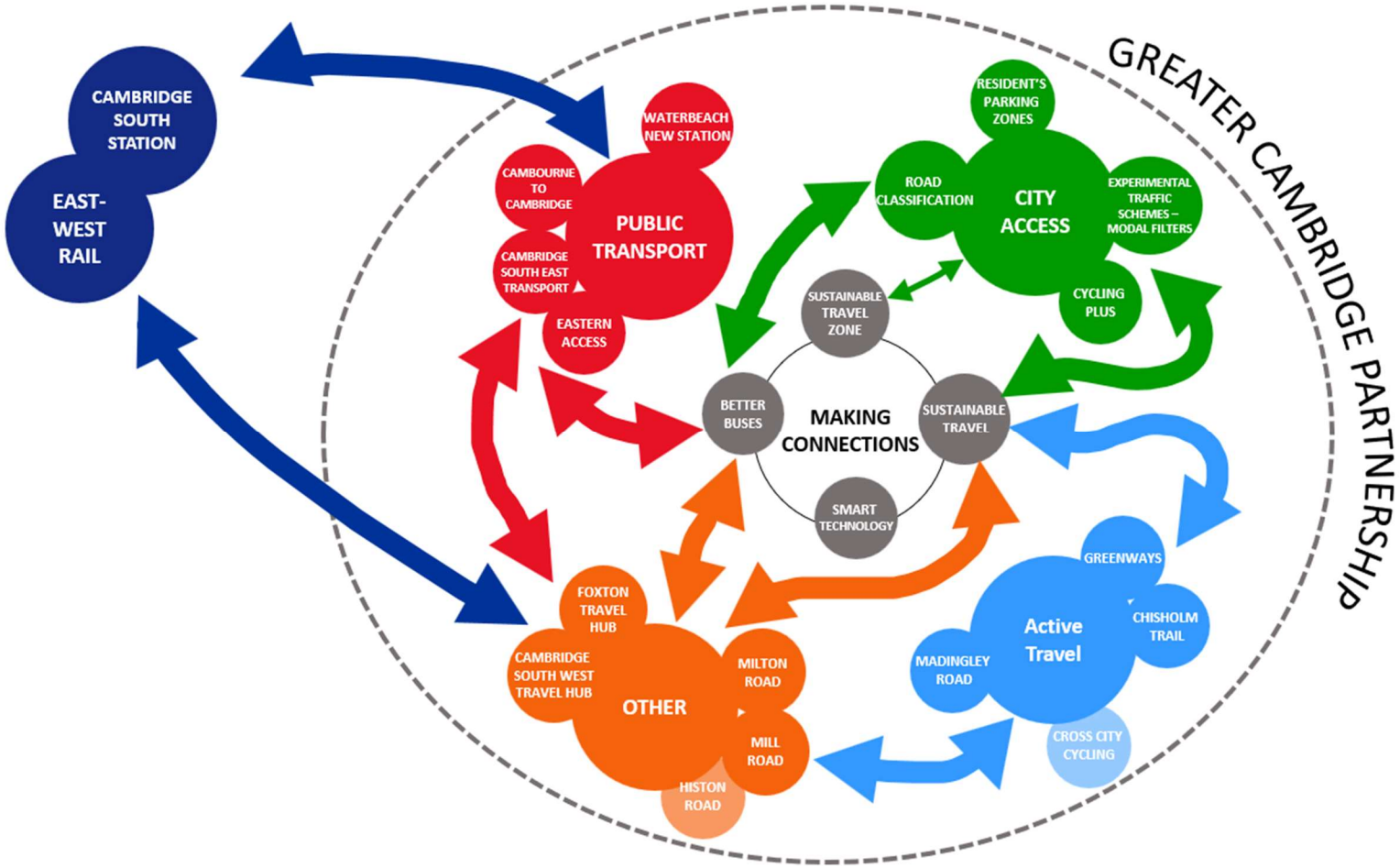
- Keep the Greater Cambridge area well connected to the regional and national transport network, opening up opportunities by working closely with strategic partners;
- Reallocate limited road space in the city centre and invest in public transport (including Park & Ride) to make bus travel quicker and more reliable;
- Build an extensive network of new cycleways, directly connecting people to homes, jobs, study and opportunity, across the city and neighbouring village;
- Help make people's journeys and lives easier by making use of research and investing in cutting-edge technology; and,
- Connect Cambridge with strategically important towns and cities by improving our rail stations, supporting the creation of new ones and financing new rail links.

6.3.3. The four sustainable transport programmes are listed below, and their interdependencies are shown in Figure 6-2:

- **City Access Programme:** is GCP's sustainable transport strategy that includes the following schemes: Making Connections, road classification, cycling plus, experimental traffic schemes and residents' parking schemes;
- **Public Transport Programme:** consists of four corridor projects that aim to provide better public transport and active travel routes for growing communities to the north (Waterbeach to Cambridge), southeast (Cambridge Southeast Transport), east (Cambridge Eastern Access) and west (Cambourne to Cambridge) of Cambridge;
- **Active Travel Programme:** a programme of active travel schemes designed to increase cycling, scooting, jogging and walking in Greater Cambridge (including: Chisholm Trail, Cross-City Cycling and the Greenways programme); and
- **Other Transport Schemes Programme:** a suite of corridor improvements and transport interchange schemes; this, includes Milton Road, Histon Road, Mill Road, New Waterbeach Station, Cambridge Southwest Travel Hub and Foxton Travel Hub.

6.3.4. Whilst the sub-programmes under the four sustainable transport programmes are being managed independently, certain interdependencies exist with Making Connections; these interdependencies are also illustrated below in Figure 6-2. Please note that completed schemes are lightly shaded; namely, Histon Road and Cross City Cycling.

Figure 6-2 – Programme Interdependencies[133]



[133] Greater Cambridge Partnership

6.3.5. The interdependencies shown in Figure 6-2 highlight the inter-scheme relationships that need to be considered when developing the designs for, and subsequently implementing, each of the Making Connections work packages. For example, wider sustainable travel measures must be developed in consideration of the active travel programmes, the Cycling Plus scheme and the Experimental Traffic Schemes, as all schemes propose modifications to Greater Cambridge's active travel network.

6.3.6. Similarly, the GCP public transport schemes would provide further public transport capacity to complement that provided through Making Connections, and the implementation of the Sustainable Travel Zone would likely increase demand for those schemes. Therefore, whilst the viability of Making Connections is not directly dependent on the delivery of these schemes, prior to its proposed commencement, they would influence demand. The GCP's latest Transport Programme is set out in Figure 6-4 and includes a column that sets out how the programmed completion dates of each scheme align with the proposed opening year for Making Connections.

Table 6-4 – GCP's Transport Programme

Project	Current Delivery Stage	Programmed Completion Date	Alignment with Planned Opening Year for Making Connections
Cambridge Southeast Transport (CSET) Phase 1	Construction	2024	-2 Years
Cambridge Southeast Transport (CSET) Phase 2	Design	2026	Same year
Cambourne to Cambridge / A428 Corridor	Design	2026	Same year
Waterbeach to Cambridge	Early Design	2027	+ 1 Year
Eastern Access	Early Design	2027	+ 1 Year
West of Cambridge Package	Design	2025	-1 Year
Milton Road	Construction	2024	-2 Years
City Access Project	Design	2024	-2 Years
Whittlesford Station Transport Infrastructure Strategy	Initial Options	2023	-3 Years
Cycling Plus	Initial Options	2027	+ 1 Year
Chisholm Trail Cycle Links Phase 2	Design	2024	-2 Years
Madingley Road (Cycling)	Design	2025	-1 Year

Project	Current Delivery Stage	Programmed Completion Date	Alignment with Planned Opening Year for Making Connections
Waterbeach Greenway	Project Initiation	2025	-1 Year
Fulbourn Greenway	Early Design	2025	-1 Year
Comberton Greenway	Design	2025	-1 Year
Melbourn Greenway	Design	2025	-1 Year
St Ives Greenway	Design	2025	-1 Year
Barton Greenway	Design	2025	-1 Year
Bottisham Greenway	Design	2025	-1 Year
Horningsea Greenway	Design	2024	-2 Years
Sawston Greenway	Design	2025	-1 Year
Swaffhams Greenway	Design	2025	-1 Year
Haslingfield Greenway	Design	2025	-1 Year
Waterbeach Station	Design	2025	-1 Year

6.3.7. The progress of GCP's wider programme of schemes is dependent on a number of key decisions and potential enquiries. Therefore, the interface between Making Connections and the public transport schemes is being carefully managed with regular planning and coordination meetings taking place between delivery teams to ensure the impact of any potential delays is mitigated appropriately; this includes a consideration of the scheduling of construction activities.

6.3.8. Not only is there a potential interdependency between the construction phases of each programme, but considerations are also being taken during the design phase to ensure that the design of one scheme does not impact another. The coordination between each major programme is a significant task for the GCP and one which features as a heightened risk on the Risk Register see Appendix N.

Programme Dependencies

6.3.9. The success and financial viability of the Making Connections programme has a relationship with a number of other activities, projects and programmes.

6.3.10. In addition to the programme interdependencies above, the following table sets out a longlist of potential relationships and dependencies; these dependencies, and the extent of their relationship with Making Connections, would be reviewed as the programme is refined.

6.3.11. Regarding the dependencies related to the bus network, it should be noted that the Bus Services Act of 2017 provides the CPCA, as the Local Transport Authority, with powers to reform the bus market. The Act provides the option to franchise bus services or create an enhanced partnership. The CPCA has established a Bus Reform Task Force whose role is to consider and recommend appropriate reforms to bus services, strategies and public information. The Bus Reform Task Force is preparing a business case that is appraising the relative merits of enhanced partnership working or franchising; the outcome of this process has a key impact on the route to delivering of the bus service improvements proposed as part of Making Connection programme.

Table 6-5 – Making Connections Programme Dependencies

Dependency	How it may impact the development of the scheme
Bus Fleet Capacity - at present there are not enough buses to meet the Making Connections service expansion proposals.	The Making Connections programme includes proposals for the expansion of, and enhancements to, Cambridge's bus network. The proposals include more frequent services, with longer operating hours, more rural connections, and new routes into growing employment areas. Moreover, the procurement mechanism for expanding the bus fleet should reflect the CPCA's commitment for all buses to be zero emission by 2030. To achieve this, it is estimated that the current bus fleet in the Greater Cambridge area may need to double in size. The doubling of the bus fleet equates to an additional 130 buses, with 100 buses serving the core network and 30 buses serving rural areas. The delivery of the bus fleet is dependent on effective coworking with operators and manufacturers and the development of a procurement strategy that presents an attractive arrangement for potential service providers. The ability to deliver fleet capacity expansion also has a strong relationship with the outcome of the CPCA's ongoing bus reform work. The Bus Reform Task Force is preparing a business case that is appraising the relative merits of enhanced partnership working or franchising.
Bus Depot and Station/Stop Capacity would need to be expanded to meet the Making Connections bus service expansion proposals.	Cambridgeshire's existing bus depot and station/stop network is operating at or near capacity. The Making Connections programme is likely to require a review of this network to accommodate additional buses. The expansion of the bus depot and station/stop network would thus need to occur alongside the delivery of the overall Making Connections programme to achieve the desired level of service. The ability to deliver bus depot and station/stop capacity expansion is also related to the outcome of the CPCA's bus reform work. The Bus Reform Task Force is preparing a business case that is appraising the relative merits of enhanced partnership working or franchising.

Dependency	How it may impact the development of the scheme
Inadequate grid capacity and charging infrastructure for electric buses—significant additional charging infrastructure would need to be delivered to meet the Making Connections bus service expansion proposals.	Reflecting the Cambridgeshire and Peterborough Climate Commission's recommendations (2021), the CPCA's draft Local Transport and Connectivity Plan (LTCP, 2022) contains a commitment for all buses to be zero emission by 2030. The CPCA's Zero Emission Bus Regional Areas (ZEBRA) bid, to assist in providing 30 electric buses, was approved in 2021. There is an intention to see a further 150 buses provided by 2025, and thereafter a further 40 each year until the entire fleet has been replaced. To cater for this change, appropriate charging infrastructure would need to be introduced, which is beyond the scope of the Making Connection programme. The nature of this change may further constrain bus depot capacity, and, in some cases, it may be necessary to re-site bus depot facilities. The increased requirement for electricity at the existing and, if required, new depot sites, would place additional demand on the local electrical grid. Early engagement with UK Power Networks and CCC, and soft market testing with bus providers, is thus ongoing. The issues of grid capacity and the provision of charging infrastructure are being considered in the business case of the CPCA's bus reform work, which includes an options appraisal of potential delivery models.
GCP Busway Schemes – the success of the CSET Phase 2 and Cambourne to Cambridge (C2C) schemes would be influenced by the impact of Making Connections on reducing congestion, and would also contribute to the attractiveness of using bus services in the area.	Making Connections and the other schemes within the wider City Access programme, aim to reduce congestion in Greater Cambridge; this would be key to reducing journey times for buses and also making Park & Ride more attractive and successful. The mode-switching resulting from the STZ would create additional demand for proposed Park & Ride facilities, such as those proposed as part of C2C and CSET. The development of these two traffic-free corridor schemes would also increase the attractiveness and patronage of bus services to the west and south of the city and thereby further contribute to the Making Connections objectives of reducing congestion, improving journey times and reliability and increasing the number of trips made by bus
Lack of Park and Ride (P&R) and Travel Hub Capacity—the existing number of spaces at Cambridge P&Rs may need to be expanded to meet additional demand created by Making Connections.	Cambridge's existing network of five park and ride sites was operating at or near capacity prior to the COVID-19 pandemic. As a result, the GCP programme includes the provision of up to 10,000 additional Park and Ride spaces around the city region. Here, the GCP has expanded Trumpington Park and Ride, and has proposals for additional capacity at the Cambridge South West Travel Hub (CSWTH) and the Foxton Travel Hub, as well as new/relocated hubs proposed via the Cambourne to Cambridge, Cambridge Eastern Access and Waterbeach to Cambridge schemes; the Making Connections programme is likely to further increase demand. The scheme traffic modelling would be regularly reviewed to assess the likely supply and demand for Park and Ride spaces*.
*Please note that the parking and public transport models are not capacity constrained; hence, there are no parking or service capacity constraints restricting people from choosing park and ride as a preferred travel option	
Delivery of Cambridge South Station—could significantly improve public transport access to the CBC and thus influence the modal choices of people accessing the site.	Cambridge South station could make the CBC and Southern Fringe more accessible and enable significant future development at the site. The delivery of Cambridge South could thus change the potential number of people choosing to drive to Cambridge, and/or use park and ride services. Hence, the scheme shares the aim of Making Connections to enact modal share and reduce congestion. The effect of Cambridge South on traffic flows in Cambridge has thus been accounted for in the scheme modelling.

Dependency	How it may impact the development of the scheme
Extent and rate of development in Greater Cambridge—the viability of Making Connections would be influenced by the extent to which growth occurs in the city	The modelling underpinning Making Connections is informed by the levels of growth set out in Local Plans. The rate of growth in Cambridge would have a significant impact on the potential revenue generation of the Making Connections programme. The potential for alternative growth trajectories can be considered during the scheme development process as sensitivity tests of scheme viability. Following the introduction of any scheme, monitoring and evaluation of impacts would allow the scheme to be adapted to reflect observed outcomes.
Technological Change—innovations have the potential to change both the need to travel, our travel behaviours and the delivery of road charging schemes.	The GCP is committed to using new technologies to create a clean and efficient transport system. The final specification of the Making Connections programme, including the proposed sustainable transport measures, would be influenced by the technologies available at the procurement stage.
Approvals—delays to approvals of part or all of the programme could impact the holistic delivery of the programme.	Timescales in relation to statutory processes in order to deliver the scheme, for example, the need to obtain any planning permission, and the publication and confirmation of any Orders.

6.4 Programme Implementation

Programme Workstreams

6.4.1. The work breakdown structure for the Making Connections programme is set out in the following table. No activities or spend of programme resources would take place outside the defined workstreams, as together they define the entirety of the scope of the programme. Each workstream has a name to define it and a reference which assists in the organisation of programme files.

Table 6-6 – Workstream Breakdown Descriptions[134]

Workstream Name	Description
Programme Management	All activities related to the management of technical work streams throughout the programme and general day to day communication and engagement with the client and partner organisations.
Outline Business Case	Work related to the production and management of the Outline Business Case.

[134] Making Connections Technical Team

Workstream Name	Description
Impact Assessments	The purpose of the workstream is to provide input into the business case based on the effects arising from Making Connections; the assessments included are as follows: • Noise Assessment – identifies the potential change in noise levels along highway links within the study area. • Air Quality – identifies the potential change in local air quality along highway links within the study area. • Health Impact Assessment – the approach used to judge the potential health impacts of Making Connections on a population, particularly on vulnerable or protected groups. • Carbon – a Carbon Management Plan sets out how greenhouse gases would be managed and minimised across the whole lifecycle of the scheme. • Business Impact Assessment – High-level impact analysis which assesses business impacts in terms of workforce, customers and supply chains.
Equality Impact Assessment (EQIA) and Social Impact (SI) and Distributional Impact (DI) Assessments	• The EqIA considers the impact of Making Connections on relevant groups who share characteristics which are protected under the Equality Act, as well as others considered to be vulnerable within society. • The Social Impact Assessment (SIA) considers the likely impacts of Making Connections on the human experience, and its impact on social factors which are not considered in wider economic or environmental impacts. • The Distributional Impact Assessment (DIA) considers the variance of impacts from the Programme across different social groups. The SIA and DIA form part of the options appraisal process and feed into the Appraisal Summary Table.
Delivery Model Assessment	The Delivery Model Assessment (DMA) provides an assessment of the possible delivery models for Making Connections and its component parts, including: • Roadside Equipment; • The STZ payment system – back office and enforcement methods; and, • Infrastructure requirements – bus depot facilities, bus service management and sustainable transport measures. The DMA sets out the target operating model for how the charging component would work, the roles and responsibilities of different organisations and a summary of which elements should be outsourced or delivered in-house.

Workstream Name	Description
Charging Scheme Design	Technical work relating to the design and operation of the Charging Scheme for the STZ; this includes outline design of the scheme boundary and entry signage and camera locations. Technical notes have been produced for: • Target Operating Model - charging scheme; • Concept of operations for the charging scheme; • High-level roadside equipment design; • Back office operations; • Customer sales and payment channels; and, • STZ Enforcement . This workstream also has produced a series of notes on potential Discounts, Exemptions and Reimbursements and the mechanisms to administer them.
Bus Proposition Design and Sustainable Transport	Technical work to produce illustrative bus and sustainable transport networks that could be delivered as part of the Sustainable Travel Zone. This workstream is aligned with the work of the CPCA's Bus Reform Task Force. The Task Force is currently preparing a business case that is appraising the relative merits of enhanced partnership working and franchising. The GCP is liaising closely with the CPCA throughout this process.

Programme Delivery Approach

6.4.2. As set out above, it is proposed that CCC, as the local highway authority, would fulfil the overarching role of Delivery Body for the Making Connections programme.

6.4.3. It is recognised that other organisations, including CPCA as the local transport authority also have delivery roles, including in relation to the bus proposition, within the overall programme. The details of this arrangement, and the role of the GCP, would be decided within the FBC.

6.4.4. The role of CCC, as the Delivery Body, would be to deliver the highway-related component schemes of the Making Connections programme with the support of appointed contractors and partners where appropriate. Although the GCP has overseen development of this OBC, subject to future decision-taking, the current view is that the FBC for Making Connections would therefore be overseen by CCC.

Relationship between CCC and the CPCA

6.4.5. Cambridgeshire County Council, as local highway authority, and the Cambridgeshire and Peterborough Combined Authority, as the local transport authority, have a long-established working relationship, with ongoing collaboration on procedural and financial matters.

6.4.6. The detailed management arrangements for the implementation and operational phases of Making Connections are still under development but would build upon those already-established arrangements and protocols. These arrangements would respect key commercial issues and constraints, including those related to the road user charge and bus elements, that are set out in the Commercial Dimension to this OBC. In particular, detailed

mechanisms related to bus service procurement, and implementation of the proposed fares initiative, are dependent on the outcome of the ongoing CPCA work on bus reform.

Given this, the detailed management protocols and arrangements for Making Connections would therefore be established after the approval of this OBC and would be presented in the Full Business Case.

Programme Delivery

6.4.7. A core Making Connections team would be put in place to coordinate programme development and delivery. The implementation and operation of the component schemes of the Making Connections programme, including the proposed sustainable transport measures, would be undertaken by Delivery Agents and Operating Agents; these agents are set out in the table below.

6.4.8. Delivery Agents are subcontractors or other public sector bodies tasked with delivering a scheme in whole or in part. An Operating Agent is a sub-contractor or other public body tasked with operating (and/or decommissioning) a scheme in whole or in part.

6.4.9. The component schemes of the Making Connections programme, including the sustainable transport measures, are shown in Figure 6-3. To ensure that the programme is appropriately resourced, a combination of the following resources would be drawn upon:

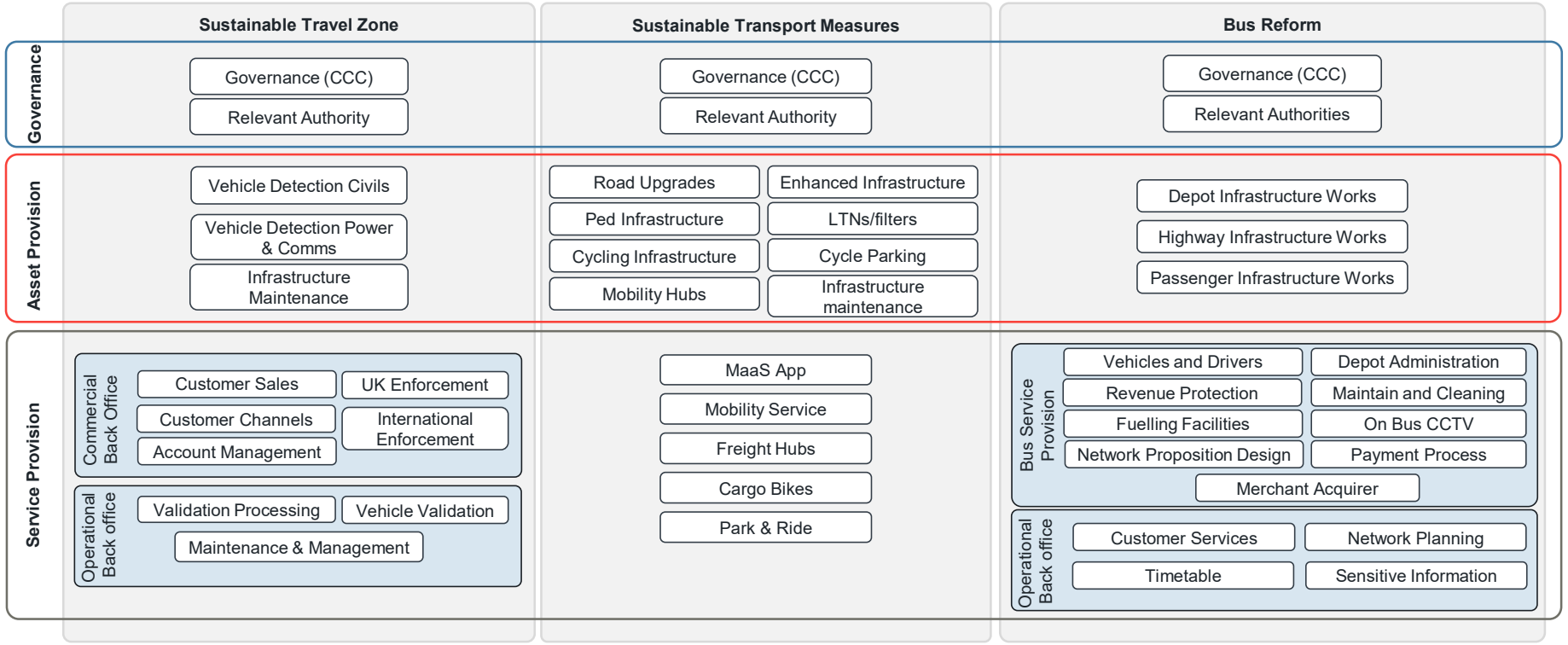
- Lead Advisor (the multi-disciplinary consultant team set out in Figure 6-4)
- GCP resource
- CCC resource
- Supplementary resources from the independent consultant market, where appropriate, e.g. where additional Project Management resources are required

6.4.10. Further detail on the procurement approach for securing this resource is detailed in the Commercial Dimension of this OBC.

Programme Delivery Architecture

6.4.11. The various roles that would need to be fulfilled at each phase of the programme lifecycle, and for each component scheme of the Making Connections programme, are set out in the Commercial Dimension, which is based on the delivery architecture set out in Figure 6-3. It is not possible to specify all of the actual organisations that would undertake these roles at this stage of the Making Connections programme.

Figure 6-3 – Making Connections Scheme Delivery Architecture



6.4.12. In determining the best-placed Delivery Agent for each scheme, the rationale applied is that where CCC currently have the responsibilities for delivery/operation of the activities relating to the component schemes of the Making Connections programme, it is likely that this would continue. This assumption would be reviewed at the FBC stage when the required resource and technical capability to deliver each scheme is better understood.

6.4.13. Where the legal service provider is included as the lead body, this is due to acknowledgement that a specialist central resource may be required to coordinate and develop the Traffic Regulation Orders (TRO) and the Charging Scheme Order (CSO).

6.4.14. Each component scheme of the Making Connections programme would likely require Implementation Funding. Hence, each scheme is being developed in accordance with its own timescales to allow the appropriate appraisals to take place and subsequent funding to be released.

6.4.15. The implementation and operation of the component schemes of the Making Connections programme would be undertaken by one or more of the Delivery or Operating Agents; this information is provided in the Commercial Dimension.

6.4.16. It is proposed that Project Managers would be allocated to each scheme as appropriate; the level and quantity of project management resources required would be appropriate for the complexity and value of the scheme. There is also the possibility that some of the schemes would become standalone projects in the future, depending on the outcome of the Risk Potential Assessment (RPA) and the policy design components.

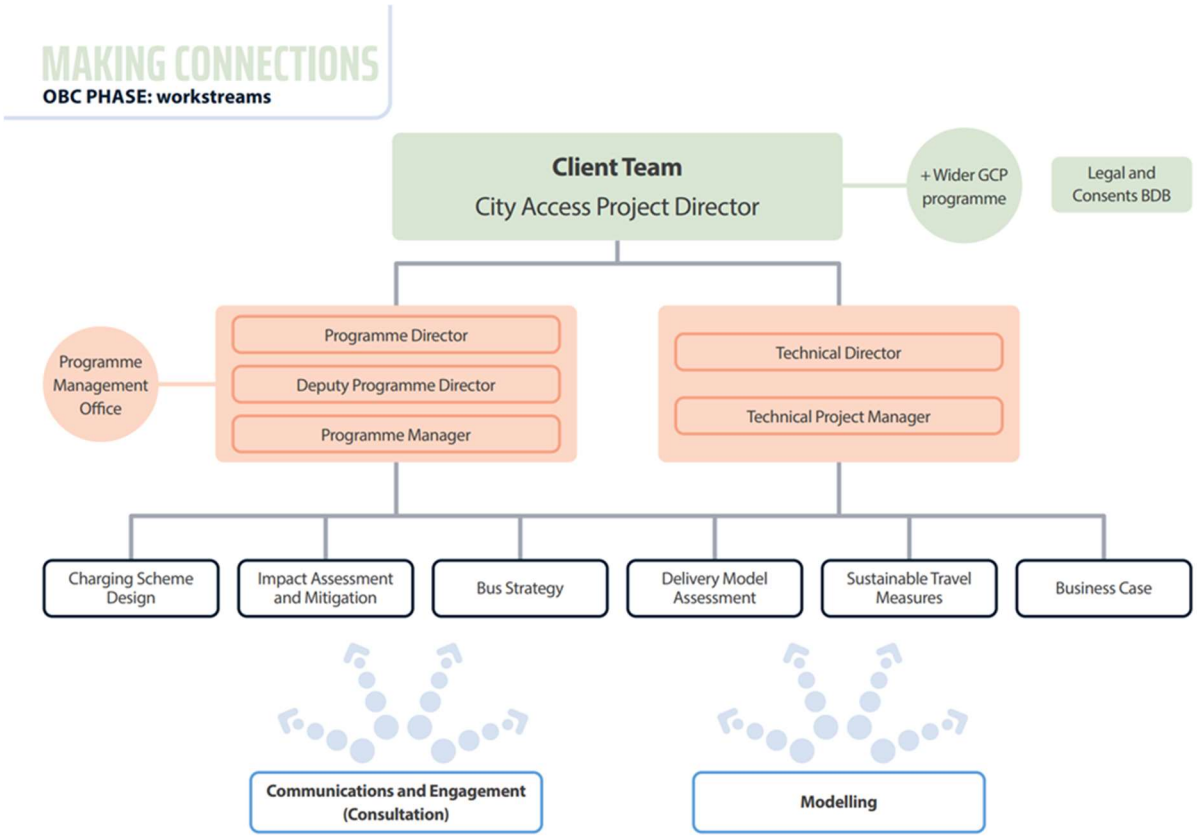
The Delivery Team

6.4.17. The delivery team, headed by the overarching Making Connections Programme Director, manages the day-to-day delivery of the Making Connections programme and is accountable to the Project Board. The team coordinates inputs from the technical advisors responsible for the delivery of the key workstreams, including:

- Programme Management
- Business Case
- Options Development and Appraisal
- Charging Scheme Design
- Impact Assessment and Mitigation
- Delivery Model Assessment
- Sustainable Transport Measures
- Bus Strategy and network development
- Commercial and Financial
- Communications and Engagement

6.4.18. The delivery team structure is illustrated in Figure 6-4 below.

Figure 6-4 – Making Connections delivery team structure



Governance, Organisational Structures & Roles

Project Governance

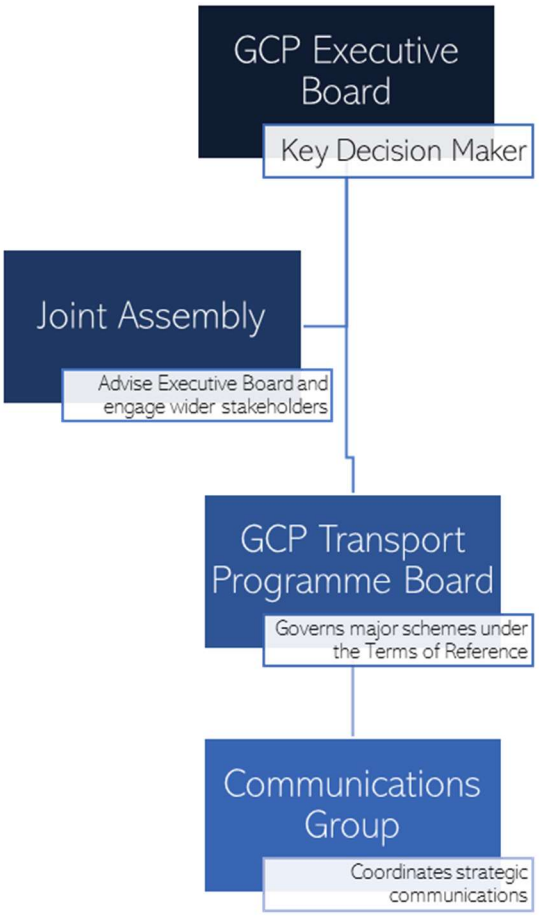
6.4.19. As set out in the Strategic Dimension, the GCP is the local delivery body for the City Deal with central Government and is responsible for overseeing the delivery of all schemes funded through the City Deal. As such the Making Connections programme is currently overseen by the GCP, although CCC, as the local highway authority, would also have a key role. In relation to the road user charging element of the Making Connections programme, the legal powers to implement a charging scheme sit with CCC as the local highway authority. CCC would therefore make the final decision in relation to any charging scheme and would be responsible for making the Charging Scheme Order to implement the charging scheme.

6.4.20. The GCP operates as a Joint Committee that is jointly governed under powers delegated by its three local authority partners (CCC, Cambridge City Council and South Cambridgeshire District Council). The GCP is led by a decision-making Executive Board which coordinates the overall strategic vision, and drives forward the partnership's programme of work.

6.4.21. The GCP Executive Board, as a joint committee of the three Councils, was established by Cambridgeshire County Council (CCC) under section 102(1) (b) of the Local Government Act 1972 and by Cambridge City Council and South Cambridgeshire District Council under section 9EB of the Local Government Act 2000. The three Councils have agreed to delegate exercise of their functions to the Executive Board to the extent necessary to enable the Executive Board to pursue and achieve the objectives of the Greater Cambridge City Deal and to undertake any actions necessary, incidental or ancillary to achieving those objectives, and, accordingly, the three Councils have made the necessary changes to their respective schemes of delegation. The Executive Board may further delegate to officers of the three Councils.

6.4.22. The GCP is run in accordance with a clear governance structure, agreed by all partners. The governance structure of the GCP is shown in Figure 6-5.

Figure 6-5 – Governance Structure[135]



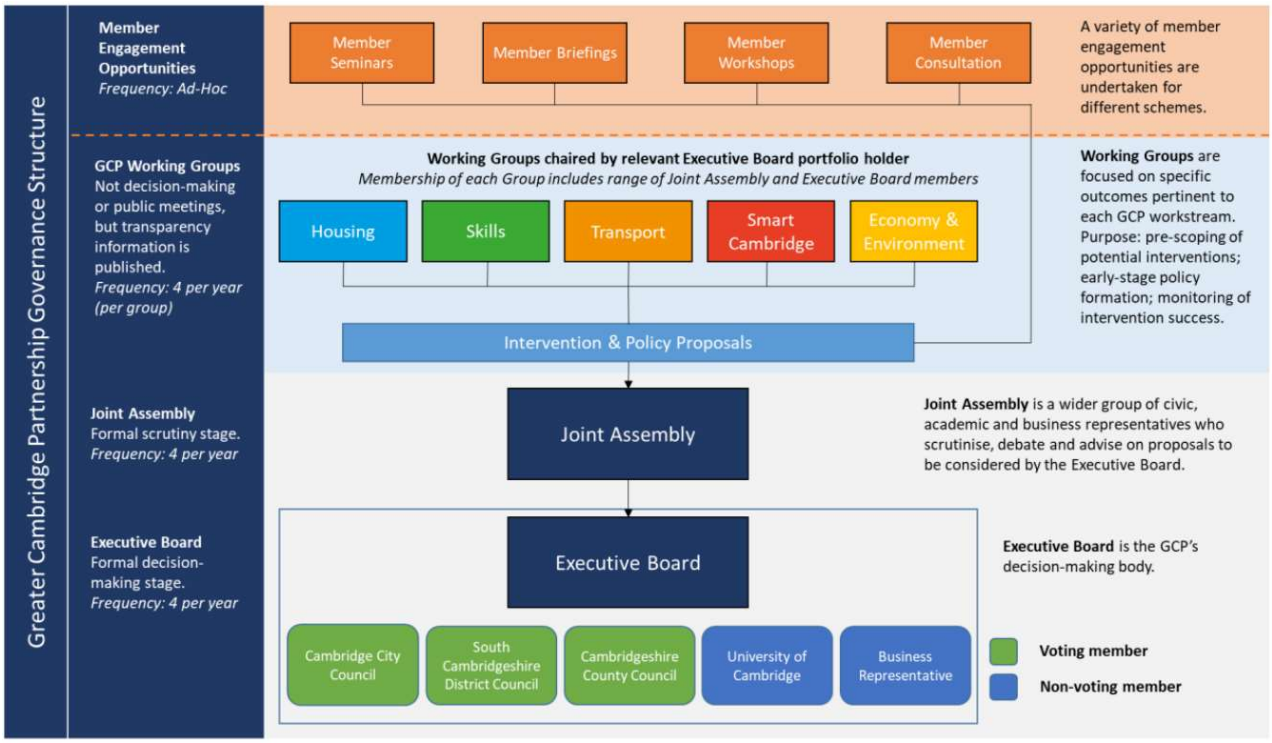
Executive Board

6.4.23. The composition and responsibilities of the Executive Board are set out in Table 6-2. The rules governing the Executive Board only allow the three local authority representatives voting rights; however, the Board consider the advice of the other representatives (currently the CPCA Business Board, and the University of Cambridge) to make sure decisions represent the business and academic sectors.

6.4.24. The following figure provides a more detailed summary of the GCP's governance structure.

[135] Greater Cambridge Partnership (2021). *Governance - Assurance Framework*

Figure 6-6 – GCP Executive Board and Joint Assembly Governance Structure[136]



Joint Assembly

6.4.25. The composition and responsibilities of the Joint Assembly are set out in Table 6-2. The current members of the Joint Assembly and their respective roles are listed on the CCC website.

6.4.26. The Joint Assembly draws on the broad expertise of its 15 members to scrutinise and advise on the Executive Board's key decisions relating to the projects and programmes within its portfolio of schemes.

Transport Programme Board

6.4.27. The GCP Transport Programme Board is responsible for overseeing all major transport schemes being delivered as part of the City Deal. The purpose of the Programme Board is to:

- Provide visible governance in line with the City Deal Assurance Framework;
- Advise on programme wide level decisions before they go to the GCP Executive Board;
- Guide project managers in developing proposals to meet the agreed objectives;
- Review the proposals and challenging solutions on impact, benefits and value for money; and,
- Act as a sounding board for concepts and ideas.

[136] Greater Cambridge Partnership. *Greater Cambridge City Deal Assurance Framework*

6.4.28. The membership of the Project Board is set out below:

Table 6-7 – Programme Board Membership[137]

Role	Organisation
Executive	GCP
Senior User	CCC
Financial Lead	GCP and CCC as accountable body
Programme Manager	GCP
Project Managers	For projects in scope, with support from consultants as Suppliers (if required)

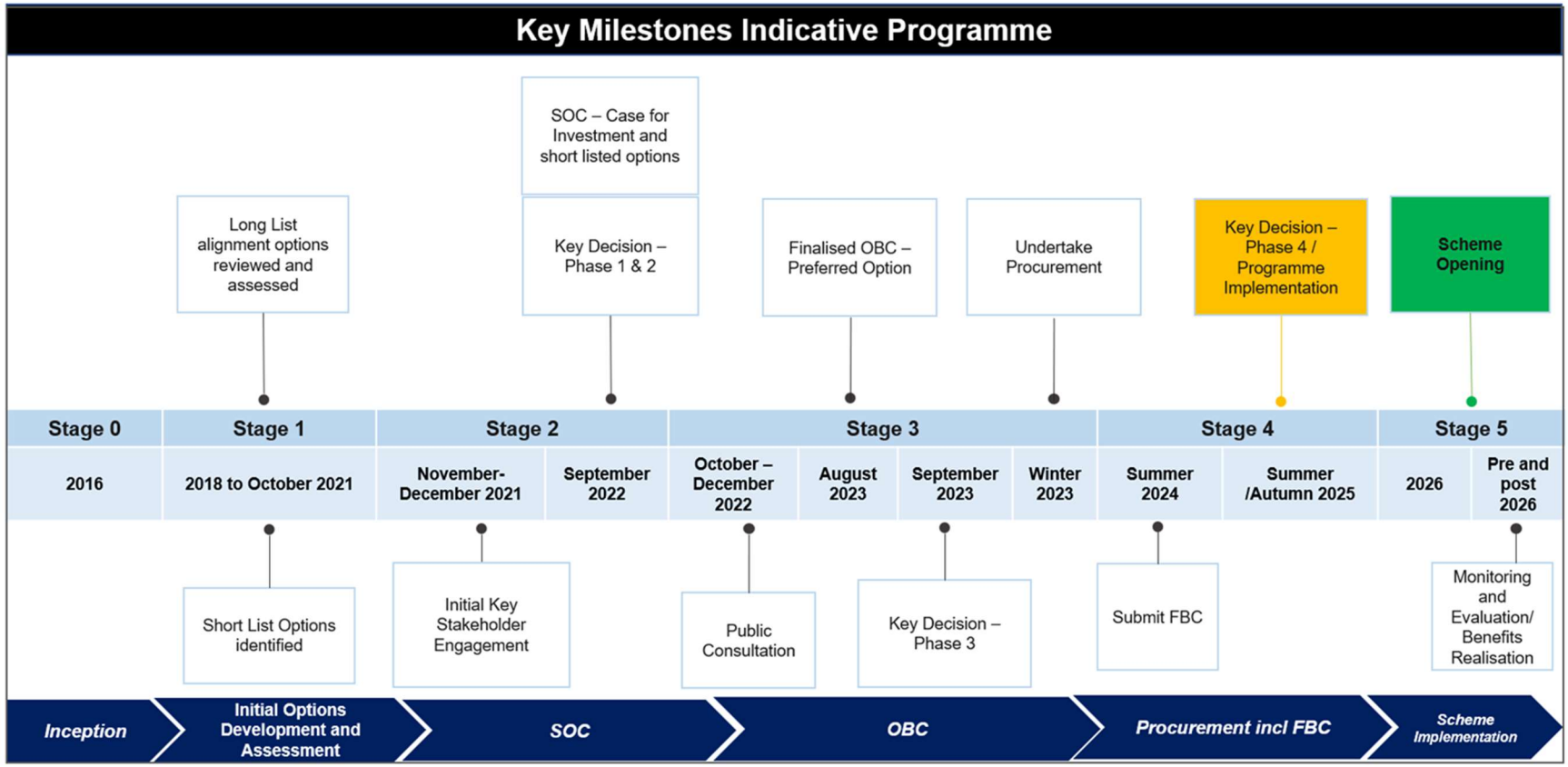
6.5 Programme Plan

6.5.1. A programme showing the project development and delivery stages is presented in Figure 6-7 – Programme Gantt Chart and provides:

- Duration and milestones of all tasks;
- Relationships and interdependencies between the various activities; and,
- Project phases.

[137] Greater Cambridge Partnership (2021). *Governance - Assurance Framework*

Figure 6-7 – Programme Gantt Chart



6.5.2. If the programme should change, this would be reported through the Project Managers Report to seek approval from the GCP Executive Board. The following table provides the key milestones and their currently anticipated delivery dates; items in green text have been completed. Separate detailed programmes of implementation for the bus programme and wider sustainable travel measures are provided in Appendix L. Subject to approvals, these programmes commence from 2023/2024 onwards.

Table 6-8 – Key milestones

Stage	Key Tasks	Actual / Estimated Completion Date
Stage 0 – Inception	N/A	2016
Stage 1 – Initial Options Development and Assessment	N/A	2018
Stage 2 – SOC	Initial Key Stakeholder Engagement	November 2021 – December 2021
Stage 2 – SOC	SOC – case for investment & short-listed options	September 2022
Stage 2 – SOC	Key Decision - Phase 1&2	September 2022
Stage 3 – OBC	Public Consultation	October to December 2022
Stage 3 – OBC	Finalised OBC - preferred option	August 2023
Stage 3 – OBC	Key Decision - Phase 3	October 2023
Stage 4 – Soft Market Testing	Engagement with the market	Early 2024
Stage 4 – FBC	Submit FBC	Summer 2024
Stage 4 – Procurement	Undertake procurement	Summer/Autumn 2024
Stage 5 – Scheme Implementation	Programme implementation	Winter 2024 to Summer 2026
Stage 5 – Scheme Implementation	Opening	Autumn 2026
Stage 5 – Scheme Implementation and monitoring	Monitoring and Evaluation / Benefits Realisation	• Quarterly Progress Updates - September 2026 to September 2028 • Interim Findings Report – 2028 • Final Report January – 2032-34

6.6 Stakeholder Engagement and Communications

Communications Strategy

6.6.1. This section sets out the strategy for communications and stakeholder management. Effective communication is critical to the success of the programme, and, as a result, all communication activities are guided by a programme Communications Plan and are signed off by the Making Connections project manager.

6.6.2. The Communications Plan for Making Connections is guided by the principle of the City Deal-wide communication strategy. The purpose of the strategy is to ensure that accurate and timely messages about the programme are disseminated to a range of identified stakeholder groups. Accordingly, the strategy outlines how the programme would keep

internal and external stakeholders informed about relevant programme information, including forthcoming stakeholder engagement events and key programme milestones.

Stakeholder Engagement

6.6.3. Stakeholder engagement for the Making Connections programme is managed by the programme's Communications and Engagement Team and is an ongoing process. The methods and frequency of engagement for the programme's different audiences and details of the Stakeholder engagement process to date are documented within the Consultation Report.

6.6.4. The Communications and Engagement Team maintain a Communications Log for the programme, which can be provided upon request. The Communications Log keeps a formal record of all programme consultation and includes the following headings: date; attendees; Subject matter/title of meeting; and organisations represented.

Engagement to Date

6.6.5. This section provides a high-level overview of the engagement and consultation activities that have been undertaken on behalf of GCP for Making Connections. A more detailed description of the consultation activities to date and their objectives is included in the Strategic Dimension.

6.6.6. The most recent formal public consultation event took place between 17th October 2022 and 23rd December 2022. A range of materials were prepared to help people interpret the proposals and the consultation was promoted extensively via a number of communication channels to raise awareness and encourage participation. Further details of the materials used are provided in the Consultation Report.

6.6.7. The consultation sought views on the following measures:

- Transforming the bus network
- Investing in other sustainable travel schemes
- Creating a Sustainable Travel Zone

6.6.8. The consultation proposal package also sought a view on a list of proposed Discounts, Exemptions, and Reimbursements, which were informed by the previous consultation and engagement with key stakeholders in Autumn 2021.

Consultation materials

6.6.9. The consultation utilised a number of core materials, as follows:

- **Leaflet:** A leaflet was directly delivered to circa 68,500 households, business, leisure and commercial properties in Greater Cambridge. The leaflet drew attention to the consultation and indicated where more information could be found;
- **Brochure:** A 28-page brochure was prepared which outlined the background to the proposals and explained the potential options including proposed changes to the bus network. The brochure was available online and in hard copy at local libraries;

- **Consult Cambs:** All consultation material was available via the Consult Cambs portal, GCP's online engagement platform. This included an interactive map of the proposed Making Connections Future Bus Network where users could select 'before' and 'after' options to view the proposed changes to bus services;
- **Online Survey:** An online questionnaire, hosted on the Consult Cambs website for the duration of the consultation period, was the main mechanism through which respondents could comment on the proposals. Hard copies of the questionnaire and accessible copies were available on demand via a phone service; and,
- **Demographically Representative Poll:** A demographically representative poll was undertaken in addition to the online survey. The poll collected feedback from 1,000 residents whose demographics align with the make-up of the population of Cambridge as per Census 2021.

6.6.10. The consultation was promoted via the following methods:

- **Advertising:** An audio advertisement was broadcast regularly on Cambridge 105 Radio during the consultation period;
- **Stakeholder emails:** Emails were sent out to stakeholders during the consultation period on using the GovDelivery channel;
- **Media coverage:** a summary of scheme press coverage is provided in the Consultation Report;
- **Social media:** information about the consultation was posted throughout the consultation period on GCP's social media channels through Facebook and Twitter; and,
- **Consultation video:** a short video was produced which was added to the GCP YouTube channel.

6.6.11. In addition to the above, 20 consultation events were held. The meetings gave people the opportunity to find out more about the proposals and put questions directly to the programme team. Consultation events were either held online or in person and typically lasted two or three hours each. A number of the events were held in response to comments or requests from the public or politicians. All events were planned to occur ahead of the pre-Christmas period and with a buffer period of 10 days to respond to the consultation before it closed in December 2022.

6.6.12. A full breakdown of the consultation events is provided in Table 2-2 of the Making Connections Consultation Report.

6.6.13. To supplement the online survey and public events, over 70 targeted focus groups and outreach events were held to gain the input of those likely to have an interest in, or who might be affected by, the proposals. These events were organised proactively and in response to requests from stakeholders and the community. The majority of events were held during the consultation questionnaire period, with a few events held on either side of the consultation questionnaire period.

6.6.14. More detail on these events and a full list of meetings is provided in Appendix C of the Making Connections Consultation Report.

Stakeholder Responses

6.6.15. A summary of the responses provided by key stakeholders is set out in the Strategic Dimension, and those received via the public consultation portal are summarised in the Consultation Report.

6.7 Risk and Issues Management

6.7.1. This section sets out the arrangements for risk and issues management. Risks are events that have not happened but may happen, whereas issues are known to have happened.

6.7.2. The management of risk and uncertainty is key to the successful delivery of the Programme, as it identifies threats to delivery and enables effective risk management actions to be assigned. The approach to the management of programme risks, which aligns with the principles of HM Treasury's Orange Book[138], is set out below and includes:

- A continuous approach
- Thorough identification of risks
- Assessment of risks (including the assignment of risk ratings)
- Active risk avoidance, mitigation and management
- Effective communication of the risks to the project team

Risk Management Strategy

6.7.3. The GCP has adopted a robust Risk Management Framework to ensure effective management of risks in order to enable the successful delivery of all City Deal funded projects, including the Making Connections programme. GCP's risk management framework is updated on a monthly basis and reported to the GCP Board quarterly.

6.7.4. The risk management strategy for this programme is based on the core principles for risk management set out within PRINCE2 guidance and applied proportionally to the value of the scheme. The procedure for identifying key risks aligns with the following process:

- **Identify:** Complete the risk register (as appropriate to the area of the programme and/or the producing organisation) and identify risks, opportunities and threats;
- **Assess:** Assess the risks in terms of their probability and impact on the programme objectives;
- **Plan:** Prepare the specific response to the threats (e.g. to help reduce or avoid the threat), and/or plan to maximise opportunity in the case that these threats do occur;
- **Implement:** Carry out the above in response to an identified threat if one occurs; and
- **Communicate:** Report and communicate the above to relevant team members and stakeholders.

[138] HM Treasury (2023). *Orange Book Guidance*

6.7.5. Risk management must be an ongoing process, as illustrated by the GCP risk management process illustrated below.

Figure 6-8 – GCP Risk Management Process[139]

6.7.6. To facilitate the effective management of risks associated with the scheme's delivery, risks have been considered in terms of two broad categories:

- **Strategic Risks** – these are presented in the Project Managers report and are those risks which impact the overall delivery of the programme scope; and
- **Technical Risks** – these are associated with specific work streams and are managed by the Project Manager.

6.7.7. The Project Manager has responsibility for overseeing the Risk Management process. In accordance with the GCP Risk Management Framework, the roles, responsibilities and reporting lines for risk management have been clearly defined within the programme team.

Risk Register

6.7.8. A series of assumptions and exclusions workshops have taken place with technical experts from each project workstream. The purpose of these workshops was to ensure that the risk register fully reflected changes and progress made on programme delivery post-SOC; this enabled the team to benchmark their risks against the updated scope, cost and programme, and facilitated the production of the quantified risk register found in Appendix N.

6.7.9. The risk register was updated to reflect the output of these reviews to ensure that risk exposure was baselined against the programme scope (across all workstreams) and cost

[139] Greater Cambridge Partnership (2021). *Governance - Assurance Framework*

(with reference to the Charging Scheme, Demand and Financial Models). This exercise has helped to ensure a robust approach to capturing risk (threats and opportunities) and estimating uncertainty.

6.7.10. The evaluation of risks and uncertainties using the matrix approach to risk quantification in the programme risk register, is in line with best practice and commensurate with the outline stage of this programme.

6.7.11. A minimum and maximum quantification of each risk is provided in the two columns on the right of Table 6-9. From the QRA, a Monte Carlo simulation has been undertaken to optimise the risk assessment and analyse the sensitivities surrounding the risk allocations used. The optimised quantified value of risk for each option is shown in the Financial Dimension.

6.7.12. The risk register sets out the following:

- Details of the risk
- The likelihood of the risk
- The impact of the risk.
- The mitigation strategy, including risk owners. The anticipated reduction in exposure to risk, as a result of those mitigations, the target score, is provided in Appendix N.
- An overall assessment of the current status of the risk or issue which would be one of the following categories:
  - Red – significant and live risk with high potential to occur and to impact programme delivery either at the strategic or technical level;
  - Amber – risk and issue that has lower potential to occur and lower impact; and,
  - Green – risk is unlikely to occur and or has no major impact.

The five highest risks, identified at this stage in the programme's evolution, are listed the table below; these risks all fall into the red risk category.

Table 6-9 – Programme risks

Risk ID	Risk Title	Risk Owner	Risk Description	Cause of Risk	Consequence of Risk	Current Assessment	Mitigation Measures	Minimum Value	Maximum Value
6	Development and delivery of the bus network upgrade may delay introduction of STZ charging	CPCA and CCC	The Cambridge and Peterborough Combined Authority (CPCA) are at an early stage of progression towards the key milestones to deliver bus reform across the network.	Bus network delivery is dependent on CPCA, and the charging scheme is dependent on Cambridgeshire County Council (CCC), Independent review of the bus service reform case - the independent review may not agree progression of this business case to public consultation Delayed of delivery of bus network improvements / bus offer is not sufficiently attractive and/or believed to be deliverable Both organisations have their own approval processes – scope for delivery timescales to be misaligned and hence delays.	Acceptability of the scheme - Charging cannot be imposed Auditor may reject the bus service reform business case, leading to circa 3-6 months to formulate an alternative strategy and ratify through governance. In the worst case this could be a showstopper.	High	Early strategy work to shape delivery model, programme and options in franchised or enhanced partnerships. Explore easy to implement bus improvements. Develop clear and simple comms on the bus offer - What and When. Establish a Bus Integration working group to provide closer working with CPCA and bus operators Effective communication between CPCA and GCP to manage the sequencing of the bus network upgrade and the introduction of the STZ charging infrastructure upgrades and the mechanism via which funding can be transferred.	£7,740,000	£12,900,000
27	Bus service reform may not be implemented in time to support delivery of Making Connections / adequate interim measures available	CPCA	Bus reform may not be implemented in time to support delivery of Making Connections / adequate interim measures available	The Cambridge and Peterborough Combined Authority (CPCA) are at an early stage of progression towards the key milestones to deliver bus reform across the network. Independent review of the bus reform business case - the independent review may not agree progression of this business case to public consultation	This would necessitate the implementation of interim measures, however there is no certainty around what these would be or the potential cost and schedule impact.	High	Actively develop contingency plan for bus reform including potential interim measures if there's a delay in implementation.	£2,580,000	£ 7,740,000
33	Behavioural change may increase congestion outside of hours in which STZ charging applies.	CPCA	Introduction of STZ charging may drive changes in travel behaviour that increase pressures on travel outside of times within which the STZ charge applies.	Highways network is very sensitive and can become very congested on Saturdays. Currently charge does not apply on Saturdays	It may be more costly to operate buses on Saturdays including revised timetables to account for longer journeys, cost of operation would increase impact on net revenue.	Medium	Review points would be built into the monitoring and evaluation strategy.	£2,580,000	£ 7,740,000

Risk ID	Risk Title	Risk Owner	Risk Description	Cause of Risk	Consequence of Risk	Current Assessment	Mitigation Measures	Minimum Value	Maximum Value
39	Zero-emission bus technologies	CPCA	Zero-emission bus technologies may not be able to deliver daily bus service mileages required	Bus strategy calculations assume 1 ZEB can replace one diesel bus. Caveats in strategy highlights that the ZEBs would not have the capacity to complete some journeys currently done by buses.	Could be mitigated by partial sourcing of hydrogen buses however this could have a significant cost impact. Alternatively, the implementation of opportunity charging at the end of service, but this would need the introduction of charging equipment in locations where we could receive objections, and might need to install additional substations to provide sufficient power for fast charging. This could also impact service frequency.	High	Could be mitigated by partial sourcing of hydrogen buses Alternatively the implementation of opportunity charging at the end of service, but this would need the introduction of charging equipment in locations where we could receive objections and might need to install additional substations to provide sufficient power for fast charging Accept continued operation of diesel buses.	£2,580,000	£ 7,740,000
35	Bus operating cost inflation	CPCA	Bus operating cost inflation and CPI out-turn may not be consistent with CPI forecasts	Uncertainty around salary increases, fuel etc. This is built into the cost plan. We have assumed that all of the cost headings would be increased by CPI, except for bus drivers and engineers who are modelled as increasing by CPI plus an additional 20% in 2026 (one-off additional increase).	Costs may be over or understated. Probability is 100% BC - Forecast overstated, savings against operating cost forecast, ML value represents zero deviation from forecast on assumption that forecast is accurate. Max value forecast is understated, additional costs incurred CPI forecasts were predicting that inflation would have fallen by Quarter 2 2023, and that by quarter 2, 2024 inflation would be practically zero. However, inflation may continue to increase and revised forecast may show this trend continuing for longer than expected.	High	Monitor tender costs and build in lessons learned into the forward procurement programme.	-£2,580,000	£ 7,740,000

6.7.13. Risk management processes have been employed and recorded throughout the programme lifecycle. The risk register is monitored and, if necessary, updated at regular workshops and meetings. The Project Manager has responsibility for overseeing the Risk Management process. DfT Major Scheme guidance has been followed in order to identify, assess and mitigate risks.

Issues Management

6.7.14. Key issues for implementation usually arise when identified risks to the programme materialise and therefore become issues rather than risks. In order to prevent delays to the programme, where key issues are identified, it is assumed that programme work would progress while they are being considered by the Project Board and that the issues would be resolved promptly or escalated to the Joint Assembly and Executive Board, as deemed necessary. All issues are recorded in the Programme's Risk Register, which is regularly reviewed and updated. As with risks, each issue is assigned an impact level, a corresponding mitigation measure and an owner.

6.8 Lessons Management

6.8.1. The effective management of lessons learned plays a crucial role in the success and sustainability of any transport programme by providing an opportunity for stakeholders to identify and capitalise on the experiences gained during the planning, implementation, and operational stages.

6.8.2. This section outlines the importance of lessons management within the context of the Making Connections programme and presents a framework for capturing, analysing, and applying these lessons to enhance programme outcomes.

Purpose of Lessons Management

6.8.3. The primary purpose of lesson management is to foster continuous improvement, reduce risks, and maximise the value of a given investment. The Lessons Management Plan for Making Connections sets out how the programme team would systematically capture and disseminate knowledge throughout the proposal and share lessons with other teams.

6.8.4. The anticipated benefits of the Lessons Management Strategy are set out in the following table.

Table 6-10 – Outcomes of Effective Lessons Management

Lessons Management Outcome	Description
Inform Effective Decision-Making	The Lessons Management Strategy prioritises analysing lessons learned from two sources: the Making Connections programme itself and other projects. The purpose of this process is to enable the programme team to make more informed choices, anticipate potential challenges, and optimise resource allocation.

Lessons Management Outcome	Description
Mitigate Risks	Identifying lessons from similar past projects or initiatives would also assist with the mitigation of risks associated with the implementation of Making Connections. The Risk Management Strategy for the programme includes strategies to minimise disruptions, avoid costly mistakes, and ensure smoother project delivery by understanding challenges encountered by others.
Enhance Efficiency	'Leaning a lesson' is often perceived as rectifying a past mistake, but an effective Lessons Management Strategy also identifies applicable best practices, process improvements, and innovations. Focusing on learning from positive interventions would enable the programme team to optimise resources, reduce delays, and streamline workflows.
Facilitate Organisational Learning	Lessons management is also about longevity. The Lessons Management Strategy seeks to instil a culture of learning within the delivery team by promoting knowledge sharing, collaboration, and the exchange of ideas among team members, stakeholders, and partners. The purpose of this collective learning is to strengthen the GCP's capacity to deliver successful projects.

The Lessons Management Strategy

6.8.5. The Lessons Management Strategy for Making Connections is aligned with the principles set out within the DfT's Transport Business Case Guidance to ensure the Strategy supports a robust and well-informed decision-making process.

6.8.6. The Strategy has three core sections, which are listed as follows:

- Learning from other proposals
- Continuous learning throughout the proposal
- Effective knowledge sharing with other teams

Learning from Other Proposals

6.8.7. The following table sets out the sequential steps that the programme team has taken to ensure lessons from other projects are incorporated into the management and development of the Making Connections programme.

Table 6-11 – Lessons Management – Learning from Other Proposals

Sequence	Step	Actions
1	Identify relevant projects	The team conducted a thorough review of similar transport projects, both domestically and internationally, to identify relevant proposals from which to derive valuable insights and lessons learned.
2	Analyse best practices	The team evaluated successful projects with similar objectives, focusing on their strategies, methodologies, key challenges faced, and innovative solutions employed. This 'success mapping exercise' was captured in the Programme's Key Decisions and Actions Log.
3	Establish partnerships	The programme delivery team have established relationships with other project teams, such as the team that delivered the Birmingham Clean Air Zone, in order to promote knowledge-sharing networks and better understand their experiences and best practices.

Sequence	Step	Actions
4	Conduct comparative analysis	The programme team have sought to compare and benchmark the Making Connections programme against other successful projects, where appropriate. The monitoring and evaluation framework for the programme (included in Appendix D) specifically includes mechanisms for identifying areas for improvement and potential risks based on learning from other projects.

Evidence of Similar Projects

6.8.8. A selection of the relevant transport projects that CCC and the Greater Cambridge Partnership (GCP) have delivered in recent years is described in the table below.

6.8.9. The successful delivery of these projects demonstrates the organisations' ability and experience in relation to transport projects, which include public transport investment and operation, traffic management and enforcement elements. The lessons learned in these projects would continue to be invaluable in the potential delivery of Making Connections.

Table 6-12 – Evidence of Similar Projects

Project	Organisation	Time Period	Description	Approximate Cost
Bus lane and bus gate enforcement in Cambridge	CCC	2016	In 2016 CCC installed closed circuit television (CCTV) cameras to record vehicles entering bus lanes during restricted hours. The scheme was designed to improve bus lane enforcement and reduce delays resulting from unauthorised vehicles using the lanes. The four bus lanes currently being enforced are: • Elizabeth Way (24 hours); • Newmarket Road (heading out of Cambridge between River Lane and Barnwell Bridge, 24 hours); • Newmarket Road (heading into Cambridge between Barnwell Bridge and River Lane, 24 hours); and, • Hills Road (heading into Cambridge between Bateman Street and Union Road, between 7am and 7pm). In 2016, the total amount of income CCC received through Penalty Charge Notices issued for illegal use of a bus lane or bus gate was £349,419. In 2017, following the introduction of the bus gates in Cambridge, this increased to £1,244,394 and in 2018 revenue increased further to £1,738,567[140]. CCC invest these monies into public transport and highway improvements*.	TBC
Cambridge Zero Emission Buses Regional Area (ZEBRA)	CPCA	2021	Working in partnership, the CPCA and GCP successfully delivered a business case that secured funding for 30 new electric double-decker buses for the Cambridge area. As part of the bid, the two organisations demonstrated that they had the support of local bus operators and had undertaken suitable engagement with UK Power Networks regarding supporting infrastructure. The bid also provided the associated infrastructure costs and an outline procurement strategy. This provides a clear example of successful coworking between the two organisations. The business case requested a grant award of £4.295 million from the Zero Emission Buses Regional Area (ZEBRA) scheme initiative for 2021-22. The grant is contributing to the delivery of zero-emission replacements for 10% of the region's 350 buses in operation on the urban and interurban network.	£16.5 million
Park & Ride operation	CCC	Ongoing	CCC maintains and operates a successful network of five highly utilised park and rides that are located at the periphery of the city. The success of Cambridge's Park and Ride Network demonstrates CCC's ability to effectively work with bus operators and implement measures that facilitate modal shift and intercept car trips at the edge of the city.	N/A
The Cambridgeshire Guided Busway (CGB)	CCC	2011 to present	The CGB opened in 2011 and is the longest guided busway in the world. It provides a high quality public transport connection from Huntingdon and St Ives to the north west of Cambridge, and between Addenbrooke's Hospital and Trumpington Park & Ride to the south of Cambridge. Access to Cambridge City Centre is provided via on-street running with sections of bus priority. The maintenance track that runs alongside the guided section of CGB was opened to pedestrians, equestrians and cyclists in 2011; this complementary measure now regularly experiences more than 1,000 cycle trips per day, with an average of 1,363 journeys measured in 2022.[141]. The success of the CGB shared-use track demonstrates CCC's ability to deliver infrastructure that simultaneously promotes public transport use (post implementation bus patronage rose 33% on the CGB corridor as per CCC (2012) Cambridgeshire Guided Busway Post-Opening User Research) and active modes. The scheme required the introduction of a suite of TRO measures, including bus priority measures introduced on Milton Road, to counter delays caused by congestion in the evening peak. CCC also undertook a comprehensive stakeholder engagement exercise with statutory and non-statutory bodies across the length of the corridor. At the scheme's public inquiry the inspector noted that the "detailed proposals have been the subject of significant consultation" and that the "public inquiry, which extended over 31 days, provided a major opportunity for groups and individuals to have their objections heard and for questions to be put to CCC's witnesses". At the conclusion, the Inspector recommend that planning permission be granted within the various limits provided for in the draft Order.	£150m (This is the total cost of the Cambridgeshire Guided Busway, and included a £109m contribution from Cambridgeshire County Council)
The Cambridge Core Traffic Scheme (CCTS)	CCC	1997 - 2003	Like Making Connections, the CCTS scheme aimed to deliver improved access for pedestrians, cyclists and buses through traffic management and bus priority measures; these changes were made at various locations within Cambridge's inner ring road. The measures were implemented in phases between 1997 and 2003. The measures aimed to promote sustainable modes of travel and further improve the city centre environment. Between 1993 and 2003 the number of private vehicles in the city centre fell by 15%, which is partly attributable to the CCTS measures.	£7m (This is an estimate as the costs were part of a wider package of Busway costs)

[140] Cambridgeshire Insight Open Data (2019). *Bus Lane and Bus Gate Enforcement*
[141] Cambridgeshire Insight (2023). *Cambridgeshire Annual Cycling Counts*

Strategy for Learning Throughout the Programme

6.8.10. The following table sets out the steps that the programme team has taken to ensure lessons are learned throughout the programme lifecycle.

Table 6-13 – Lessons Management – Learning Throughout the Programme

Sequence	Step	Actions
1	Establish learning objectives	Clear learning objectives were set at the outset of the proposal, as part of the development of the SMART objectives, to ensure that all team members understand the project's goals and the expected outcomes.
2	Regular reviews and reflections	The overall programme manager, and the leaders of individual work packages, undertake periodic reviews to assess progress, identify challenges, and capture lessons learned. At weekly progress meetings, team members are also given space to reflect on their experiences and share insights; this enables positive and negative practices to be incorporated into future decision-making processes.
3	Documentation and knowledge management	In line with the Greater Cambridge City Deal Assurance Framework, the Making Connections programme has followed a robust documentation process. The Programme has an Issues and Actions Log that is used to capture key findings, lessons learned, and best practices throughout. The Log is owned and monitored by the project manager and is stored on a centralised SharePoint platform to ensure easy access and dissemination of information within the team.

Strategy for Sharing Lessons with Other Team

6.8.11. The following table sets out the steps that the programme team has taken or would take, to ensure lessons learned as part of the Making Connections programme can be shared effectively.

Table 6-14 – Lessons Management – Sharing Lessons with Other Teams

Step	Actions
Prepare a Dissemination Plan	As part of the monitoring and evaluation process, the Making Connections team would create a comprehensive 'Dissemination Plan' for sharing lessons learned with other teams, including stakeholders, partners, and relevant organisations. The Plan would set out appropriate communication channels and platforms for effective knowledge transfer.
Develop a programme case study	At the point the Programme becomes operational or is closed, the GCP would prepare a programme case study highlighting the key insights, successes, challenges, and lessons learned from Making Connections. This document would act as a central repository for lessons learned and would be published on the GCP website and made readily available to interested parties.
Feedback mechanisms	The GCP and its team of consultants have established clear feedback mechanisms to gather insights from across its suite of programmes and projects. A formal meeting takes place weekly to foster a two-way communication flow for continuous learning and improvement

Step	Actions
Workshops at programme close	The Making Connections team would hold a collaborative workshop at the end of the programme to engage with other teams and project managers within GCP and CCC. The workshop would provide a platform for open discussions, encouraging knowledge sharing and the cross-pollination of ideas.

Lessons Management Summary

6.8.12. The Lessons Management Strategy for Making Connections promotes learning from other proposals, continuous learning throughout the proposal, and effective knowledge sharing with other teams, in order to enhance decision-making, minimise risks, and promote the success of the programme.

6.9 Benefits Management

6.9.1. The justification for any intervention should be based on the benefits it can achieve. A benefits realisation plan (BRP) has been prepared to help realise the forecast benefits and scheme objectives of the Programme.

6.9.2. The following table sets out the BRP for Making Connections, which demonstrates how benefits have been planned for and would be tracked and realised through scheme implementation.

Table 6-15 – Making Connections Benefits Realisation Plan

Link to Programme Objective	Programme Benefit	Expected Level of Benefit	Programme Beneficiary	Responsible Party	Requirement to Achieve Benefit	Evaluation Criteria	Timescale of Benefit
To reduce carbon emissions from transport	Reduction in carbon and greenhouse gas emissions	To be confirmed via the full Carbon Management Plan. Contribution towards goal of achieving Net Zero Cambridgeshire 2045 through reduction of emissions from transport.	-Greater Cambridge Residents -Visitors -Local Economy	GCP/CCC	TBC	Analysis of local transport data (including Google AP).	Short-term (by 2030)
To improve air quality in the city centre	Improvement in local air quality	Reduction in the incidence of chronic bronchitis and the incidence of mortality attributed to air pollution and particulate matter. Correlated reduction on use of health services and health expenditure for the aforementioned human health issues.	-Residents -Visitors -Employees -Local Environment -Health Providers	GCP/CCC	TBC	Data analysis of local air quality monitoring stations for all available metrics (PM2.5, PM10, N02) compared to baseline data and historical trends. Key metrics to assess include improved health outcomes and reduction in health expenditure (e.g. hospital admissions, mortality, impacts and chronic bronchitis impacts).	Short-term (by 2030)

Link to Programme Objective	Programme Benefit	Expected Level of Benefit	Programme Beneficiary	Responsible Party	Requirement to Achieve Benefit	Evaluation Criteria	Timescale of Benefit
To improve access to jobs and education for people, especially those living in rural areas	Improvement in connectivity to jobs and education	Reduction in journey time delay between residential and employment/education facilities. Reduction in disparity between rural/urban areas in relation to Indices of Multiple Deprivation Domains (employment/education/skills/training).	-Greater Cambridge Residents -Visitors -Local Employers -Local /Regional Economy	GCP/CCC	TBC	Data collection via Google Directions API (cannot go back in time), local transport data or Mobile Network Data (MND) Data analysis of Indices of Multiple Deprivation domains - Employment, education skills and training.	Medium-term (by 2034)
To contribute to the GCP target to reduce traffic by 15% from the 2011 baseline To reduce congestion in Cambridge To reduce journey times and improve journey reliability	Reduction in congestion within the defined STZ area	Reduction in journey times delay for both private and public transport modes. Reduction in congestion by 15% from the 2011 baseline.	-Greater Cambridge Residents -Visitors -Local Employers -Local Economy	GCP/CCC	TBC	Data collection via Google API / MND / traffic surveys to assess vehicle kilometres driven by type of vehicle and improvements in journey time compared to baseline.	TBC

Link to Programme Objective	Programme Benefit	Expected Level of Benefit	Programme Beneficiary	Responsible Party	Requirement to Achieve Benefit	Evaluation Criteria	Timescale of Benefit
To increase the number of trips by bus	Improvement in the accessibility, reliability and affordability of bus services	Increase in bus patronage.	-Greater Cambridge Residents -Visitors -Local Employers -Bus Operators	GCP/CCC/ CPCA	TBC	Data collection including bus patronage, bus user interviews and journey time data, assessed against baseline numbers undertaken prior to bus service improvements.	TBC
To increase the number of trips by cycle	Improvements to the local active travel environment	Increase in number of and location of walking and cycling trips. Correlated increase in overall physical and mental health of residents and reduction in use of health services and health expenditure.	-Pedestrians -Cyclists -Local Economy	GCP/CCC	TBC	Data collection via existing bi-annual pedestrian and cycle counts across radial and river cordons. Potential for targeted survey data to assess user experience and use of improved infrastructure; this could include a shared data collection programme with other cycling scheme e.g. the Greenways programme.	TBC
To increase the number of trips on foot				GCP/CCC	TBC		TBC
To reduce the number of road accident casualties	The fostering of a safer transport environment	Reduce prevalence of injuries and fatalities from road accident collisions. Correlated positive impact on local economy from increased productivity and reduced use of health services.	-All transport Users -Health Providers -Local Economy	GCP/CCC	TBC	Data analysis of open source collision data from police records compared to baseline.	TBC

Link to Programme Objective	Programme Benefit	Expected Level of Benefit	Programme Beneficiary	Responsible Party	Requirement to Achieve Benefit	Evaluation Criteria	Timescale of Benefit
To raise sufficient net revenue to fund the transformation of the bus network and wider Sustainable Transport Measures	The creation of a self-funding transport network	Obtaining adequate funding to achieve aims of the Local Transport Plan and create sustainable self-funding transport network.	-CCC -Bus Users	GCP/CCC/ CPCA	TBC	Analysis of programme financial information	TBC
To enable the re-allocation of road space to buses, pedestrians, and cyclists	The re-allocation of road space in favour of sustainable modes	Increase in access to good public transport and active travel infrastructure which adheres to best practice guidance (LTN 1/20). Correlated impact on use of and experience of public transport, walking and cycling.	-Greater Cambridge Residents -Visitors -Local Employers -Local Economy	GCP/CCC	TBC	Monitor GCP/CCC scheme delivery of active travel and public transport schemes	TBC

6.10 Data and Information Security

Introduction

6.10.1. The Making Connections Programme involves the integration of various systems and the handling of sensitive data. Therefore, it is essential to ensure that critical systems and digital assets are protected. This section outlines the measures and strategies that are being implemented to safeguard these aspects within the programme environment.

Protecting Critical Systems

6.10.2. To ensure the integrity and availability of critical systems are protected, the following measures are being implemented:

- **Robust Access Control:** Implementing strict access control mechanisms would be crucial to prevent unauthorised access to critical systems. This involves the use of strong authentication methods, such as multi-factor authentication, and role-based access controls to restrict system access to authorised personnel only;
- **Regular Updates and Patching:** Critical systems are regularly updated with the latest security patches and updates. This helps to mitigate vulnerabilities that could be exploited by malicious actors and enhances the overall security posture of the systems;
- **Intrusion Detection and Prevention Systems:** Implementing intrusion detection and prevention systems would enable the identification and mitigation of potential threats in real-time. This involves the monitoring of network traffic, system logs, and other indicators of compromise to detect any unauthorised activities and respond promptly;
- **Disaster Recovery and Business Continuity Planning:** Robust disaster recovery and business continuity plans are established to ensure the rapid recovery of critical systems in the event of an incident or disruption. Regular backups of critical data and systems are performed, and testing of these recovery procedures are conducted periodically to validate their effectiveness; and
- **Protecting Digital Assets:** Digital assets, including software applications, databases, and intellectual property are protected from unauthorised access, modification, or theft via the following measures:
  - **Data Encryption:** Sensitive data stored within the systems are encrypted to prevent unauthorised access, both at rest and during transmission. Strong encryption algorithms and secure key management practices are employed to ensure the confidentiality and integrity of the data.
  - **Secure Development Practices:** although no new applications and software are expected to be developed as part of the Making Connections Business Case, if any are required these would follow secure coding practices including conducting regular security code reviews, using secure development frameworks, and performing penetration testing to identify and address any vulnerabilities before development.
  - **User Awareness and Training:** All employees and stakeholders involved in the programme would undergo regular security awareness training programmes. These

programmes would educate individuals about best practices for handling digital assets, recognising phishing attempts, and adhering to secure data handling procedures.

Protection of Commercially Sensitive Data

6.10.3. Commercially sensitive data, including financial information, customer data, and proprietary business information, needs to be protected to comply with applicable regulations. The following strategies are implemented to safeguard commercially sensitive data:

- Data Classification and Access Controls: Commercially sensitive data are classified based on its sensitivity level, and appropriate access controls are implemented accordingly. This would ensure that only authorised personnel can access and handle the sensitive data, limiting the risk of unauthorised exposure or leakage;
- Regular Security Audits: Periodic security audits are conducted to identify potential vulnerabilities and ensure compliance with data protection regulations. This would involve reviewing access logs, performing vulnerability assessments, and conducting penetration testing to assess the effectiveness of security controls and identify areas for improvement; and
- Compliance with Data Protection Regulations: The transport business case would prioritise compliance with relevant data protection regulations, such as the General Data Protection Regulation (GDPR) or other applicable laws. Adequate measures are implemented to protect personal data, including obtaining appropriate consent, providing data subject rights, and maintaining data breach notification procedures.

Data Information and Security Policies

6.10.4. The table in Appendix T provides a summary of relevant policy documents that contribute to the protection of critical systems, digital assets and commercially sensitive data related to the Making Connections Programme; these policies include:

- Greater Cambridge Partnership's Privacy and Data Protection Policy
- Cambridgeshire County Council's Data and Information Security Policy
- GCP’s Risk Management Framework
- CPCA’s Information and Sharing Framework
- CCC’s County Emergency Management Plan
- CCC’s Pseudonymisation and Anonymisation of Data Policy

6.11 Carbon Management Plan

Introduction

6.11.1. The Carbon Management Plan (CMP) for the Making Connections programme outlines a comprehensive strategy to measure, report, and mitigate carbon and greenhouse emissions associated with the programme. The CMP is provided in Appendix H.

6.11.2. Through the adoption of this plan, GCP and CCC demonstrate their commitment to sustainable development, climate action, and the reduction of greenhouse gas emissions to foster a low-carbon and climate-resilient future for Greater Cambridge.

Carbon Management

6.11.3. As per DfT guidance, in relation to the CMP, the Management Dimension should provide a summary of:

- Predicted emissions against baseline values
- Include credible mitigation of associated risks
  - Notes risks to achieving the SMART objectives in the Strategic Dimension
- Provides sufficient evidence on the programme team's overall ability to manage and reduce carbon emissions

Predicted emissions against baseline values

6.11.4. The Making Connections CMP would establish and embed the PAS2080 carbon management process. While the data and outputs are currently in progress and therefore not yet available, a significant part of the carbon workstream which feeds into the CMP is a proportionately detailed, quantified whole-life carbon appraisal. The output of said quantification is a carbon baseline against which the impacts and carbon outcomes of the proposed interventions (scenarios) and future progress toward achieving carbon reduction targets can be measured. An initial assessment of available Making Connections modelling scenarios – DS1, I.e., 'Do-Maximum' and DS6 – would be presented alongside the Carbon Statement of Case as a precursor to the full CMP.

6.11.5. Fuller details on the appraisal methodology are available in the Appraisal Specification Report (ASR) in Appendix B. The whole-life carbon analysis considers a scheme's whole-life carbon impact in accordance with categories and principles identified in PAS2080, including Before Use, Use and After Use / End of Life. This pertains not just to capital (embodied) carbon associated with the creation and management of infrastructure itself, but also the user's utilisation of the asset, i.e., user emissions, as well as additional impacts or removals.

6.11.6. Five user emissions scenarios are to be appraised: the Do-Minimum scenario, to be compared against four alternative 'Do-Something' user emissions scenarios. These would be quantitatively appraised and supplemented by relevant and proportionate assessment of capital carbon and additional impacts and/or removals to build a whole-life carbon appraisal for all five scenarios. As above, two of the 'Do-Something' user emissions scenarios would be quantified first (DS1 and DS6) to showcase the potential 'Do-Maximum' user emissions carbon impact and scale of emissions reductions to be achieved. The remaining two, as well as capital carbon information would be supplemented at a later date when the appropriate data is available to build a quantified whole-life carbon impact for all scenarios. These

scenarios would form the basis of the full Carbon Management Plan, also to be provided at a later date.

6.11.7. The Carbon Management Plan would contextualise these carbon impacts and their implications, and devise (in line with PAS2080:2023) actions and opportunities to actively manage adverse carbon impacts and promote activities which yield beneficial carbon outcomes associated with the scheme.

Predicted emissions

6.11.8. The quantified carbon assessment is in progress and therefore the finalised whole-life emissions results are not available at the time of publishing; the GCP would publish the outputs in the completed CMP once available.

6.11.9. Prior to the publication of the CMP, it is important to note that Making Connections is anticipated to bring significant decarbonisation benefits for the transport network in the long run by providing and incentivising alternatives to private vehicle use and their associated emissions. However, the extent to which these benefits outweigh any adverse carbon impacts – both to general traffic flows and capital carbon – is yet to be determined.

6.11.10. The capital (embodied) carbon impact involved in construction and maintenance to establish the scheme is a necessary carbon 'payment' to unlock required transport behaviour changes. The carbon management process would be established for the scheme through the CMP, which enables the management of capital carbon emissions which are within the scheme's control (i.e., any built infrastructure) and to influence user emissions, the latter of which the GCP or CCC cannot directly control due to numerous external factors.

6.11.11. The CMP would aim to minimise the capital carbon impact of the scheme by influencing further design evolution and construction practices. However, as the Making Connections programme does not involve significant construction and associated maintenance activities, the levels of capital carbon are not expected to be as significant as large-scale transport infrastructure schemes.

6.11.12. While best-practice quantification would be used alongside the best available data, there are limitations to the extent to which this can capture the full impact of the scheme. There are several factors which may result in the scheme providing a greater carbon reduction than indicated in the assessment, such as larger mode-savings that could be realised in combination with other policies and interventions such as GCP's active travel programme.

6.11.13. Similarly, it is possible that the quantified impact may differ from the logically anticipated impact because modelling is inherently uncertain and cannot definitively predict future impacts. While the CSRM2 model is multi-modal that distinguishes between individual links, it is possible that carbon benefits of the scheme may be underestimated or overestimated and that the potential benefits or disbenefits may not have been fully captured at this stage. If this is the case, not only would the logic behind Making Connections being the right type of scheme remain crucial, but so too would the strategic significance of this scheme. For further information, please see the Carbon Management Plan in Appendix H.

Risk Mitigations Strategy

6.11.14. The SMART objectives for Making Connections include reducing carbon emissions. The scope of works associated with the CMP enables the management of carbon and therefore helps to mitigate the risk of carbon-related objectives not being achieved.

How does the CMP contribute to minimising risks associated with the project?

6.11.15. Delivering a best-practice carbon management process would help minimise the following programme risks:

- Demonstrating a robust strategic case – the whole-life carbon quantification of carbon impacts would provide further evidence on how this scheme contributes to decarbonisation commitments; and
- Demonstrating robust analysis of scheme impacts and a proactive approach to their management – capital carbon impacts can be significant and can erode some of the user emission savings that stand to be gained from modal-shift. Carbon management would ensure impacts are fully understood and addressed to maximise the net-impact of the scheme.

How does the CMP contribute to minimising risks associated with not achieving SMART objectives?

6.11.16. The agreed strategic and SMART objectives of Making Connections are detailed in Section 2.6.10 of the Strategic Dimension and those most pertinent to the carbon workstream are listed below:

- To reduce carbon emissions from transport
- To contribute to the GCP target to reduce traffic by 15% from the 2011 baseline

6.11.17. Crucially for this scope of work, reducing carbon emissions from transport (in part by reducing traffic) is not just a scheme-specific requirement, but necessary for the broader decarbonisation agenda which is ratified by decarbonisation commitments; the GCP shares Cambridgeshire County Council's commitment to be Net Zero by 2045. Accordingly, the risks of not achieving the SMART objectives have broader implications than the scheme alone, including the risks/implications associated with climate change for Cambridgeshire.

6.11.18. Regarding the specific Programme objectives, all are to some extent interconnected through their relation to carbon and decarbonisation outcomes. For example, increased trip making by bus/cycle/on foot is linked to reducing congestion in Cambridge and vice versa, and both are linked to the 15% traffic reduction target and vice versa, all of which contribute to reducing emissions from transport and decarbonisation more broadly. The objectives have been agreed upon with a key outcome in mind – reducing private vehicle kilometres to transform the use of Greater Cambridge's transport networks. This in turn would contribute to decarbonisation.

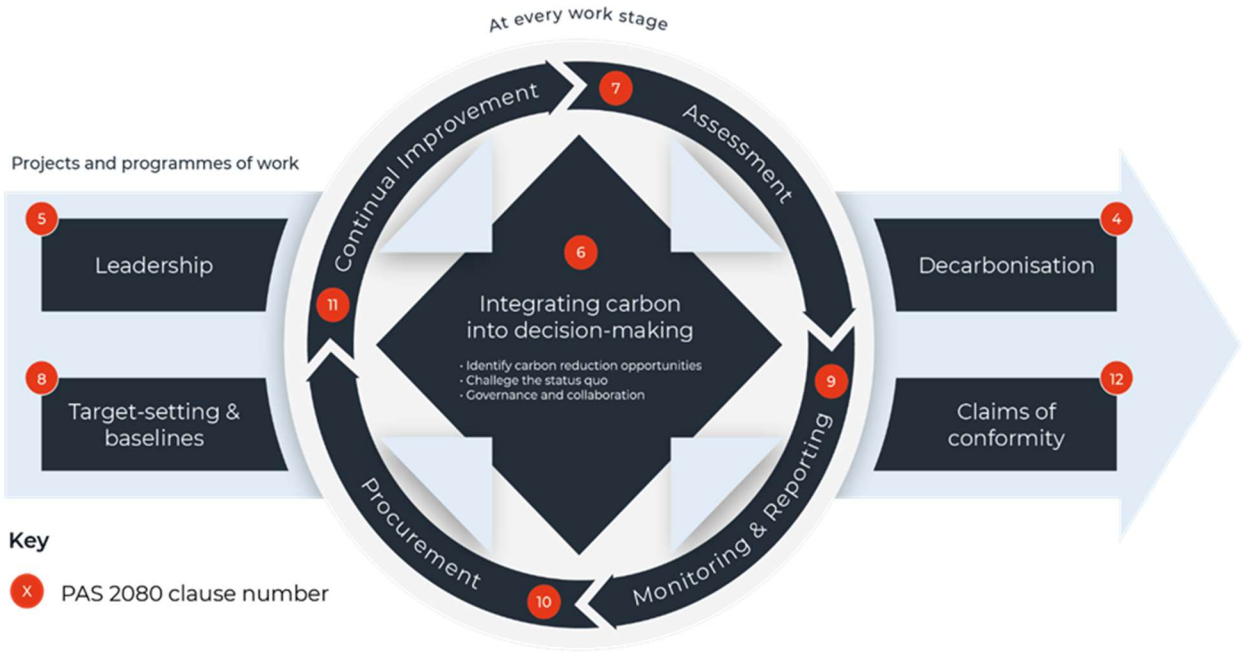
6.11.19. A core function of the quantified carbon assessments which underpin the CMP would be to showcase the relative merits of different road user charging scenarios and illustrate their

relative carbon impact to enable decision-makers to comprehensively consider the scheme. It is anticipated that the quantified assessment would make the case for the scheme in carbon terms. Lowering the level of the charge is a risk to the 15% traffic reduction target – a key carbon outcome; this therefore poses a risk to the other objectives because reducing private vehicle kilometres enables and facilitates the other objectives.

The Project Team's Ability to Manage and Reduce Carbon Emissions

6.11.20. WSP is accredited to PAS 2080 (2016) having been audited by the appropriate organisation. Carbon management is embedded in the team's internal project management systems to ensure a compliant approach to carbon management in scheme delivery. The Making Connections OBC CMP would embed carbon management through the scheme's delivery by establishing a PAS2080-compliant approach to carbon management. The CMP would account for all of the PAS2080 Clauses illustrated in Figure 6-9 below.

Figure 6-9 – PAS 2080 Carbon Management Process[142]



6.11.21. In addition to accounting for all Clauses, the carbon workstream (beyond the CMP alone) aims to embed carbon management through project delivery and management by hosting a carbon workshop. The workshop would bring workstream and design leads together to foster a collaborative and embedded approach to carbon management. Furthermore, carbon would continue to be part of the scheme's development due to the iterative nature of the carbon management process.

6.11.22. The CMP would outline actions to minimise adverse carbon impacts and maximise beneficial carbon outcomes for the scheme. As such, the project team – via the CMP and

[142] PAS 2080 (2023). *WSP UK Ltd*

carbon scope of works – can manage and reduce carbon emissions through the PAS2080-compliant carbon management process.

6.11.23. By doing so, identified carbon outcomes can be achieved as well as mitigating risks to meeting the SMART objectives; thereby, not only contributing to making the carbon and strategic case for the Making Connections scheme, but also meeting statutory decarbonisation commitments.

6.12 Monitoring and Evaluation

6.12.1. Monitoring and evaluation (M&E) are essential parts of any transport programme. The process provides an opportunity to improve performance by reviewing past and current activities, with the aim of replicating good practice and eliminating mistakes in the future. This section outlines the monitoring and evaluation plan for the Making Connections programme.

6.12.2. The GCP has a responsibility to report on how funding is being utilised, how its expenditure represents value for money to the taxpayer and how spending aligns with the City Deal objectives.

6.12.3. Arup has been commissioned to undertake a scoping exercise for the monitoring and evaluation (M&E) of the Making Connections Cambridge project. This Monitoring and Evaluation scoping report for the Making Connections Cambridge (MCC) Evaluation feeds into the Outline Business Case (OBC).

6.12.4. The DfT's 'Monitoring and Evaluation Framework for Local Authority Major Schemes' guidance document forms the basis of the monitoring strategy alongside the GCP's Assurance Framework.

6.12.5. The DfT's guidance sets out the requirements for the monitoring of schemes and outlines three tiers of monitoring and evaluation, these are:

- Standard monitoring
- Enhanced monitoring
- Fuller evaluation

6.12.6. The Making Connections programme would follow the enhanced monitoring practice as the scheme is likely to be more than £50m in value.

6.12.7. The programme would be monitored against a set of enhanced indicators; the indicators are shown in the M&E Scoping Report in Appendix D with suggested data sources. The indicators have been identified based on an agreed list of research questions based on the Making Connections Logic Model, which includes the following key stages of the scheme:

- Inputs, if made available by the GCP (i.e. what is being invested in terms of resources, equipment, skills and activities undertaken to deliver the scheme). For Making Connections this would include revenue generated and public and sustainable transport improvements;

- Outputs (i.e. what has been delivered and how it is being used);
- Outcomes (i.e. intermediate effects, such as changes in traffic flows, modal shifts) and
- Impacts (i.e. longer-term effects on wider social and economic outcomes e.g. supporting economic growth).

Monitoring and Evaluation Plan

6.12.8. Following the scoping exercise, a detailed Monitoring and Evaluation framework would be developed; this would include a detailed data collection and analysis plan to support the implementation of Making Connections and the evaluation of the programme post-completion.

6.12.9. Cambridge has an existing network of infrastructure to monitor traffic data, journey times and air quality. This existing network would be supplemented with further data collection measures, where appropriate, to ensure that a robust data set is maintained.

Table 6-16 – Monitoring and Evaluation – Planned Work Activities

Stage	Activity	Deliverable	Date
Evaluation scoping	Contained in M&E Scoping Report (See Appendix D)	Evaluation Scoping Report	August 2023
Baselining	This is a data collection and results stage that would be carried out 3-6 months pre-implementation of the intervention.	Baselining Report	May / June – November / December 2025
Ongoing monitoring	Building on the baselining report, suggest quarterly updates on key indicators against counterfactual, to understand how the impact unfolds – and provide crucial feedback to decision makers	Quarterly Progress Updates	January 2025 – January 2027 (Duration 2 years)
Interim ex post findings report	2 years after the implementation of the programme it is advisable to evaluate the transport and environmental impacts of the programme	Interim Findings Report	March 2027
Longer-term ex post findings report	5-7 years after implementation it is advisable to evaluate all aspects of the scheme using robust ex post evaluation approaches	Final Report	March 2031-33

6.12.10. This component of the M&E timeline focuses on stage 1, and the scoping report provides an indicative plan for future stages. During the implementation phase of the programme, monitoring would be undertaken to assess the impact of the work being carried out and also to establish the extent of behaviour change.

6.12.11. The post-programme evaluation would establish whether Making Connections achieves its SMART objectives, which would be based on the timescales set out in the Benefits Realisation Plan.

6.12.12. The direct post-project evaluation is expected to be undertaken in 2027 to reflect the completed implementation benefits realisation period following two years of operation. To evaluate the impact and understand the effectiveness of the scheme, data would be collected to measure the success of the scheme against the themed assessment criteria which were identified as measures of success. To this extent, the approach to monitoring and evaluation goes beyond the basic requirements of the DfT's standard monitoring guidance and is also closely aligned with the Benefits Realisation Plan.

6.12.13. The scope of this evaluation would be in line with HMT's Magenta Book, which sets out guidance for methods of evaluation, encompassing the development of indicators and a counterfactual, utilising data effectively, evaluation governance and the dissemination of findings.

6.12.14. A table summarising the monitoring and evaluation indicators and their associated M&E methodology is provided in the M&E Scoping Report in Appendix D.

WSP House
70 Chancery Lane
London
WC2A 1AF

wsp.com

Agenda Item No: 7

Greater Cambridge Partnership Future Investment Strategy 3

Report to: Greater Cambridge Partnership Joint Assembly

Date 7th September 2023

Lead Officer: Rachel Stopard - Chief Executive, GCP

1. Background

1.1 In March 2019, the Executive Board agreed the Greater Cambridge Partnership's (GCP's) Future Investment Strategy (FIS). The purpose of the FIS is to outline how the GCP will invest in order to maximise the benefits realised by residents and businesses in Greater Cambridge through the delivery of the City Deal.

1.2 In 2020 in the context of the impact of Covid-19, the Executive Board agreed to an updated FIS (FIS2). The aim of that update was to assess the Strategy agreed in 2019 and identify gaps or opportunities to intervene in light of new evidence. Specifically it led to:

- Updated criteria for prioritisation of future investment, which were amended to bring environmental objectives into the strategic criteria.

- Agreement of the prioritisation for additional future investment, in particular: within the previous £75m public transport allocation, creating flexibility within this allocation to meet City Deal objectives; allocating £20m to a fund for unlocking housing delivery and allocating £2.8m to the Smart programme to continue work to support delivery of GCP objectives.

- Agreement that the projects prioritised in the Future Investment Strategy are prioritised in principle, with further work to be undertaken by officers in line with usual project development processes and the City Deal Assurance Framework, before funding is committed.

1.3 Since 2020 significant events have occurred within the national and international context that have caused high inflation within the UK. This has led to costs of projects across the country increasing significantly. Within the construction industry the overall index for construction went up by 40.5% from May 2020 to May 2023.

1.4 In this context, the GCP needs to reassess its programme and ensure that the investment of funds is still achieving the overall objectives of the City Deal, as well as meeting the criteria agreed by the Executive Board in December 2020.

1.5 The Joint Assembly is invited to consider the proposals to be presented to the Executive Board and in particular comment on:

(a) The FIS3 for investment across the GCP Programme.

(b) The reprioritisation of the programme, including pausing those schemes listed in 2.9 with specific changes to other schemes set out in 3.6.

(c) Opportunities for additional funding.

(d) The current forecast cost of the programme and the work officers are doing to manage this.

(e) The proposed process for managing the 'overprogramming' element of the GCP budget including annual reports on the forecast cost of the programme.

2. Issues for Discussion

Inflation

2.1 Over the last three years inflation has reached a level significantly higher than predicted. This is due to a number of international events including COVID-19 and the war in Ukraine. Within the construction industry the level of inflation has been greater due to availability of materials and energy costs. As a headline the index for all construction materials has gone from 113.9 in May 2020 to 160.1 in May 2023. This is an increase of 40.5% in construction materials costs. The below table sets out specific examples of increases in cost for key construction materials from April 2020 to April 2023.

Table 1: Building Materials Index (source: Data.gov)

	% increase
Fabricated Structural Steel	71%
Cement	31%
Pre-cast concrete products	54%
Imported sawn or planed wood	30%
Gravels, Sand, Clays and Kaolin*	28%

*Before August 2020 these statistics were confidential so this figure is August 2020- April 2023

2.2 Inflation is affecting schemes nationwide. A range of different approaches are being adopted by authorities to deal with the issue. These include:

- The West Yorkshire Combined Authority took a decision in December 2022 (link) to pause or take out of the programme 42 projects and release capital into other developing projects, to a value of approximately £270million. The paused projects would still be delivered over a longer period of time and alternative funding sources for them would also be sought.

- Oxfordshire County Council paused the A40 Housing Infrastructure Fund scheme in November 2022 to review costs. The outcome of this was published in July 2023 (link) and consists of splitting the programme into

phases with the A40 scheme focused primarily on active travel and public passenger transport. This phasing has put other elements of the A40 programme back and means Oxfordshire will have to renegotiate the funding deal with Homes England.

- The Department for Transport announced in March 2023 (link) that they would delay multiple major projects including the Lower Thames Crossing and High Speed 2 in order to 'ensure the overall spending profile is manageable.'

Impact of Inflation on the GCP Programme

2.3 Over the last six months GCP officers have undertaken a detailed review of the programme to understand the impact of inflation. Specifically this has involved:

- Detailed analysis of each scheme to understand the impact of inflation on the forecast costs.
- Analysis of opportunities for value engineering, incorporating them where possible.
- A review of schemes against the planned project outcomes set out within each scheme Business Case, and review of whether changes in scope could provide better outcomes.
- Analysis of the programme against the December 2020 agreed FIS Prioritisation criteria (set out in section 2.7 and Table 3).
- Detailed analysis of expected income within the programme, especially related to developer income.

2.4 The scale of inflationary pressure on the GCP programme is significant. Though anticipated income has increased, anticipated expenditure has also increased significantly:

- o The expected income for the GCP Programme, has increased from £654million to £719million.
- o The forecast expenditure on the existing agreed programme has increased from £765million to £997million.
- o The identified gap between funding to expenditure has now increased from the agreed £111million to £278million.

Existing Budget, Income and Overprogramming

Budget	Income forecast (March 2023)	Difference (Overprogramming)
£765,000,000	£654,000,000	£111,000,000

Forecast Cost, Forecast Income and Overprogramming

Forecast Cost	Income forecast (March 2023)	Difference (Overprogramming)
£997,000,000	£719,000,000	£278,000,000

2.5 The specific reasons for this increase in cost are as follows:

- Inflation is affecting the majority of project costs by at least 20-30%.
- Significant inflationary pressures on the Waterbeach to Cambridge, Cambourne to Cambridge and Cambridge South East Transport Phase 2 have seen over £100million worth of increase across those three schemes.
- A potential budget for Madingley Road has been allowed for (£14million).

2.6 Based on these figures, officers have used the agreed FIS2 prioritisation criteria to assess the programme in terms of priority.

Increased Income

As set out in 6.2 below a portion of the inflationary increases can be offset by increased income. The forecast income for the Programme has increased from £654million to £719million, this follows discussions with the County Council over reasonable assumptions related to Development contributions to projects. The scale of the contribution is subject to negotiation with the Planning Authorities on a case by case basis but at this stage GCP officers have agreed with County Council colleagues that a total figure of £187million can be reasonably assumed. This is an increase of £66million from the previous estimate of £121million. Officers have taken a conservative approach to this assumption.

Agreed Prioritisation Criteria

2.7 In December 2020, the Executive Board agreed that the prioritisation criteria for GCP investments should be updated. The agreed criteria for prioritising schemes is set out below.

Table 2: Criteria for Prioritisation of Schemes

STRATEGIC	
How does the scheme facilitate City Deal objectives?	What is the likely impact on facilitating economic growth of doing the scheme vs. not doing the scheme?[1]
	What is the impact on the labour market of doing the scheme?[2]
	Will the scheme clearly support the delivery of net-zero carbon objectives across Greater Cambridge?

[1] This would be measured in line with government's criteria moving to Gateway 2025.

[2] For transport projects this measure would use connectivity and competitiveness measures. For other projects this could include looking at number of apprenticeships supported, or number of jobs created.

How does the scheme facilitate environmental objectives?	To what extent will delivery of the scheme result in environmental 'net gain'?
TRANSPORT	
What is the impact on people's travel choices?	Overall journey time improvement
	Impact on journey reliability
	Capacity improvement
	Competitiveness analysis of car vs. public transport and/or active travel
Scale of impact	Connecting how many homes to how many jobs, to include: - Existing homes - Enabling or facilitating new homes
	Connecting different employment sites to encourage knowledge exchange
OVERALL	
Is the scheme deliverable?	Is the scheme affordable for GCP?
	Is the scheme deliverable within the City Deal timescales?
	Consideration of other factors, including practicality, risk analysis and stakeholder support
Is the scheme value for money and financially sustainable?	Including, if applicable: - funding identified beyond the City Deal period - potential to recycle funds or generate future revenue
How does the scheme interact with other schemes (both GCP and non-GCP)?	In particular, alignment with CPCA schemes, and interaction with other proposed strategic infrastructure schemes e.g. East-West Rail
Other policy impacts	To what extent is the scheme tailored to emerging trends in working and travel for work behaviours?
	Social distributional impacts
	Are there any impacts that severely deteriorate or negate the positive impacts?
	What is the likely impact on air quality?
	What is the impact on public realm? (alignment with spaces and movement SPD)

2.8 Utilising this methodology each scheme has been assessed, except where schemes with a final design have been agreed by the Executive Board and are under construction, or a scheme is complete. Therefore, the schemes not included are set out below in Table 3.

Table 3: Schemes not included in Programme Prioritisation

Scheme		**Status**
Cross City Cycling	Hills Road / Addenbrookes Corridor	Completed
	Arbury Road Corridor	Completed
	Links to Cambridge North Station & Science Park	Completed
	Links to East Cambridge and NCN11/ Fen Ditton	Completed
	Fulbourn/ Cherry Hinton Eastern Access	Completed

A10 Cycle Route (Shepreth to Melbourn)	Completed
Skills Phase 1	Completed
Chisholm Trail Phase 1	Completed
Histon Road	Completed
SMART- CP Development – Building on the Benefits	Completed
SMART- Data Visualisation – Phase Two	Completed
SMART- New Communities - Phase One (Extended)	Completed
SMART- Smart Signals – Phase One	Completed
SMART- Strategic Sensing Network – Phase One	Completed
SMART- C-CAV3 Autonomous Vehicle Project	Completed
SMART- Digital Wayfinding	Completed
Milton Road	Under Construction
Cambridge South East Transport Strategy Phase 1	Under Construction
Skills Phase 2	In delivery

2.9 The assessment of the programme is set out in Table 4 below. When assessed against other projects in the programme, this methodology has demonstrated that two schemes within the GCP Programme are relatively less likely to deliver against key elements of the FIS's criteria. The two schemes are the Cambridge South East Transport Strategy Phase 2 (CSETs) and the Foxton Travel Hub.

2.10 As Table 4 demonstrates, of the major schemes the GCP is delivering CSET's Phase 2 and Foxton Travel Hub do not score as strongly when assessed against the FIS criteria. The reasons for this are as follows:

- Although Cambridge South East Transport Strategy Phase 2 (CSET 2) has significant benefits including supporting the Biomedical campus, it is not able to attract significant third party funding (such as developer contributions) as it is not directly linked to residential development in the current Local Plan. In comparison with other schemes in the programme it therefore does not fulfil criteria 6 at this time.

- Foxton Travel Hub is not able to attract significant third party funding (such as developer contributions) as it is not directly linked to the current Local Plan. It therefore does not fulfil criteria 6.

2.11 The previous Cambridge Biomedical Campus (CBC) Transport Needs Assessment[3] demonstrated the clear need for CSET 2 as a dedicated public transport corridor to support both the existing and planned growth of CBC. The Transport Needs Assessment demonstrated that without this intervention, there will be a significant increase in car trips to and from the campus, creating further challenge and therefore stifling planned growth ambitions.

2.12 Within the constrained financial environment we find ourselves we are required to make decisions based on the highest levels of certainty we have. Difficult decisions are required in order to deliver the majority of the programme and to meet the overall objectives of the City Deal in the context of inflationary pressures. However, the current situation doesn't rule out that position changing as proposals for the next

[3] https://www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Public-Transport/Cambridge-South-East-Transport/CBC-Transport-Needs-Review-Study-Refresh-v5.0.pdf

Local Plan continue to emerge. Indeed, the next Local Plan is likely to include further growth[4] at the Cambridge Biomedical Campus. Combined with recent announcements around 'Cambridge 2040'[5] the case for CSET's Phase 2 remains strong.

Table 4 – Assessment against FIS criteria

Scheme	1. Facilitate City Deal Objectives	2. Facilitate Environmental Objectives	3. Impact on peoples travel choices	4. Scale of Impact	5. Scheme Deliverability	6. Value for money and financially sustainable	7. Interactions with other schemes (including CPCA)	8. Other policy impacts	Priority
Public Transport Schemes									
Cambridge South East (A1307) - Phase 2	✓	✓	✓	✓	✓		✓	✓	
Cambourne to Cambridge (A428)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Waterbeach to Cambridge	✓	✓	✓	✓	✓	✓	✓	✓	✓
Eastern Access	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cambridge South West Travel Hub	✓	✓	✓	✓	✓	✓	✓	✓	✓
Foxton Travel Hub	✓	✓	✓	✓	✓		✓	✓	
Waterbeach Station	✓	✓	✓	✓	✓	✓	✓	✓	✓
City Access Project	✓	✓	✓	✓	✓	✓	✓	✓	✓
Active Travel Schemes									
Chisholm Trail cycle links - Phase 2	✓	✓	✓	✓	✓	✓	✓	✓	✓
Madingley Road	✓	✓	✓	✓	✓	✓	✓	✓	✓
Greenways	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cycling Plus- Hills Road	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cycling Plus- A1134	✓	✓	✓	✓	✓	✓	✓	✓	✓
Transport Enabling Schemes									
SMART	✓	✓	✓	✓	✓	✓	✓	✓	✓

2.13 As part of the of scheme-by-scheme evaluation exercise a number of additional 'programme changes' have also been identified. These suggested changes can be seen in section 3.6.

3. Options and Emerging Recommendations

Reprioritisation of the Programme

3.1 Section 2 of this report demonstrates the inflationary constraints facing the GCP Programme and the work that officers have developed to gain further clarity.

3.2 The Executive Board will be asked to consider the following options:

[4] https://consultations.greatercambridgeplanning.org/greater-cambridge-local-plan-first-proposals/greater-cambridge-2041/edge-cambridge/policy-scbc

[5] https://www.gov.uk/government/speeches/long-term-plan-for-housing-secretary-of-states-speech

Option 1: Do Nothing

The programme would continue to move forward with an overprogramming assumption of £278million. As a result, a decision would have to be taken at a later date on which schemes to pause and/ or rely on additional funding becoming available via other sources.

Option 2: Reprioritise Based on the Programme Prioritisation Criteria

Utilising the assessment completed by officers, pause CSET's Phase 2 and Foxton Travel Hub. Costs for these schemes would be removed from GCP budget pressures and GCP officers would proactively seek new funding opportunities.

In this scenario, the level of overprogramming would stand at £122million. As above, this would continue to be assessed at regular intervals and as part of an annual assessment linked to the budgeting process.

3.3 Officers suggest that **Option 2** is taken forward. In this scenario, the following actions would be taken:

- Work on CSET's Phase 2 and Foxton Travel Hub would pause.
- For Foxton this would be once all the planning documentation is drafted.
- For CSET's Phase 2 this would follow the completion of the design changes following the consultation on the location of the Retirement Village in Stapleford. Please see agenda item 8 (CSET's Phase 2) for further information. Although all preparations would be complete, the pause would also be prior to requesting approval from Cambridgeshire County Council to submit a Transport and Works Act Order (TWAO). Work will be paused by the end of 2023 at the latest.
- In tandem, GCP officers would work with partner organisations to identify additional funding opportunities for these schemes. As part of this, officers would work with the LPA's and central Government to understand more about the recent 'Cambridge 2040' announcement [6].
- The Programme would continue to look at Value Engineering opportunities within each individual scheme to ensure value for money is continually assessed and further opportunities for savings identified.

Overprogramming

3.4 If Option 2 is taken forward**,** the programme will have £122m of overprogramming. Maintaining a level of overprogramming is required for the following reasons:

- Significant risk still remains across the programme within each scheme. This could mean that schemes come in under budget. Alternatively, it could mean some elements of schemes, or whole schemes need to be reviewed due to not being able to pass through statutory processes (planning, TWAO etc.).

[6] https://www.gov.uk/government/speeches/long-term-plan-for-housing-secretary-of-states-speech

- As S106 funding continues to grow, this could mean that the level of overprogramming reduces as further funding becomes available. As in 2.5 above, officers have taken a conservative approach to this assumption. Therefore the expectation is that the income will increase in future years. As set out in 6.5 below, officers will continue to work with County Council colleagues to further refine these assumptions.

3.5 To effectively manage the over programming position there are a range of actions that can be taken:

- As above, a process of continued value engineering and value management will be applied to each project to ensure delivery and identify potential savings.

- In tandem, an annual process of review, linked to the budgeting process would enable a continual review of levels of overprogramming.

- Opportunities can be realised including the bulk buying of materials and opportunities to remove excavated materials from one scheme to another. This will reduce costs in import/ export of materials.

- Further understanding of risk within each project and where funding can be released from schemes as a result.

- Increased knowledge of potential income into the programme. As above, this is being built up with the County Council's Development Management team.

Programme Changes

3.6 As part of the prioritisation exercise a process of scheme-by-scheme evaluations has taken place to understand options for ensuring projects achieve maximum outcomes. This has identified the following for consideration:

Greenways Programme additions

- The work identified that significant benefits would be achieved from funding the A505 bridge to Royston within the Melbourn Greenway. It is therefore proposed that this is added into the programme. In addition, changes to the Linton Greenway such as the route around the Abingdon's are suggested.

Greenways Programme alterations

- Across the Greenways programme, following further cost scrutiny and public engagement it is clear that some elements should be reconsidered until further funding can be identified. These elements are:

    - The Sawston Greenway link via Dernford Reservoir which would be of significant cost due to the need to reprofile the Network Rail embankment.

    - The Melbourn Greenway off road link to the Haslingfield Greenway at Harston due to the cost and limited benefits offered by this route.

- The St Ives Greenway, Over spur which would need to include a new structure. This would result in a significant increase in cost.

Eastern Access

- The Eastern Access substantive paper at item 10 of this agenda sets out changes related to the Phase 1 scope. The costs in this paper reflect that scope.

Non-Transport Programme

3.7 As above, every element of the programme has been assessed in line with the criteria set out. The following has been identified:

Skills

As with the national picture of inflation the GCP's contracted work on skills is being impacted. Our contract provider, Form the Future, has had to increase staff salaries, is meeting the demands of increased costs for events and the increases in the cost of commodities and utilities. In order to maintain current levels of delivery Form the Future have asked the GCP in increase the remaining contract value (as at August 2023) by 10% (c£110,000).

Smart

The Smart Programme is currently forecast to be on budget and deliver significant benefits for the wider GCP Programme. In line with the rest of the programme, this will continually be reviewed. It should be noted that the Smart team have secured significant external funding to help support the work they are doing.

Housing

The current costs for Waterbeach station continue to be as set in July 2022. This is set out in Table 5. As with the rest of the programme this will be kept under regular review.

Economy and Environment

As a result of the UKPN's decision to fund the Grid capacity works, aside from a limited amount of consultancy expenditure, there is no longer any capital expenditure required from GCP towards this project or any other significant costs anticipated for this workstream.

4. Alignment with City Deal Objectives

4.1 The programme prioritisation exercise is focused on ensuring the continued delivery of the key City Deal objectives:

- Accelerating delivery of 33,480 planned homes;
- Delivering new Apprenticeships for young people;

- Creating 45,000 new jobs;

As set out in the City Deal, the programme will achieve this through the delivery of a 'comprehensive network of pedestrian and cycle routes within Cambridge' and by ensuring 'the main radial routes have high quality bus priority measures'.

5. Citizen's Assembly

5.1 The June 2020 Board response to the Citizens Assembly set out how the GCP supports the vision set out by the Citizens' Assembly, which aligns well with the aims set out in the City Deal and subsequently developed for the GCP's transport programme.

In supporting this vision, the GCP confirmed it would bring forward proposals that:

- Provide better public and active travel options – giving people a good alternative to travelling by car;
- Improve connectivity and enable better connections for people accessing employment in Greater Cambridge from across the travel to work area;
- Ensure that our proposals help to reduce air pollution and carbon emissions, supporting our partners to achieve their ambitions for net zero carbon. This would include exploring how, over a period of time, we can reduce and ultimately remove polluting vehicles from the city centre; and
- Make better use of space, particularly through creating more space for pedestrians and cyclists, which is more important than ever before now, to support social distancing.

As set out above, this exercise takes all of the above points into consideration.

6. Financial Implications

Overview

6.1 The overall forecast for GCP expenditure, income and overprogramming, based on the recommended Option 2 are as follows:

Forecast Cost	Forecast Income	Difference (Overprogramming)
£841,000,000	£719,000,000	£122,000,000

Forecast Income and Overprogramming

6.2 The forecast income for the Programme has increased from £654million to £719million, this follows discussions with the County Council over reasonable assumptions related to Development contributions to projects. Significant developments around Cambridge are expected to contribute financially to the programme including the Waterbeach New Town, North East Cambridge and the West of Cambridge Development. The scale of contribution is subject to negotiation with the Planning Authorities on a case by case basis but at this stage GCP officers

have agreed with County Council colleagues that a total figure of £187million can be reasonably assumed. This is an increase of £66million from £121million. As above, a conservative approach has been taken to this assessment.

6.3 Although the overprogramming figure has increased, the same principle as was agreed in the budget setting process in March 2023 has been adopted as part of this updated FIS. As above, this position will be continually reviewed, with the next update presented to the Joint Assembly and Executive Board as part of the March 2024 budget setting process.

Forecast Expenditure – Assumes Option 2 Scenario

6.4 The below table sets out the current budget for each scheme and the current forecast cost. It should be noted this table does not include all previous costs for completed projects, these are within the budget set in March 2023. This takes into account the pausing of both CSETS Phase 2 and Foxton Travel Hub as well as the Greenways programme updates. It should be noted that at this time this is for information except for the Waterbeach to Cambridge and Eastern Access costs both of which are subject to separate agenda items. The full updated budget will be agreed at the March 2024 meeting of the Executive Board.

Table 5: Forecast costs with Programme Prioritisation Option 2

Scheme	Budget (£000s)	Forecast Cost (£000s)	Notes
Cambridge South East (A1307) -Phase 1	16,950	20,770	Linton Greenway will now be delivered as part of the overarching Greenways programme.
Cambridge South East (A1307) - Phase 2	132,285	18,015	This includes scheme preparation to date and delivery of active travel measures for the Sawston Greenway. It should be noted that the updated forecast cost is £161,388,000.
Cambourne to Cambridge (A428)	157,000	181,349	Increased due to inflation.
Waterbeach to Cambridge	52,600	109,400	Increased due to understanding of scope and inflation. A full agenda item (Agenda Item 9) sets out the scope of this project.
Eastern Access	50,500	58,472	The scope of this project is reflected in the full item on Eastern Access. Agenda item 10.
Cambridge South West Travel Hub	42,000	69,503	Includes spend to date on the expansion of Trumpington Park and Ride and the construction of the South West Travel Hub.
Foxton Travel Hub		2,500	Covers spend to date. No further spend on the project if Option 2 adopted. It should be noted that the updated forecast cost is £14,043,000.
Milton Road bus and cycling priority	24,000	31,945	As well as inflation, these costs increases also reflect the requirement to complete maintenance work as part of the scheme.
City Access Project	20,320	20,320	Subject to the next stages of Making Connections, funding from the FIS Allocation (below) may be allocated to the delivery of the programme.
Chisholm Trail cycle links - Phase 2	5,000	6,184	Increased due to inflation.
Madingley Road	993	14,548	No budget currently allocated. Subject for discussion on December Board agenda.

Greenways Programme	76,000	112,708	Includes Linton Greenway and changes to programme such as introduction of the A505 bridge to Royston.
Cycling Plus- Hills Road	5,100	7,705	Dependent on the Option taken forward this figure will be refined.. Subject to Board discussion in December 2023.
Cycling Plus- A1134	5,100	10,000	Dependent on the Option taken forward this figure will be refined. Subject to Board discussion in December 2023.
Waterbeach Station	37,000	37,000	Business Case expected to be presented to the Board in December 2023.
FIS Allocation - Public Transport Improvements and Sustainable Travel	65,000	65,000	This is an allocation that has yet to be allocated to a specific project. Should a Making connections package be agreed, the majority of this funding will likely be allocated to that programme.
SMART	5,070	5,070	No change
Skills	4,713	4,823	10% increase to reflect increase of contract costs as set out in section 3.6
Programme management and scheme development	5,450	6,450	This is increased to cover a larger number of programme wide pieces that need to be completed including Biodiversity and Carbon. This also includes increase in resource related to commercial support for the GCP programme.

6.5 Any future budget updates will need to account for the cost of potential borrowing as we move towards 2031 and beyond. These costs are dependent on a range of factors, including some currently unknown anticipated S106 contributions. However, there is a high likelihood that borrowing will be required in advance of these funds, and this will need to be funded from GCP resources. As such officers will work with County Council colleagues to better refine these assumptions for inclusion. This needs to be identified in the coming months in order that the GCP Board are aware of this likelihood and the impact on current decisions in terms of any commitment of funds in order to ensure that funds are available to provide for this borrowing.

Have the resource implications been cleared by Finance? Yes
Name of Financial Officer: Sarah Heywood

7. Risks

7.1 The following are key risks associated with the Programme and will be regularly reviewed by officers:

Income from Developers

The income assumed from developers has been worked up in partnership with the County Council. It takes conservative assumptions with regards to future major development contributions. However, these assumptions could be impacted by significant economic shocks that impact the pace housebuilding.

Gateway Review

The assumed income anticipates a successful Gateway Review in 2024. The impact of inflation is being highlighted with DLUHC as part of this process.

Risk within Projects

Each project has its own Risk Register and appropriate budgetary allocation for risk. This could mean that if not all risk is realised then schemes could be delivered under budget. At the same time, not all risks can be known and therefore it should be understood that unforeseen risks can lead to increase in scheme costs at a later stage.

Further Inflation

As set out in Table 5, all schemes have been evaluated and now account for the impact of existing inflation as well as forecast future inflation. However, unforeseen delays in projects or additional unforeseen events could lead to further inflation that cannot currently be known.

8. Next Steps and Milestones

8.1 The above strategy (FIS3) has set out how officers suggest the GCP Board may wish to respond to the identified, national, inflationary pressures. This includes the pausing of Foxton Travel Hub and CSET's Phase 2 as well as specific less substantive changes within the Programme as set out in 3.6.

8.2 The costs shown in Table 5 reflect the best available information at this time, however as above, officers will continue to refine this information to ensure an accurate programme position.

Background Papers

Source Documents	**Location**
GCP Future Investment Strategy (March 2019)	Link
GCP Future Investment Strategy (December 2020)	Link

Agenda Item No: 8

Cambridge South-East Transport Scheme

Report to:	Greater Cambridge Partnership Joint Assembly
Date	7th September 2023
Lead Officer:	Peter Blake – Director of Transport, GCP

1. Background

1.1 The Cambridge South-East Transport scheme is one of four corridor schemes that form a key component of the Greater Cambridge Partnership's (GCP's) sustainable transport programme. As the delivery body for the Greater Cambridge City Deal, the GCP is delivering a comprehensive programme of sustainable transport initiatives, working with local authority partners to create a comprehensive transport network that can meet the needs of the area now and into the future.

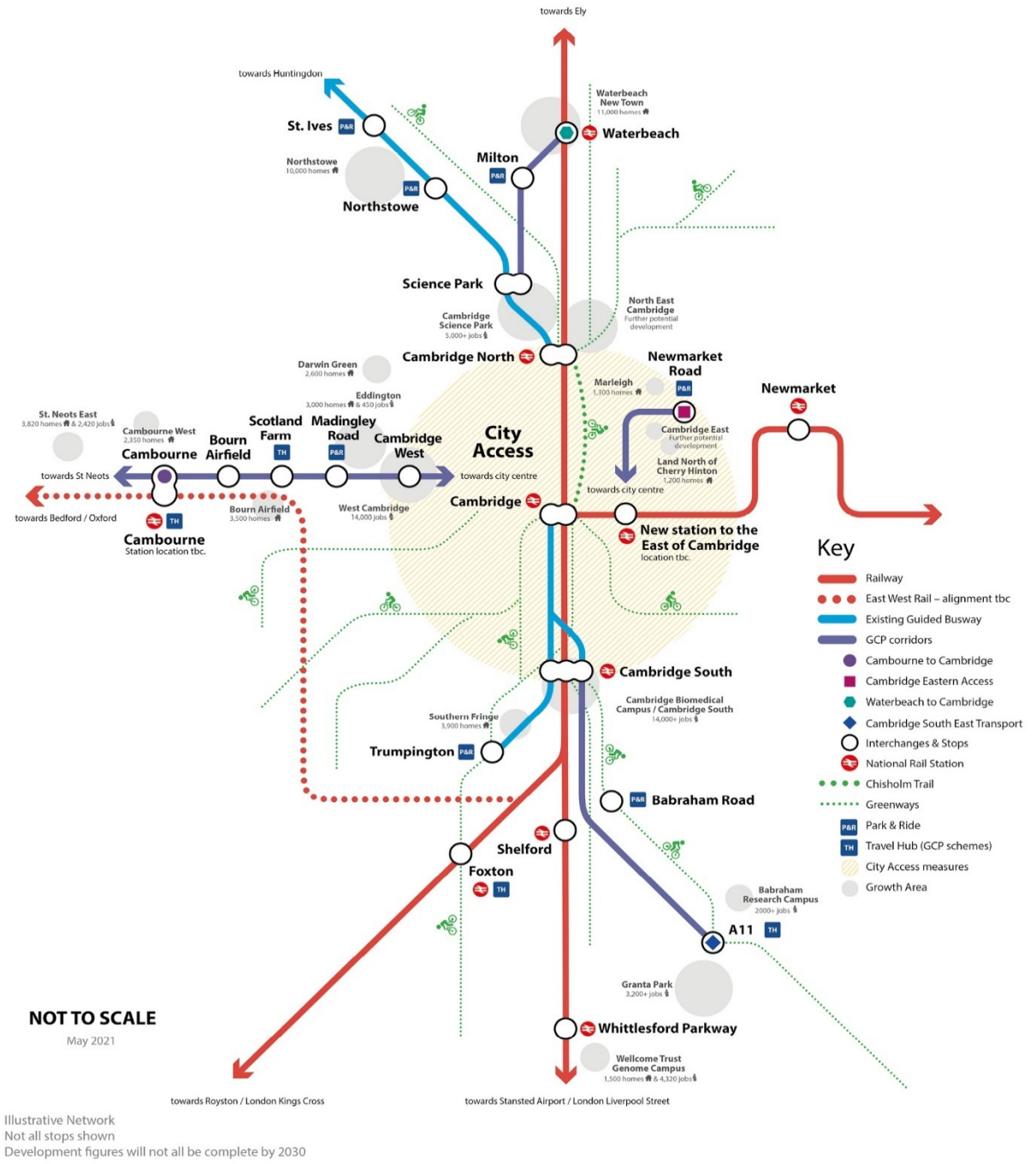
1.2 This paper presents the report of the Stapleford Consultation and the revised route based on the outcome of the consultation and technical review.

1.3 The programme has been developed using an extensive evidence base and is designed to support sustainable economic growth and the accelerated delivery of the Local Plan, as well as enabling a broader transformation in the way Greater Cambridge moves and travels, supporting the transition to zero carbon and creating a more inclusive economy. The GCP's vision for a future travel network is particularly important in achieving a green recovery from Covid-19, with sustainable transport options vital to enable communities to access work, study and other opportunities the city-region has to offer.

1.4 To create a more sustainable network for the future, reduce congestion, improve air quality and reduce carbon emissions, significantly more people need to travel by public transport, cycling and walking with significantly fewer people travelling by car. The GCP's programme looks to achieve this by giving people better choices to travel sustainably.

1.5 Figure 1 below sets out the future sustainable transport network for Greater Cambridge and how this will be substantially enhanced over the next decade, forming a cohesive network throughout Greater Cambridge and further afield.

Figure 1



1.6 The A1307 Haverhill to Cambridge corridor is one of the key radial routes into Cambridge and Haverhill is a key origin area for travel to work in Cambridge. The A1307 suffers considerably from congestion during peak times, particularly at the Cambridge end, at the junction with the A11 and around Linton, the largest other settlement on the corridor.

1.7 The route has seen significant increases in traffic over the last decade and large existing and proposed development sites along this corridor mean that pressure on already congested roads and the limited public transport service is set to rise.

1.8 The route along the A1307 Cambridge to Haverhill has been highlighted as a strategic project to help make travel by foot, bicycle and public transport more attractive than private car journeys, alleviating congestion and supporting the region's growth. The Cambridge South East Transport scheme (CSETS) is therefore in compliance with the Local Transport Plan. The Cambridge Biomedical Campus (CBC), as one of the primary destinations of the route, continues to experience considerable growth including further planned hospital development. Access for workers to existing and planned development is a key consideration of the scheme.

1.9 The CSETS project consists of two phases: Phase 1 which comprises 16 discrete small to medium works packages currently under construction and development, aimed at achieving some journey improvements for cyclists and public transport on the existing A1307, mainly within existing highway boundaries. Phase 2, which is the main focus of this paper, is a more significant intervention – providing dedicated, mainly off-road, routes for public transport, cycling & walking, aiming to make these modes the attractive and preferable choice for many.

1.10 The Phase 2 project is made up of three key elements: a dedicated public transport link between the A11 and the Cambridge Biomedical Campus, a new Travel Hub facility near the A11/A1307 junction, and new cycling, walking and equestrian facilities.

1.11 The case for busways is built upon the considerable success of the existing St Ives to Cambridge scheme which, pre-pandemic, carried over 4m passengers per annum. A busway solution provides significant benefits over bus lanes in terms of prioritisation, and therefore journey time savings, reliability benefits and attractiveness to passengers. These benefits have been outlined in the CSETS Business Case (available online). The proposals include improvements upon the existing St Ives scheme, including a less engineered solution reducing environmental impact, a fully designed segregated cycling and walking solution alongside and modern, electric vehicles.

1.12 It is envisaged that modern, electric vehicles will be utilised on the route. This public transport corridor has been designed to be future-proofed allowing for future changes in design and vehicle type, and indeed the proliferation of electric bikes and scooters.

Scheme Development

1.13 The scheme has been in development since 2015 and advanced in accordance with Department for Transport major scheme guidance.

1.14 The Transport Strategy for Cambridgeshire and South Cambridgeshire (TSCSC) was prepared in parallel with the submitted Local Plans and adopted in March 2014. The strategy provides a plan to manage the rising population and increasing demand on the travel network by shifting people from cars to other means of travel, including public transport, walking and cycling. Policy within the TSCSC requires a range of infrastructure interventions on the Cambridge South-East corridor as a key part of the integrated land use and transport strategy, responding to levels of

planned growth. Cambridge South is one of the key growth areas identified in the plan. The Local Plan policies for the strategic development sites along the corridor requires High Quality Public Transport to link new homes to employment and services in and around Cambridge.

1.15 The CSETS scheme was originally conceived as the Three Campuses to Cambridge scheme. The Three Campuses project was reviewed by the Local Liaison Forum (LLF) in 2017, prior to public consultation on the key route options. Over course of 5 workshops, the LLF refined the options into 3 possible strategies for the scheme, on and off road, expressing a preference for an off-road solution that served the local villages.

1.16 The 3 strategies were then subject to public consultation at the end of 2017. Strategy 1, the entirely off-road solution was the preferred solution. It also had the strongest business case of the 3 options, a key component of the prescribed assessment process. It was the only option that served the local communities along the corridor, in particular Sawston, Stapleford and Great Shelford, a preference of the LLF.

1.17 The Joint Assembly endorsed the option in 2018 noting in particular that it served local villages, as well as the three Campus sites. The Executive Board adopted the off-road option as the preferred solution at its meeting in October 2018.

1.18 The project was next presented to the Executive Board in June 2019. The key conclusions of the Outline Business Case (OBC) in relation to the preferred high quality public transport, walking and cycling route as well as the travel hub location were endorsed, and it was agreed that officers undertake an Environmental Impact Assessment for the route and prepare a Transport and Works Act Order application.

Environmental Impact Assessment Consultation

1.19 A full statutory, Environmental Impact Assessment was completed. The Board noted the results of the public consultation and in particular, that feedback from the EIA consultation has been used to inform the development of the design for the preferred option, with the project team considering all comments received during the consultation. These comments had led to a number of refinements in the scheme's design and the project team undertook to continue to refine the scheme to minimise potential impacts of the scheme.

1.20 The Executive Board approved the proposal to move the scheme to the next stage, a submission of a formal Transport and Works Act application. It was noted that this application would likely result in a full public inquiry.

Covid-19 Pandemic

1.21 GCP continues to monitor the impact of the Covid-19 pandemic. The latest data shows a return to near normal traffic levels, with associated impact on congestion. The impact on public transport continues to be particularly acute and, given the likely importance of a high-quality public transport network to the future success of Greater Cambridge and the wider travel to work area, getting people back on to public transport will be an essential component of a successful strategy. Equally, with people returning to their cars faster than other modes following both

lockdowns, there is a clear risk of a car-based recovery which could potentially make sustainable modes less attractive if congestion and pollution levels return unabated. The busway solution will continue to provide significant benefits over bus lanes in terms of prioritisation, and therefore journey time savings, reliability benefits and attractiveness to passengers. These benefits have been outlined in the CSETS Business Case (available online) and will continue to be reassessed as part of the Business Case refinement.

1.22 The scheme continues to align with local policies, and will support delivery to:

- Reduce carbon emissions and improve air quality.
- Achieve modal shift away from private car use.
- Promote active mode travel.
- Help to deliver local economic growth by improving connections between. places of work and residence.
- Deliver additional housing and jobs by facilitating developments.

Stapleford Retirement Home Planning Permission

1.23 In 2021 a planning application by Axis Land Partnerships for a retirement care village along a section of the agreed route was considered and refused by the South Cambridgeshire District Council as the Local Planning Authority (LPA).

1.24 The applicant subsequently took the application to appeal. The Planning Inspector approved the development on 29/12/21. The application had a direct impact on the alignment of the CSETS project.

1.25 The applicant of the residential care village has provided a 15m wide corridor within their development to allow for the route. The 15m wide corridor that has been provided within the proposed scheme is not on the proposed alignment of the CSETS Phase 2 route and therefore a minor realignment was required. The realignment is of the order of 30-80 metres from the existing approved route.

1.26 Officers have subsequently been working closely with both planning colleagues and the new owners of the site to agree an alternate alignment through the area. The new owners of the site have been very receptive to proposals, supporting provision of the CSETS route.

1.27 An assessment of the route deviation options was undertaken and viable options reviewed. This focussed on minimising the impact to the route and surrounding environment. Respective geometry for a range of design speeds were determined from design guidance and two viable options was identified. Two options were developed, There was no discerning difference in the impacts for environment, ecology, green belt and overall costs between the respective options compared against the previous Preferred Route.

1.28 At the Executive Board meeting in June 2022, the Board recommended to:

a) note the impact of the Stapleford Retirement Village planning application on the CSETS route.

b) approve an additional targeted consultation for the impacted section of the route through Stapleford.
c) note the commitment to continue to refine the scheme design to minimise environmental impacts of the scheme.

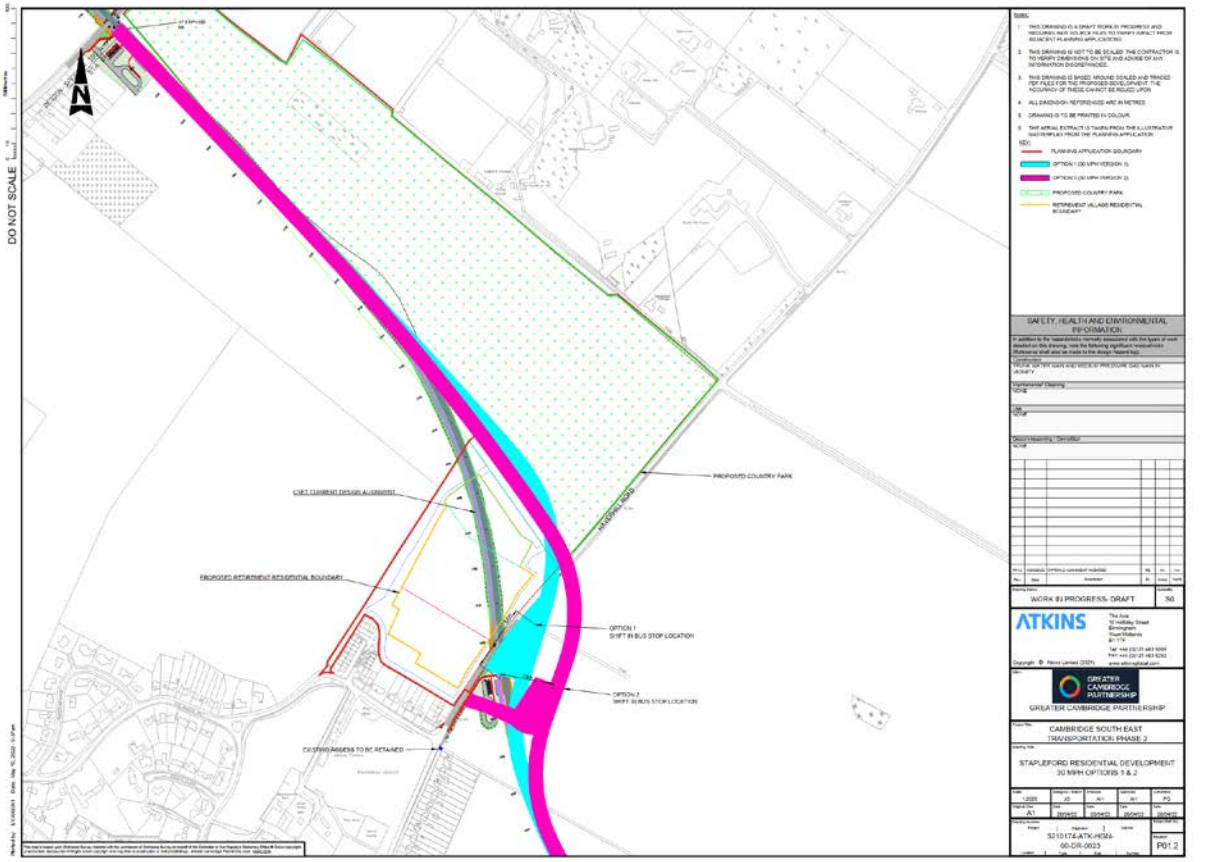
1.29 This report is updating the Joint Assembly and Executive Board on the outcome of the targeted consultation and progress with the scheme.

2. Issues for Discussion

Stapleford Consultation Summary Report

2.1 The consultation presented two options for addressing the minor amendment required by the Stapleford Retirement Village planning permission, outlined below.

Figure 2: Map Showing Both Options:



2.2 During the consultation, 316 formal responses were received and considered by the project team. This included 302 survey responses, as well as 13 emails and 1 letter. The consultation responses came from 308 individuals and 8 groups/organisations (or elected representatives). Link to the Consultation Report here.

2.3 The key findings from responses provided by all consultees during the 2022 consultation:

- Overall, the responses of those who expressed a view on the two options, demonstrate a slight preference for Option 1 shaded blue on the above diagram.

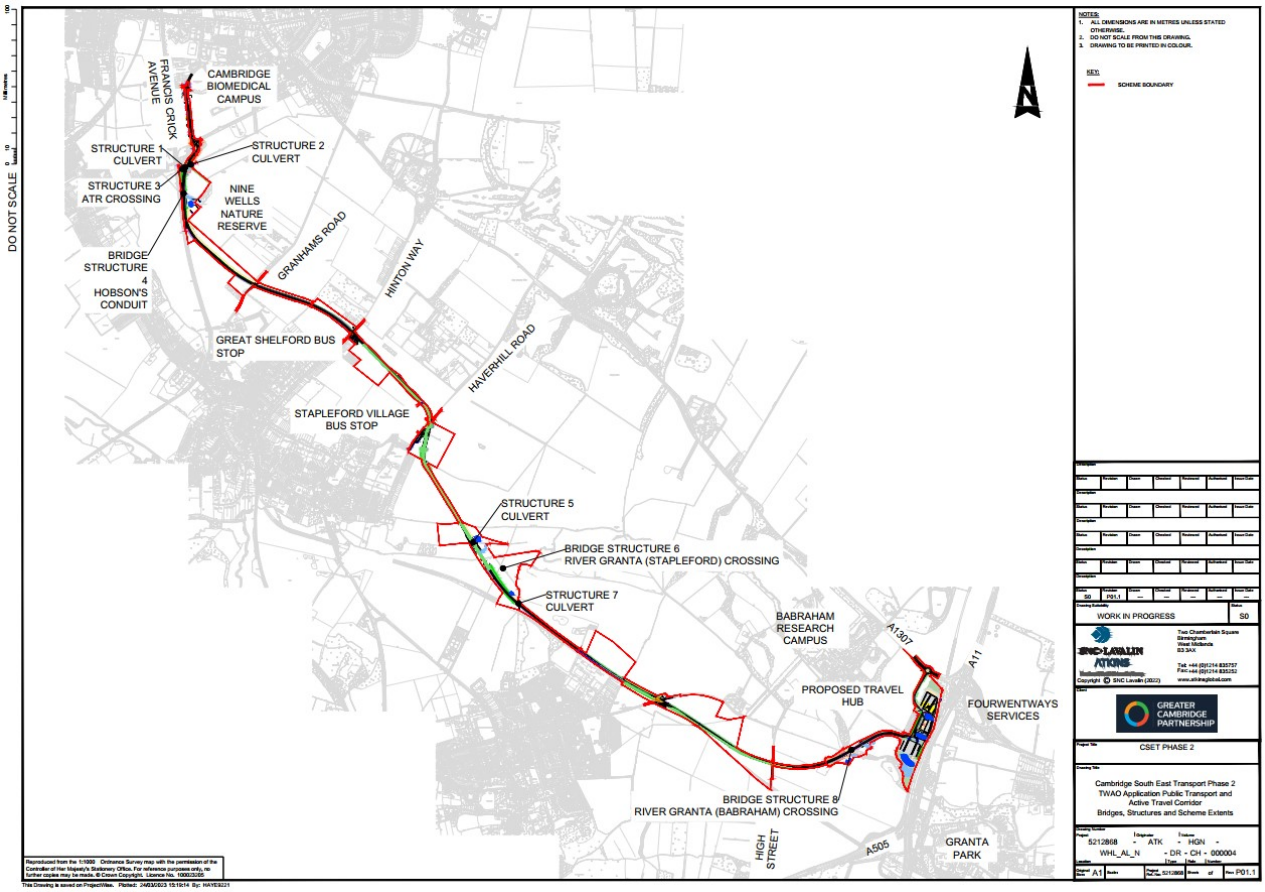
- In addition, a recurring theme, both in the questionnaire written responses and also in responses from key stakeholders, was that Option 2 would create opportunities for infill development.

- Another key concern was that the bus stop was too far from the village to be easily accessible. Option 1 keeps the bus route best connected to the village.

- Other issues raised by respondents to the consultation that are directly related to Options 1 and 2, included access across the bus route to the country park, parking, cycle storage and light pollution.

- Consequently, Option 1 is being presented to be taken forward as part of the scheme and scheme designed updated accordingly.

Figure 3: Preferred Route



3. Consultation and Engagement

3.1 Consultation and engagement has been a key feature of the CSETS scheme development.

3.2 The scheme was subject to an additional targeted consultation for the impacted section of the route through Stapleford between 18 July and 30 August 2022. The purpose of the consultation was to:

- Highlight scheme refinements as a result of the planning application and explain why the changes were made;
- Identify potential environmental impacts;
- Detail proposed mitigation measures of adverse impacts; and
- Provide an opportunity for all consultees to give their views on the revised section of the route.

3.3 All Planning issues have now been resolved following discussions and engagement with the Greater Cambridge Shared Planning Services (GCSP) and the owners of the Retirement village.

4. Options and Emerging Recommendations

4.1 The Joint Assembly is asked to comment on the recommendations likely to be presented to the Executive Board, including:

a) the response to the Stapleford Consultation.
b) the minor variation to the preferred route.
c) a formal request to Cambridgeshire County Council to prepare and submit a Transport and Works Order (TWAO) with the GCP working closely with Cambridgeshire County Council as the highways authority.

4.2 The alternate emerging recommendations dependent upon the outcome of the Future Investment Strategy paper, are;

a) the response to the Stapleford Consultation.
b) the minor variation to the preferred route.
c) Prepare to make a formal request to Cambridgeshire County Council for the submission of a Transport and Works Order (TWAO) should funding become available.

5. Alignment with City Deal Objectives

5.1 The CSET project forms an important part that will enable the Greater Cambridge Partnership to deliver against the objectives that were set out in the City Deal. The scheme will seek to connect people to places of employment and allow communities to grow sustainably in the coming years, by creating better and greener transport networks, reducing congestion and making better use of limited road space by prioritising sustainable transport.

5.2 In addition the proposals set out in this report will support the realisation of a series of benefits, including:

- Securing the continued economic success of the area through improved access.
- and connectivity.
- Significant improvements to air quality and enhancements to active travel,
- supporting a healthier population.
- Reducing carbon emissions in line with the partners' zero carbon commitments.
- Helping to address social inequalities where poor provision of transport is a
- contributing factor.
- Wellbeing and productivity benefits from improving people's journeys to and
- from employment.

6. Citizen's Assembly

6.1 Citizens' Assembly members developed and prioritised their vision for transport in Greater Cambridge. The CSET project supports a number of those priorities, namely:

- Be environmental and zero carbon (28).
- Be people centred – prioritising pedestrians and cyclists (26).
- Enable interconnection (25).
- Have interconnected cycle infrastructure.
- Provide transport equally accessible to all.

6.2 The Citizens' Assembly voted on a series of measures to reduce congestion, improve air quality and public transport which aligns with the aims of the CSET scheme.

7. Financial Implications

7.1 Costings for the scheme was updated in April 2021 to reflect the scheme designs (Design Freeze 3). The current Outline Business Case budget for the scheme is £132m. The current predicted budget cost including the impact of inflation is £160m. This will be kept under review and included in a future update of the business case, subject to the FIS process.

Have the resource implications been cleared by Finance? Yes
Name of Financial Officer: Sarah Heywood

8. Next Steps and Milestones

8.1 The next steps in the development of the project include the key elements set out in the table below.

Task	Commentary	Timescale
Seek Approval to submit TWAO	Approval will be sought from the Full Council to submit the TWAO	When funding becomes available

Background Papers

Source Documents	Location
CSET Webpage	https://www.greatercambridge.org.uk/sustainable-transport-programme/public-transport-schemes/cambridge-south-east-transport/cambridge-south-east-transport-phase-2-background

Agenda Item No: 9

Better Public Transport – Waterbeach to Cambridge and Waterbeach Greenway

Report to:	Greater Cambridge Partnership Joint Assembly
Date	7th September 2023
Lead Officer:	Peter Blake – Transport Director, GCP

1. Background

1.1 The Greater Cambridge Partnership is progressing a number of sustainable transport schemes to support the delivery of the Waterbeach New Town, which include a new busway link; a new greenway between Waterbeach and Cambridge; a new park and ride; and relocation of the railway station at Waterbeach. These are shown in Appendix A.

Better Public Transport

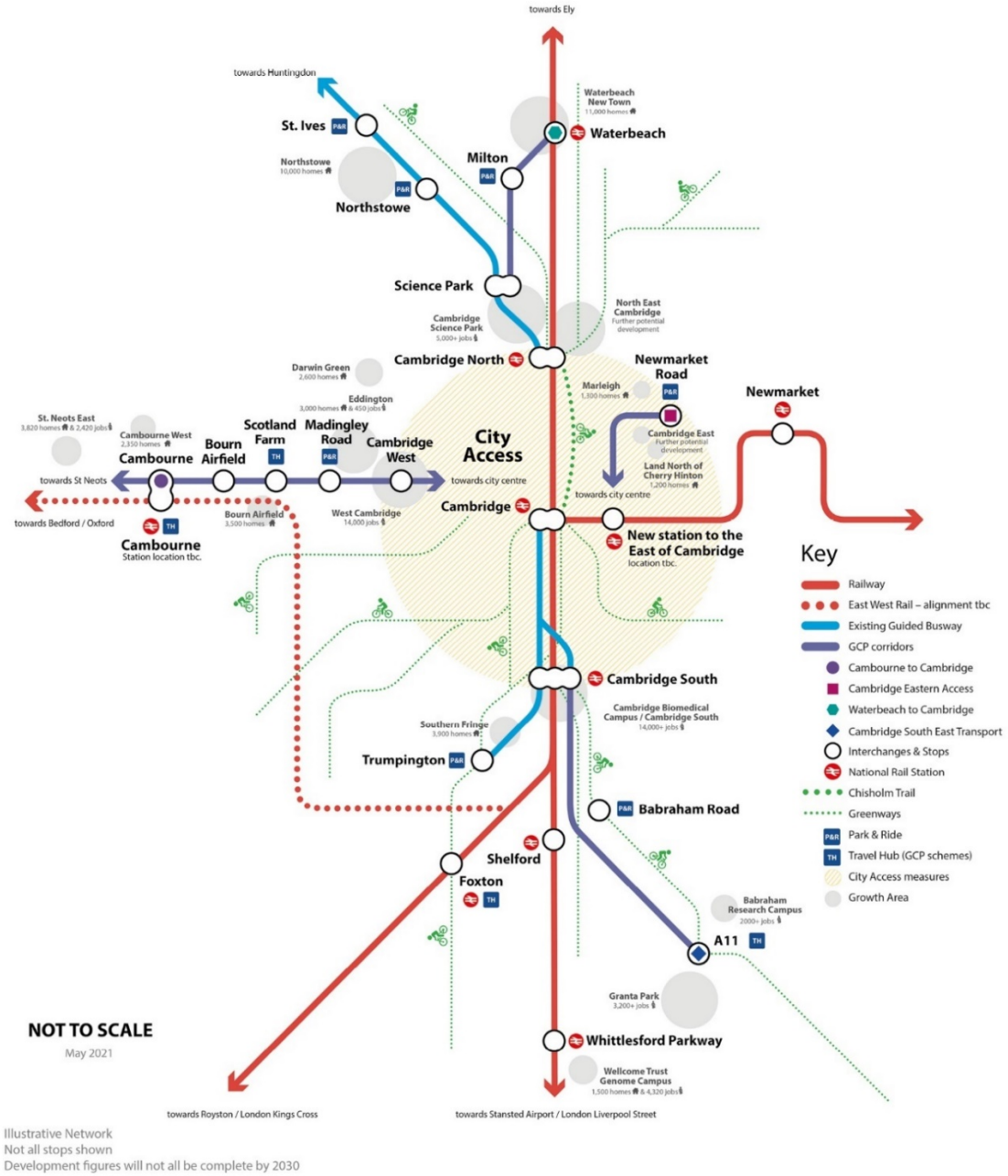
1.2 The Waterbeach to Cambridge (W2C) project aims to provide a new high quality, segregated public transport route between the new town at Waterbeach and Cambridge along with associated active travel infrastructure. The scheme also looks to include a new park and ride facility on the A10 near to the new town at Waterbeach. The Strategic Outline Case, approved by the Executive Board in July 2021 demonstrated that this new infrastructure is essential for the continued development of the new town as it will create and enhance the required network links that enable people to make trips by public transport, cycle or on foot, thus reducing pressure on the already congested highway network.

1.3 This is one of four public transport corridor schemes that form a key part of the GCP's sustainable transport programme. As the delivery body for the Greater Cambridge City Deal, the Greater Cambridge Partnership (GCP) is delivering a comprehensive programme of sustainable transport initiatives, working with local authority partners to create a comprehensive transport network that can meet the needs of the area now and into the future.

1.4 The GCP programme has been developed using an extensive evidence base and is designed to support sustainable economic growth and the accelerated delivery of the Local Plan, as well as enabling a broader transformation in the way Greater Cambridge moves and travels, supporting the transition to zero carbon and creating a more inclusive economy.

1.5 To create a more sustainable network for the future, reduce congestion, improve air quality and reduce carbon emissions, significantly more people need to travel by public transport, cycling and walking with significantly fewer people travelling by car. Figure 1 sets out the future sustainable transport network for Greater Cambridge and how this will be substantially enhanced over the next decade, forming a cohesive network throughout Greater Cambridge and further afield.

Figure 1 Future Public Transport Network



1.6 At its meeting in July 2021, the Executive Board granted approval to further develop and consult on two busway alignment options which included a Western route option, and a Revised Central route option. It was also agreed that a review of

current park and ride provision within the corridor should be carried out, with the development of options for future park and ride requirements.

1.7 These options were developed and consulted on in early 2023. Following review of the consultation feedback, work has been undertaken to select both a preferred route alignment for the busway, and a preferred location for a new park & ride facility. The Outline Business Case sets out the reasoning and justification behind the options selection and also provides an up-to-date assessment of the scheme cost and benefits.

Waterbeach Greenway

1.8 In February 2020 the GCP Executive Board agreed to an alignment of the Waterbeach Greenway alongside the railway line. This report sets out proposals to revise the alignment of the Waterbeach Greenway in response to the need for better connectivity between the various GCP projects in Waterbeach and on the A10 corridor, as well as overcome cost and delivery issues with the previous Waterbeach Greenway proposals.

1.9 The Joint Assembly is invited to consider the proposals to be presented to the Executive Board and in particular the emerging recommendations:

(a) the outcome of the public consultation.

(b) the Outline Business Case that sets out the case for the project along with updated outturn cost estimates of £109,400,000.

(c) the revised central alignment (Appendix B) is taken forward to the preliminary design stage where further work will be undertaken to refine the route and develop the preliminary designs, undertake more detailed environmental impact assessment and associated consultation, and commence the TWA planning process.

(d) The Park & Ride site option C (Appendix C) is taken forward to the preliminary design stage where further work will be undertaken to integrate the design with the busway and active travel options and develop the preliminary designs for the site. The next project stage will also include more detailed environmental impact assessment, and commencement of the TWA planning process.

(e) The proposal to consult on a new alignment of the Waterbeach Greenway.

2. Issues for Discussion

Strategic Case - provision of a new, high quality public transport route

2.1 The Waterbeach to Cambridge project is designed to develop measures to ensure that planned housing and employment growth can be accommodated without increasing levels of vehicular traffic on this northern approach to Cambridge (the study area) by making public transport & active travel journeys more reliable and attractive. This is in line with the GCP's objectives, which include reducing congestion and encouraging people to use more sustainable forms of transport.

2.2 The Waterbeach to Cambridge study area forms part of the wider A10 Ely to Cambridge Corridor, which is one of the key radial routes into Cambridge from the north of the City. Existing congestion poses significant challenges in terms of future development along the corridor, in particular planned development to the north of Waterbeach and at North East Cambridge, located either side of Milton Interchange (see section 1.2 of the OBC) and as listed below:

a) **New Town to the north of Waterbeach** is allocated for 8-9,000 homes in the 2018 Local Plan, along with other associated infrastructure and uses[1]. However, it is expected that the new town will include up to 11,000 new dwellings (the western part of the site has outline planning permission for up to 6,500 dwellings and the eastern part of the site has a resolution to grant planning permission for up to 4,500 dwellings).
b) **North East Cambridge** has been identified in the adopted Local Plans for significant potential future development, including intensification of development at Cambridge Science Park and development of the land to the east of Milton Road, known as Cambridge Northern Fringe East. The emerging North East Cambridge Area Action Plan and the emerging Greater Cambridge Local Plan identify that between them these developments could provide up to 8,350 new homes and 15,000 new jobs.
c) Alongside these major developments there are also a number of existing employment developments including Cambridge Research Park.

2.3 The strategic case highlights an overwhelming need for transport intervention within the study area to:

- Accommodate the additional housing and employment growth.
- Reduce dependency on private motor vehicles by providing alternative high-quality means of transport between key locations.
- Support local policy and strategies which identify a clear need to reduce congestion in order to enable the additional sustainable growth to be accommodated within the study area.
- Provide physical integration with other local transport interventions such as the Waterbeach Greenway, Chisholm Trail, Milton and Histon Road.

2.4 As well as overcoming some of the existing issues within the study area, a high quality, segregated public transport & active travel route will provide opportunities to:

- provide a more resilient public transport network that is not dependent on the A10 and thus enable improved journey times and reliability for public transport.
- transform public transport to a high-quality and attractive travel option along the corridor.
- provide sustainable infrastructure directly servicing new developments and key travel markets.
- encourage mode shift from private car to sustainable modes.

[1] South Cambridgeshire Local Plan 2018 - Chapter 3 Strategic Sites (scambs.gov.uk)

2.5 The journey time between Waterbeach new town and Cambridge City Centre in the weekday morning peak on a segregated route is anticipated to reliably take around 30 minutes. This compares with a (pre-covid) timetabled bus journey time of around 45 minutes, but often takes longer and is unreliable.

2.6 Provision of a segregated route is expected to increase the number of people using public transport and park and ride; and reduce the number of journeys made by car. The best performing options provide up to a 2,600 reduction in daily trips by car on the section of the A10 between Waterbeach and Cambridge

2.7 Modelling work undertaken for a new park & ride facility near Waterbeach indicated that this strategic option would generate up to 1,200 daily park & ride trips on the corridor, without abstracting a significant number of trips from the existing Milton Park & Ride site.

2.8 A new park & ride site near Waterbeach also attracts significant number of park and cycle trips many of which would otherwise have been made by car.

2.9 It is important to note that the project has accounted for the work that is being undertaken by Cambridgeshire and Peterborough Combined Authority (CPCA) on developing options for upgrading the A10 between Ely and Cambridge.

2.10 The impact of not providing new segregated infrastructure for public transport would be to see increasing traffic congestion within the corridor which would significantly reduce productivity whilst increasing carbon emissions. Growth would be stifled and would not be sustainable, particularly impacting upon much need local housing development.

Economic Case

2.11 In terms of costs, benefits, and overall value for money of the scheme, the economic case sets out that a new, high quality public transport link between the new town at Waterbeach and Cambridge, with associated new park & and ride facilities located near Waterbeach will deliver a positive benefit to cost ratio (BCR) with a present value of benefits valued up to £102M giving a BCR of 1.55. The BCR figure does not account for other monetised economic benefits such as dependent development which adds another £53.6M to the value of benefits (wider economic benefits).

Financial Case

2.12 High level scheme costs associated with the future development of the scheme have been provided within the OBC and stands at a total of £109.4M. The infrastructure will enable development on this corridor and will be forward funded by the Greater Cambridge Partnership but will also be funded from current and future S106 contributions.

Commercial and Management Cases

2.13 The Commercial and Management Cases have been set out in the OBC. Key to note within the management case is the anticipated programme which aims for a

construction start date of 2026. Officers will continue to seek opportunities to bring forward this timeline.

3. Consultation and Engagement

3.1 The 2023 public consultation adopted a multi-channel approach to promote and seek feedback including through traditional and online media, and through the wide-spread distribution of around 11,600 consultation postcards.

3.2 Full public consultation ran for eight weeks from 30 January 2023 to midday on 24 March 2023. The consultation sought views on two route alignments for a new, high quality, segregated public transport route with associated infrastructure to facilitate active travel between the new town at Waterbeach and Cambridge. These two options included the western alignment that was previously consulted on in 2021 along with a revised version of the central alignment as shown in Appendix B.

3.3 The consultation also sought views on three potential locations for a new park and ride facility close to the new town at Waterbeach. These included site A, to the north of the new town, site B, adjacent to Green End Road, and site C, directly to the west of Denny End Road (Appendix C).

3.4 Over the consultation period, 3 online briefings were held, along with 5 in person consultation events. Furthermore, the project team attended a drop-in session at the local college, 1 parish council meeting, 1 City Council Area Committee (North), a pre-launch briefing with local district and county councillors and another for Parish Council Chairs and Stakeholders. In addition, a social media campaign was undertaken, including Facebook, Twitter and Nextdoor posts publicising events. There were over 3,600 visitors to the dedicated website and over 1,300 documents (maps, information, and copies of the booklet) downloaded. All parish councils and schools in the study area were contacted. Adverts were placed in local newspapers including the Cambridge News, Cambridge Independent and Ely Standard. Adverts were also placed at the Milton Park and Ride site and bus stops along the Guided Busway near the Science Park.

3.5 The key findings from the consultation are set out in the published consultation report in and indicate that:

- Just over half of respondents supported revised central route option for the Waterbeach to Cambridge busway, with approximately two fifths in opposition to this route alignment. It was clear from the consultation responses that there were particular concerns from some about the impact of this route option on the village of Landbeach and surrounding farmland, although from other responses this alignment was seen as bringing benefits to Landbeach.

- Support for the Western route option was lower with only two fifths backing this route option with over half opposing it.

- There was strong support for the proposed enhancements to active travel infrastructure along the route.

- Over a third of respondents had ‘no opinion’ on the three locations for a new Park and Ride at Waterbeach.

- Just over two fifths supported Site A although strong objections were received from English Heritage with regard to its proximity to Denny Abbey.

- Site B received the lowest support and highest rate of objection.

3.6 Overall, the consultation was positive, and like the previous consultation in 2021, many participants at events, and respondents to the questionnaire understood and agreed with the need to provide the proposed infrastructure. However, the consultation also highlighted a number detailed concerns that the project team will need to consider in future stages of the project, these include the mitigation of any adverse impacts on the village of Landbeach, and on affected agricultural land holdings, in particular, ensuring that access to all land is retained, and ensuring high levels of security are maintained.

4. Options and Emerging Recommendations

4.1 There are three key recommendations to the Executive Board relating to the Waterbeach to Cambridge project, and one recommendation relating to the Waterbeach Greenway Project.

Route Alignment

4.2 On the basis of the technical work undertaken to assess the route alignment options and also in line with the overall public response to the proposals put forward, it is recommended that the revised central alignment is taken forward to the next project stage, where further work will be undertaken to refine the route and develop the preliminary designs, undertake more detailed environmental impact assessment, and commence the TWA planning process.

4.3 The Revised Central option is identified as the preferred option for the reasons outlined below which cover the themes of connectivity, sustainable transport trips and public support.

4.4 The Revised Central option provides better connectivity with Milton Park & Ride, connecting with Butt Lane directly to the north of the site. This means that all bus services on the busway route would be able to easily service the park & ride, without impacting journey times, and improving the service offering at the site. The proximity of the route to Milton village also means that residents of Milton could access a higher frequency of services on the busway from Milton Park & ride or Landbeach Road. The Revised Central route serves Landbeach village directly and its proximity to Waterbeach and Milton also provides the opportunity for service flexibility. This means that buses serving the villages directly could use the busway infrastructure for part of their journeys without significant diversions, contributing to improved journey times and journey reliability. Guidance infrastructure will be flexible at junctions to allow buses to turn off of and onto the busway.

4.5 Current modelling demonstrates that the Revised Central option leads to increased mode shift to sustainable transport trips compared to the Western option. In 2041, the Revised Central option is predicted to lead to an additional 750 daily public transport trips (bus, guided bus and rail), compared to a without scheme scenario. The equivalent number for the Western option is a 550-trip increase. The Revised Central option also leads to a larger increase in active travel trips, compared to the Western option. In 2041, the Revised Central option is predicted to lead to an increase of 1,400 daily active travel trips compared to a without scheme scenario. The equivalent number for the Western option is 1,200. The increase in sustainable transport trips means that the Revised Central option leads to a decrease of 2,600 daily private vehicle trips on the highway network in 2041, compared to a without scheme scenario. This mode shift towards sustainable trips also leads to a reduction in Greenhouse gas emissions, which is greater for the Revised Central option than the western option, as a result of the greater mode shift away from car.

4.6 Public consultation undertaken on the OBC route options, showed that there is higher public support for the revised central option with 51% of respondents 'strongly supporting' or 'supporting' the option, compared to 38% for the Western option.

Park & Ride

4.7 On the basis of the technical work that has been undertaken to assess the merits of the various park & ride options for the corridor, it is recommended that park and ride site option C is taken forward to the preliminary design stage where further work will be undertaken to integrate the design with the busway and active travel options and develop the preliminary designs for the site. The next project stage will also include more detailed environmental impact assessment, and commencement of the TWA planning process.

4.8 Park & ride site C is identified as the preferred option for a park & ride near Waterbeach for a number of reasons relating to transport connectivity, and environmental impacts.

4.9 In terms of transport connectivity, park & ride site C is preferred as a result of service pattern legibility, connectivity to a variety of transport infrastructure and origins and destinations. Located to the south of Waterbeach New Town, site C enables all services on the busway to access the site, without diversion. Other shortlisted locations, particularly site A to the north of Waterbeach New Town would lead to services being split to serve the development, park and ride and Waterbeach Relocated Station. This would mean a reduced frequency and quality of service to the park & ride and Waterbeach New Town and less service legibility for users.

4.10 Park & ride site C is located directly adjacent to the A10, via the Waterbeach New Town southern roundabout therefore not requiring an additional junction on the A10, which would cause additional delays for vehicles. It is located on the desire line for trips from the north, via the A10, and Waterbeach New Town towards Cambridge, therefore catering for both markets. Therefore, of the three sites considered, site C provides the fastest and most reliable journey times for park and ride buses. For active travel trips (park & walk and park & cycle) site C is predicted to lead to the most trips, due to being closer to the destinations in Cambridge. It also has direct

connectivity to the busway active travel route and Mere Way, and its proximity to the proposed A10 active travel bridge means that those residents of Waterbeach New Town located to the south west of the development could access the site by foot or cycle to catch specific services. The connectivity that site C affords leads to the greatest predicted P&R usage along the corridor, compared to the other site options, 8,250 daily users (park & ride and park & cycle).

4.11 In terms of environmental impacts, site C is considered preferable in terms of noise impacts, heritage impacts, landscape and water impacts. Its proximity to the A10 means and distance from residential properties means that the noise and landscape impact of the site is considered neutral and can be mitigated. It is not considered to impact on designated heritage assets in the study area and would have the least impact on the water environment, and any impact though construction or operation could be mitigated.

Outline Business Case

4.12 It is recommended that the Executive Board agrees that the Outline Business Case provides the evidence required to move forward to the next project stage and that it provides the basis for approval of a revised scheme budget of £109.4 Million.

4.13 The Revised Central Route option, coupled with Park & Ride option C generate a BCR of 1.55 which demonstrates that the scheme will deliver medium value for money as defined by DfT guidance.

Greenway

4.14 The proposal to change the alignment on the Waterbeach Greenway is predicated on the need to provided better connectivity between GCP schemes. It is also based on the outcome of recent investigations that highlights significant difficulty in delivering the Waterbeach Greenway along the previously agreed route that follows the railway line. It is recommended that the Executive Board agrees with proposals to consult on a new alignment of the Waterbeach Greenway (as set out in Appendix D).

4.15 Further investigation of the previous Greenway alignment has determined that the route would be subject to significant flooding and would require an extensive embankment of between 650mm – 1,000mm, which would come at significant cost (approximately £28m and £34m). It would also present a big impact on the environment as large drainage ditches would be required. It is recognised that the North East Cambridge Area Action Plan had incorporated the original alignment and the revised alignment may have implications for the spatial framework that the local planning authorities will need to consider, but on balance it is considered that continuing with the original alignment would not offer value for money.

4.16 The revised Greenway alignment starts on Cambridge Road in Waterbeach and is routed on an off-carriageway alignment on Cambridgeshire County Council land behind Car Dyke Road. The Greenway then continues across County Council and some third-party land behind the A10 to then connect with Ely Road and Milton Village where it connects with the Jane Coston Bridge and Cowley Road.

4.17 The public consultation would look to include options on the route specifics, for example: the closure of the A10 Ely Road slip (on the basis that the signalisation of

Humphries Way is in place); a quieter route passing through Coles Road; and improvements to the area of Milton Village High Street in front of the shops that address the potential conflict between higher volume of commuter cycling use in an area and pedestrians. The revised route is significantly less prone to flooding.

4.18 Although this specific alignment has not been consulted on, in 2018 the public was asked to comment on 3 options with an option following a route behind Car Dyke Road and the A10, which then routed through Milton village. Public responses on the 3 options demonstrated that a route behind Car Dyke Road and the A10 was the second most supported route of the 3. The main concern about the option was the route being aligned along the A10 which has been taken into consideration when developing the new alignment.

5. Alignment with City Deal Objectives

5.1 The proposed investment is consistent with the deal agreed between Government and Greater Cambridge which allows Greater Cambridge to maintain and grow its status as a prosperous economic area. Specifically, this initiative removes a barrier to new homes and jobs and enables the provision of better greener transport and improved air quality.

5.2 The proposed measures address existing barriers to growth represented by congestion on the A10.

5.3 In addition, the proposals set out in this report will support the realisation of a series of benefits, including:

- Securing the continued economic success of the area through improved access and connectivity;
- Significant improvements to air quality and enhancements to active travel, supporting a healthier population;
- Reducing carbon emissions in line with the partners' zero carbon commitments;
- Promoting place-making in the new Waterbeach development;
- Helping to address social inequalities where poor provision of transport is a contributing factor; and
- Wellbeing and productivity benefits from improving people's journeys to and from employment.

6. Citizen's Assembly

6.1 Citizens' Assembly members developed and prioritised their vision for transport in Greater Cambridge. The range of solutions being considered for Waterbeach to North East Cambridge directly contributes to delivery of 5 of the highest 7 scoring priorities, namely:

- Provide affordable public transport (32).
- Provide fast and reliable public transport (32).
- Be environmental and zero carbon (28).
- Be people centred – prioritising pedestrians and cyclist (26).

- Enable interconnection (e.g. north/south/east/west/urban/rural) (25).

6.2 In addition, the proposals have the potential to complement delivery of the other highest scoring priorities:

- Restrict the city centre to only clean and electric vehicles (27).
- Be managed as one coordinated system (e.g. Transport for Cambridge) (25).

6.3 The Citizens' Assembly voted on a series of measures to reduce congestion, improve air quality and public transport. Of the measures considered, Assembly members voted most strongly in favour of road closures, followed by a series of road charging options (clean air zone, pollution charge and flexible charge). These will be considered further as packages develop.

7. Financial Implications

7.1 High level construction costs associated with the future development of the scheme have been provided within the OBC. The anticipated outturn costs are shown in the table below with values based on 2023 prices, profiled, and inflated in line with the expected construction period. These values currently exclude detail on utilities diversions, and any required flood mitigation works required as a result of the drainage strategy, although anticipated costs for these elements are included within the quantified risk assessment.

Cost Element	**P50 Risk**
Sunk Costs	£1.5M
Design and Consultant Costs (assume 10% of overall scheme costs)	£9.4M
Land Costs	£3.5M
Preliminaries	£18.2M
Traffic Management	£7.7M
Scheme Cost	£51.6M
Overheads / Profit	£7.8M
Quantified Risk	£9.6M
Total	***£109.4M***

7.2 The anticipated capital requirements lie outside range of the current programme budget for the scheme which is currently set at a figure of £52.6M.

7.3 The scheme will support future development along the A10 corridor between Waterbeach New Town and North-East Cambridge and generate the required S106 income assumed in the GCP funding model for its delivery.

7.4 The infrastructure enables major developments on this corridor which has either already been permitted on the condition that this infrastructure is put in place, or else is dependent of this infrastructure for future permission.

Have the resource implications been cleared by Finance? Yes
Name of Financial Officer: Sarah Heywood

8. Next Steps and Milestones

8.1 The current project stage and recommended next steps are as follows.

Figure 4: Current Stage of the Project

8.2 To develop the preliminary designs of both the Busway and the Park and Ride site in order to work towards submitting a Transport and Works Act application, the following activities will be undertaken:

- Detailed three-dimensional design of the busway and park & and ride, including junction designs, bus stop specifications and integration with Milton Park and Ride.
- Detailed work to understand any requirements for utility diversions, and also to develop the detailed drainage strategy for the scheme which will identify any flood mitigation requirements.
- Work to further integrate the proposed scheme with other developments that are proposed in the corridor including Waterbeach Greenway, Mere Way active travel route, the A10, Waterbeach new town, North East Cambridge development (including Cambridge Science Park), and Cambridge Research Park.
- Environmental Impact Assessment, including surveys and associated statutory consultation.

- Preparation of the Transport and Works Act Planning Application and Consents.

8.3 It is anticipated that the scheme will next be presented to the Executive Board for approval in mid 2024.

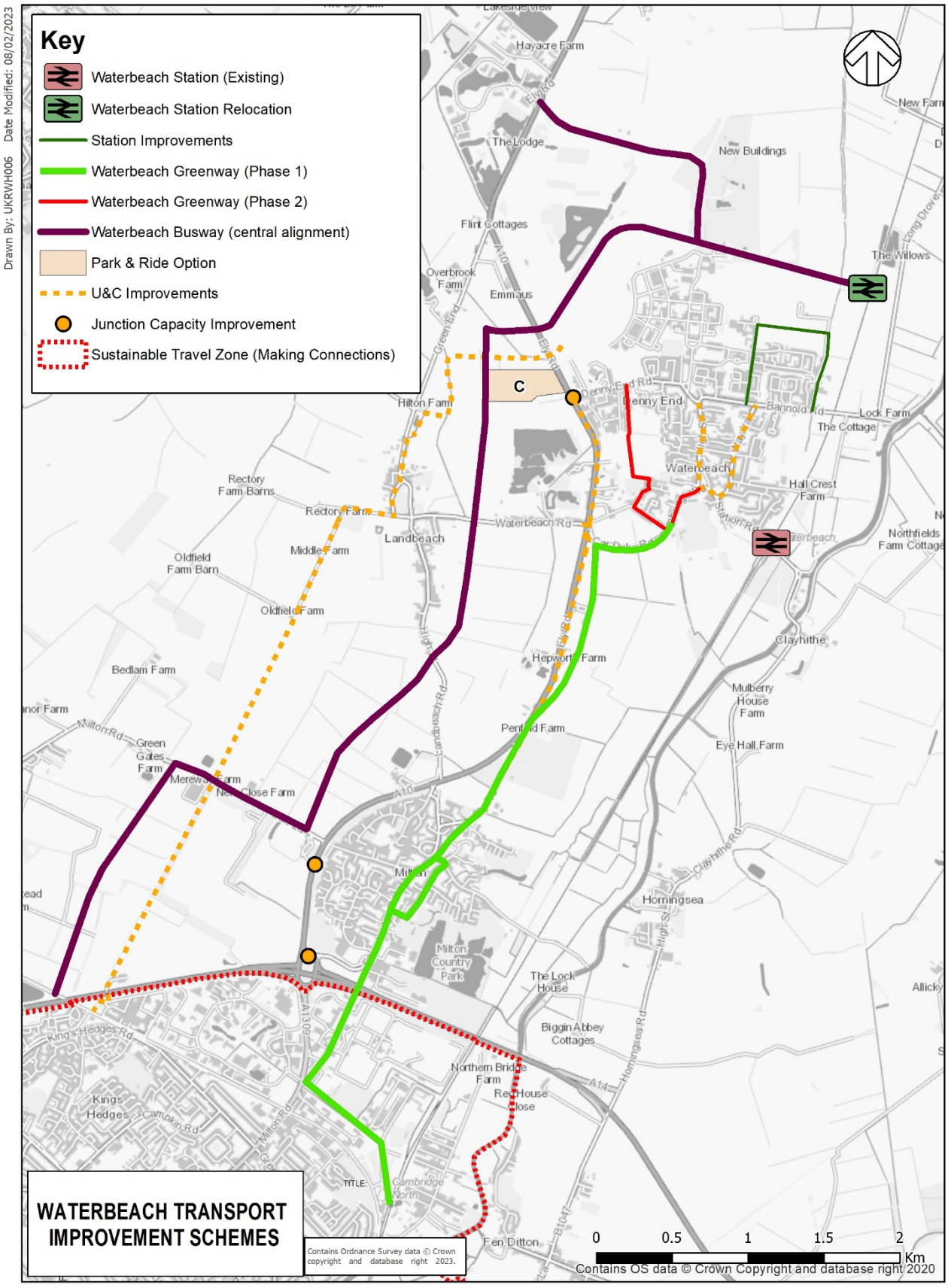
List of Appendices

Appendix A	Proposed transport links for the new town at Waterbeach
Appendix B	Western and Revised Central Route options
Appendix C	Park and Ride options A, B & C
Appendix D	Waterbeach Greenway Revised Alignment

Background Papers

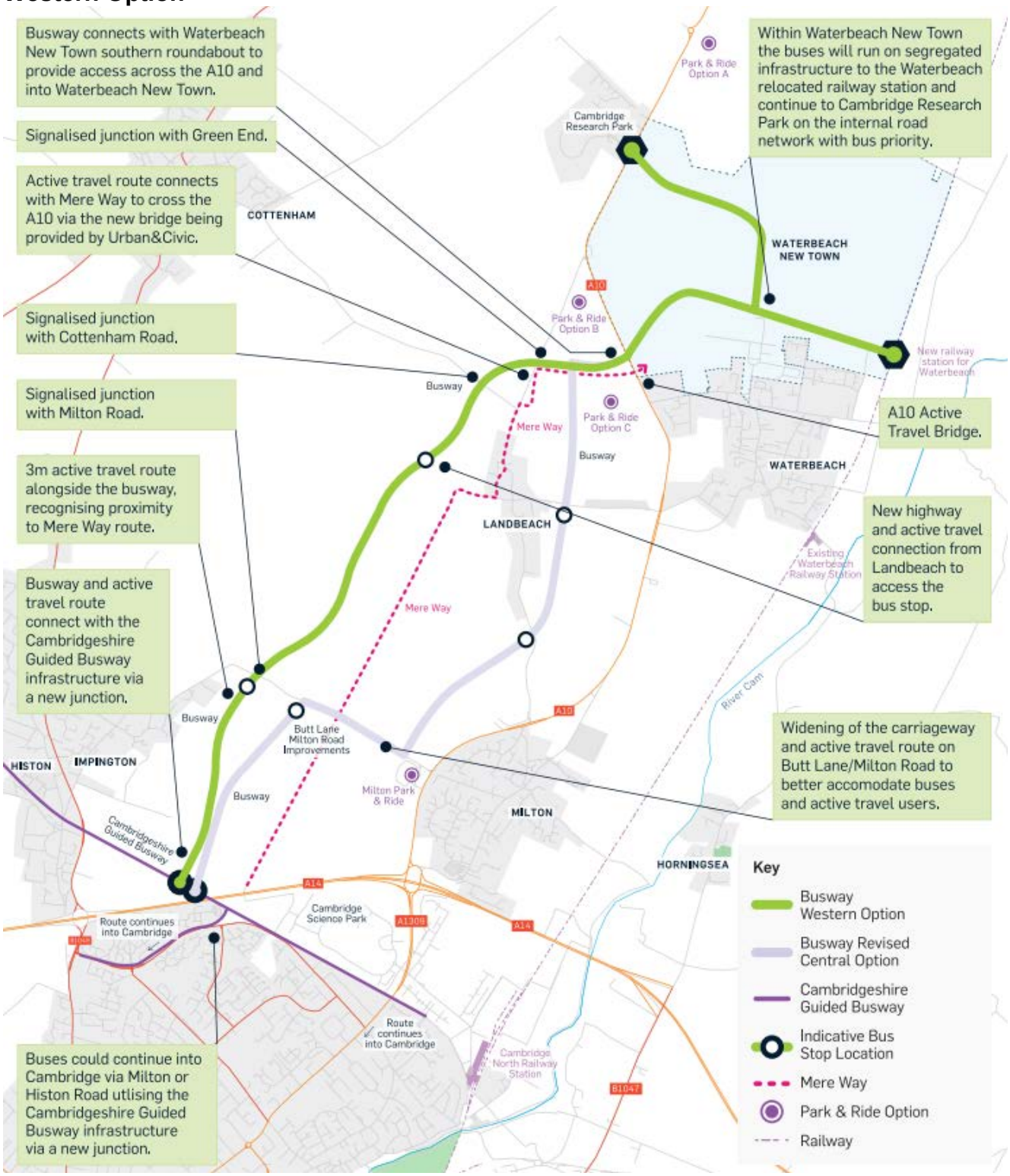
Source Documents	**Location**
Waterbeach to Cambridge Outline Business Case	W2C 2023 Outline Business Case (greatercambridge.org.uk)
Waterbeach to Cambridge Outline Business Case – Executive Summary	W2C 2023 Outline Business Case executive summary (greatercambridge.org.uk)
Waterbeach to Cambridge 2023 Consultation Report	W2C 2023 consultation report (greatercambridge.org.uk)
Waterbeach to Cambridge 2023 Consultation Brochure	GCP (amazonaws.com)
Waterbeach to Cambridge – July 2021 Executive Board Papers	Council and committee meetings - Cambridgeshire County Council > Meetings (cmis.uk.com)
Waterbeach Greenway – February 2020 Executive Board Papers	Council and committee meetings - Cambridgeshire County Council > Meetings (cmis.uk.com)
Waterbeach Greenway – 2018 Consultation Paper	Waterbeach-Greenway-consultation-report-March-2019 (greatercambridge.org.uk)
Waterbeach to Cambridge – October 2020 Executive Board Papers	Council and committee meetings - Cambridgeshire County Council > Meetings (cmis.uk.com)
Ely to Cambridge Transport Study 2018	https://www.greatercambridge.org.uk/asset-library/Transport/Transport-Projects/Waterbeach-to-Cambridge/18-01-05-Ely-to-Cambridge-Transport-Study-PSOBC-1.0.pdf
Citizens Assembly Report	\\ccc.cambridgeshire.gov.uk\data\Et Shared\City Deal\Programme Team\Wilma\Governance Matters\Executive Board\3-Executive Board Agenda Papers\2020\2020-06-25\4-Final Versions\PDFs\11b-Citizens Assembly-Appendix.pdf

Appendix A - Proposed transport links for the new town at Waterbeach

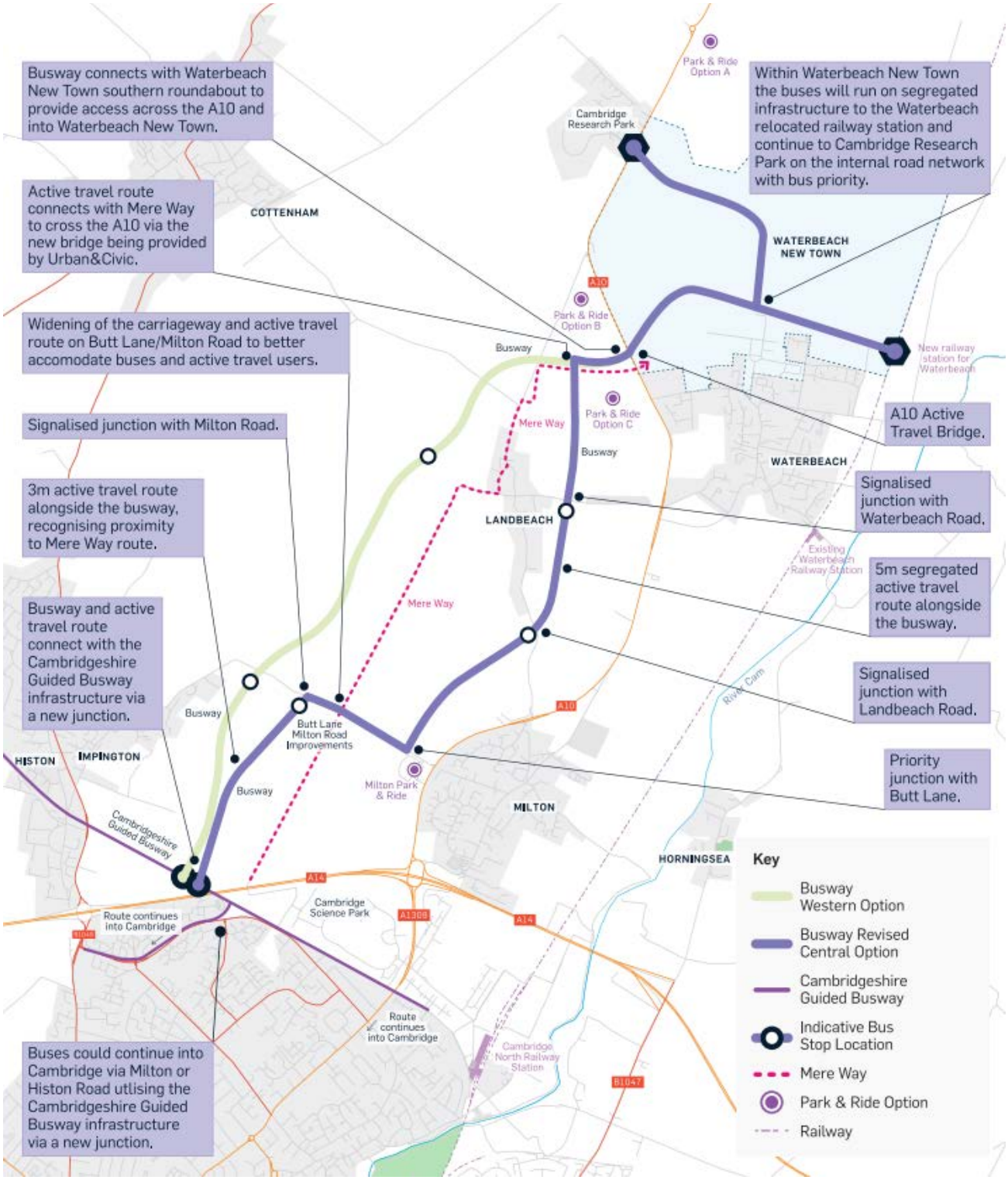


Appendix B – Western and Revised Central Route Options

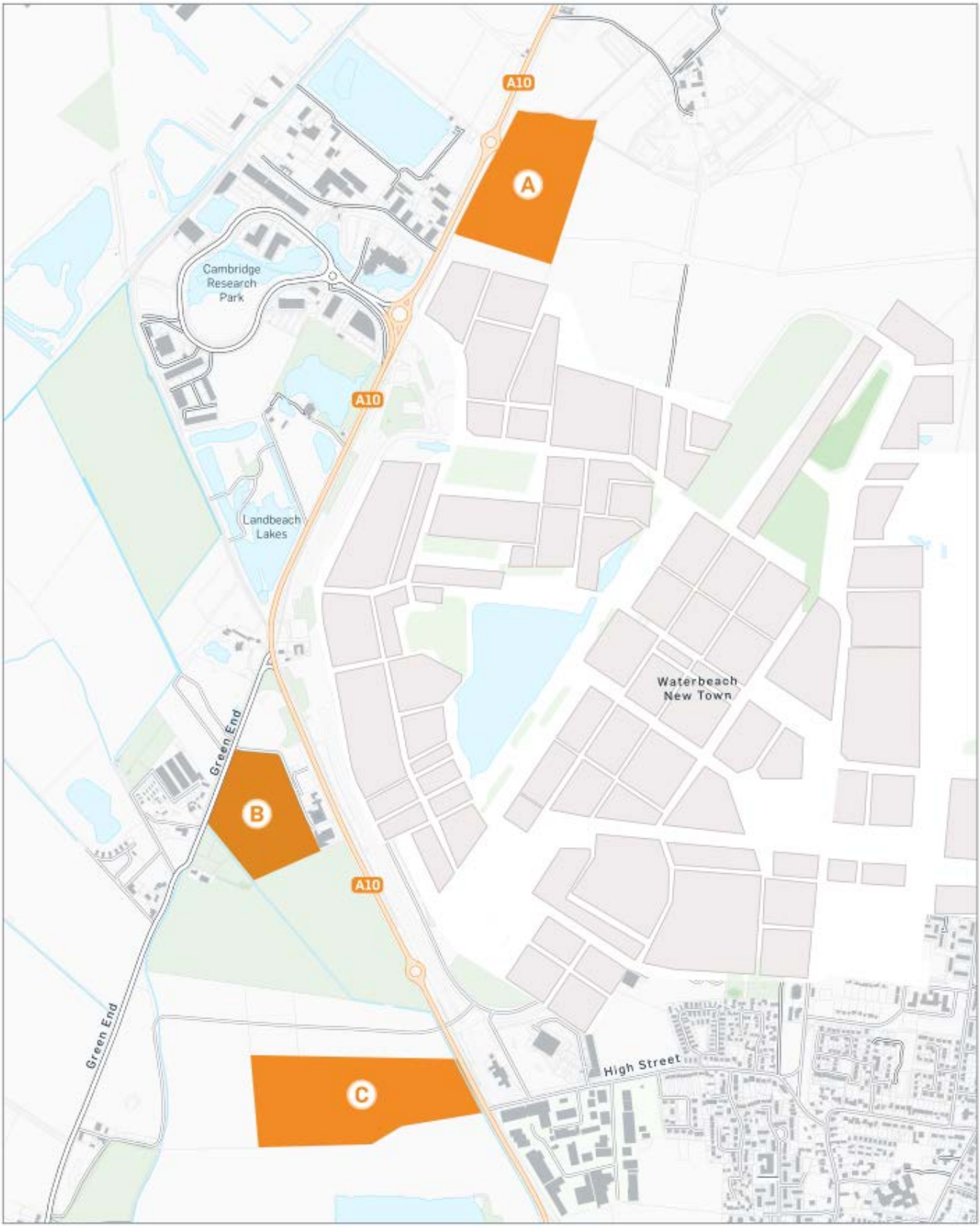
Western Option



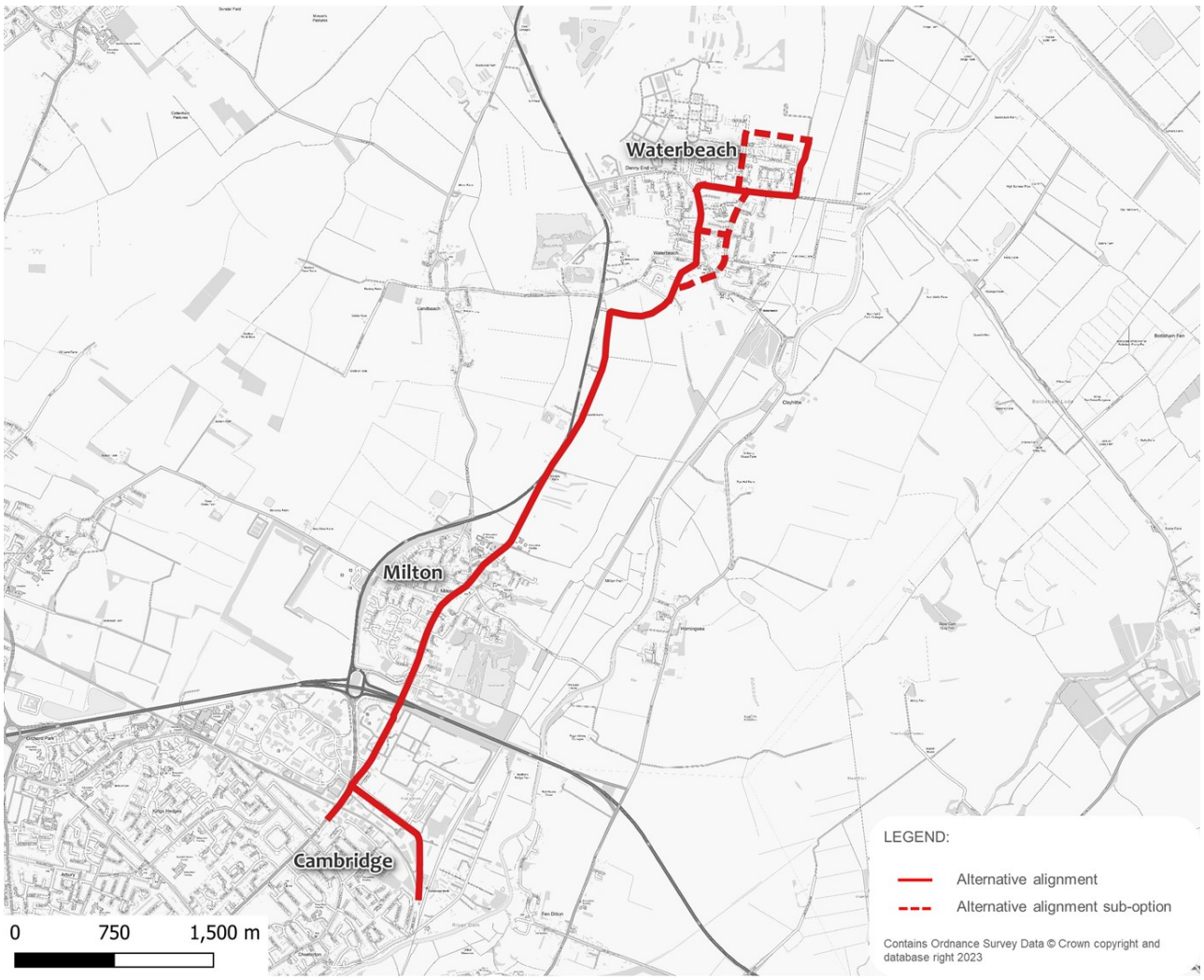
Revised Central Option



Appendix C – Park and Ride Options



Appendix D – Waterbeach Greenway Alignment



Agenda Item No: 10

Better Public Transport - Cambridge Eastern Access Project

Report to: Greater Cambridge Partnership Joint Assembly

Date 7th September 2023

Lead Officer: Peter Blake, Transport Director, GCP

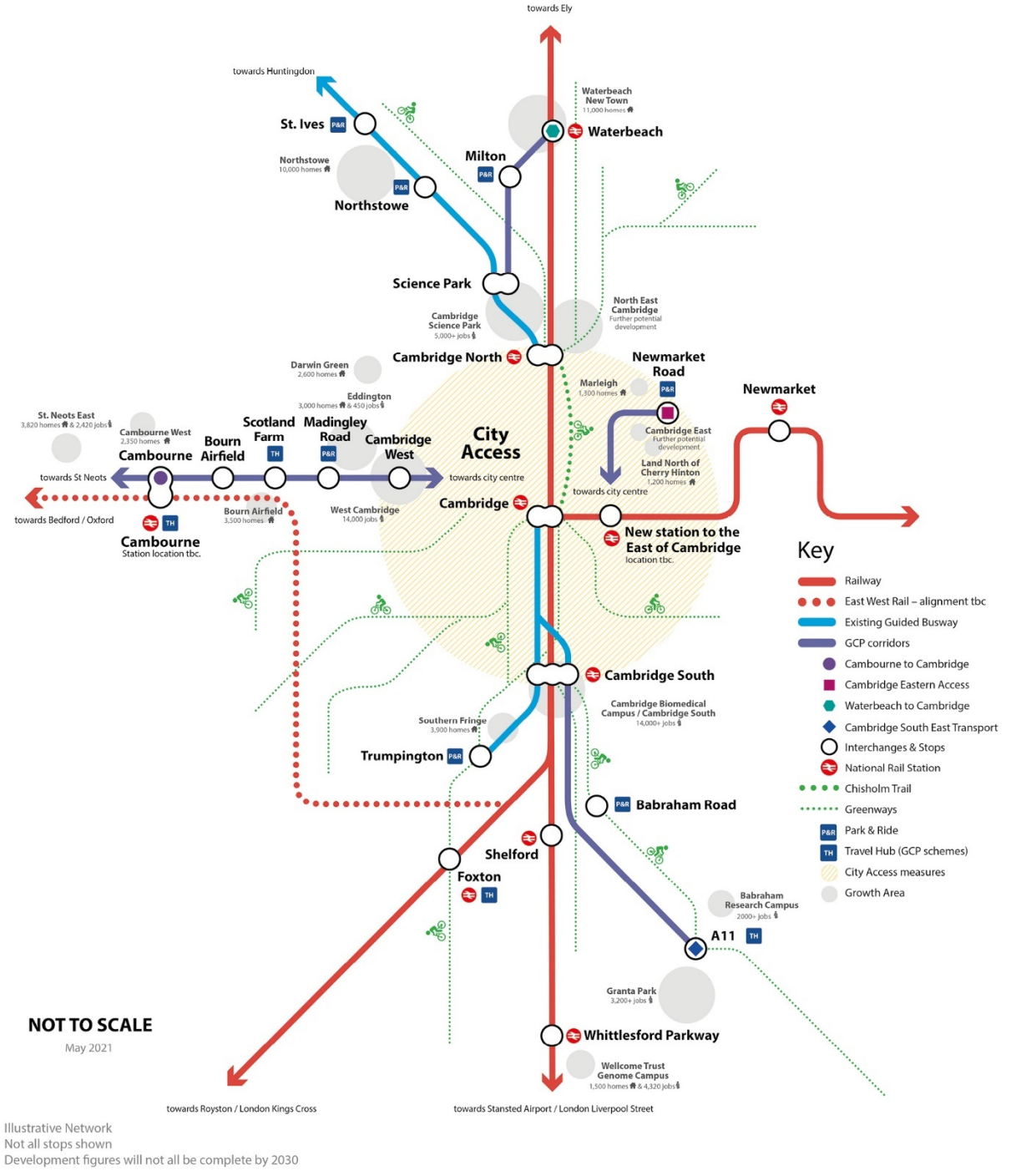
1. Background

1.1 The Cambridge Eastern Access (CEA) project is looking at access to and from the city from the east to enable people to get around more easily by public transport, cycle or on foot. It is one of four corridor schemes that form a key part of the Greater Cambridge Partnership's (GCP's) sustainable transport programme. As the delivery body for the Greater Cambridge City Deal, the GCP is delivering a comprehensive programme of sustainable transport initiatives, working with local authority partners to create a comprehensive transport network that can meet the needs of the area now and into the future.

1.2 The GCP programme has been developed using an extensive evidence base and is designed to support sustainable economic growth and the accelerated delivery of the Local Plan, as well as enabling a broader transformation in the way Greater Cambridge moves and travels; supporting the transition to zero carbon and creating a more inclusive economy. The GCP's vision for a future travel network is particularly important in achieving a green recovery from Covid-19, with sustainable transport options vital to enable communities to access work, study and other opportunities the city-region has to offer.

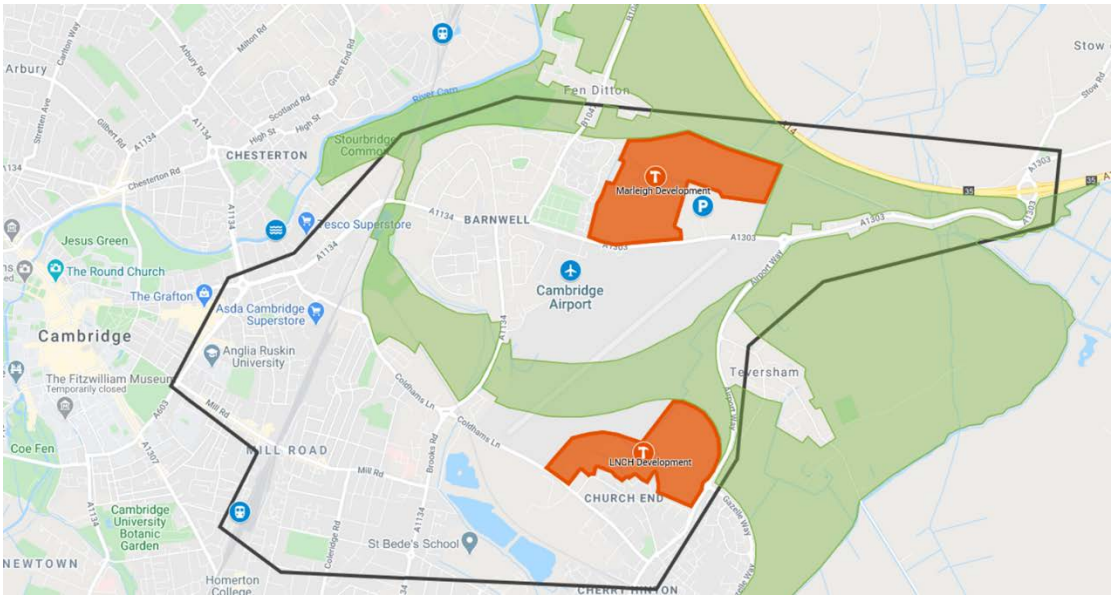
1.3 To create a more sustainable network for the future, reduce congestion, improve air quality and reduce carbon emissions, significantly more people need to travel by public transport, cycling and walking with significantly fewer people travelling by car. Figure 1 sets out the future sustainable transport network for Greater Cambridge and how this will be substantially enhanced over the next decade, forming a cohesive network throughout Greater Cambridge and further afield.

Figure 1



1.4 The Cambridge Eastern Access study area, for the purposes of pre-engagement, was defined as shown in the map below. It is bounded in the north by Newmarket Road, and to the east by Airport Way, although extending along Newmarket Road to the Quy Interchange. To the west the study area extends as far as the Railway Station, whilst to the south it extends past Mill Road.

Figure 2



1.5 In October 2020 the Executive Board considered the Options Appraisal Report and the findings of a pre-engagement exercise and approved public consultation on a series of options in order to inform the preparation of a Strategic Outline Business Case.

1.6 In July 2021 the Board approved the report on the consultation and SOBC and agreed that work should be undertaken on an Outline Business Case (OBC) for Phase A, online improvements on Newmarket Road. The consultation report on options for Cambridge Eastern Access indicated strong support for the scheme and no over-riding preferences between options. The Board also agreed that further work should be undertaken on future Park and Ride options in the area, and on Phase B, future options for the wider corridor.

1.7 In September 2022, the Board approved the OBC for Newmarket Road Phase A, noted the preference for option P1 for the Park and Ride, subject to production of an OBC and associated consultation, which it requested should retain a choice of options, and approved further consultation on both the Newmarket Road Phase A and the Park & Ride proposals.

1.8 An OBC has now been produced for the Park and Ride and further consultation on both of the above was undertaken in early 2023. Those activities inform this report to the Joint Assembly and the subsequent report to the Executive Board

2. Issues for Discussion

Phase A Issues

2.1 The OBC for Phase A Cambridge Eastern Access has been prepared and has been previously reviewed by the Joint Assembly. The OBC for the Park and Ride supports this paper. The Newmarket Road is the main radial route into Cambridge from the east and is congested, but space constrained. It provides a poor experience for all road users, and is unattractive to active travel modes. The

existing Park and Ride on the corridor is located close to the city centre, on a leased site, with the land owner having the right to terminate the lease from 2026 onwards. As such, and on the basis of the previous consultations, the proposals would prioritise improvements to active travel and public realm along Newmarket Road, and creation of a new Park and Ride site to serve the corridor in the longer term.

2.2 The consultation undertaken earlier this year, which is documented in a Background Paper to this paper, showed a reduction in support compared to previous consultations. In the initial consultation in winter 2020, 79% of respondents indicating that they supported the general proposal to improve public transport and associated travel routes into Cambridge from the east.

2.3 In the winter 2021 consultation respondents remained supportive of all three of the options for the Newmarket Road improvement proposals, both options for the Elizabeth Way Roundabout proposals and both options for the Barnwell Road proposals. While concerns were raised about the relocation of the Newmarket Park & Ride there was no clear level of opposition or support to the proposed relocation, with over two fifths of respondents having ‘no opinion’.

2.4 Overall, support for the scheme was markedly lower than for earlier consultations. A solid core of responses objected to every aspect of the scheme. Many responses were from areas well away from the study area.

2.5 Postcode analysis of the responses showed varying trends in the level of support for the proposals on Newmarket Road. Within the postcode areas containing Newmarket Road (Cambridge East, CB5 and the bordering CB25 in the North-East), the level of support was higher than the level of opposition. Support levels were also higher than opposition in CB1 (Central, South Cambridge).

2.6 The greatest level of opposition versus support was expressed by respondents in postcodes in Cambridge West and North-West (CB2 and CB3) as well as postcodes outside of Cambridge city centre (CB22, CB23 and CB24).

2.7 Phase A should be considered in 3 sections:

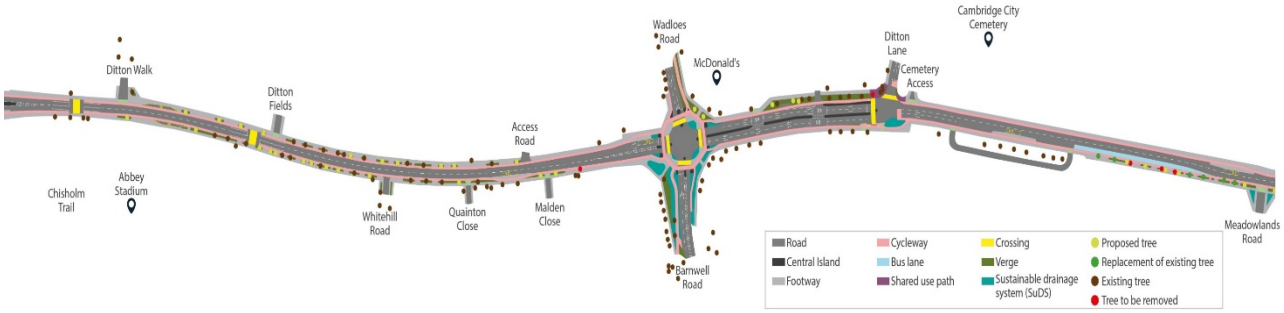
- Phase A1 - Coldhams Brook to Meadowlands
- Phase A2 - Meadowlands to Airport Way
- Phase A3 - Elizabeth Way to Coldhams Brook

2.8 The proposals for each section would create continuous LTN 1/20 compliant routes for pedestrians and cyclists along Newmarket Road, together with Cyclops junctions at Barnwell Road and Elizabeth Way. Where space permits, and it would be beneficial to do so, bus lanes would also be provided, but the ability to provide these is restricted by the strong concerns of residents that trees along Newmarket Road should be retained wherever possible. A specialist arboricultural survey has been undertaken to ensure that tree which are either protected by TPO or deemed to be of ecological value should be preserved wherever possible. Floating Bus stops consistent with current Government guidance will be provided: mini-Zebras, raised pavements and tactile paving will be applied in order to address concerns about pedestrian safety.

2.9 Plans showing each section are included below, but can be found in larger format in the consultation brochure which is included as a Background Paper to this report.

Phase A1 Coldhams Brook to Meadowlands

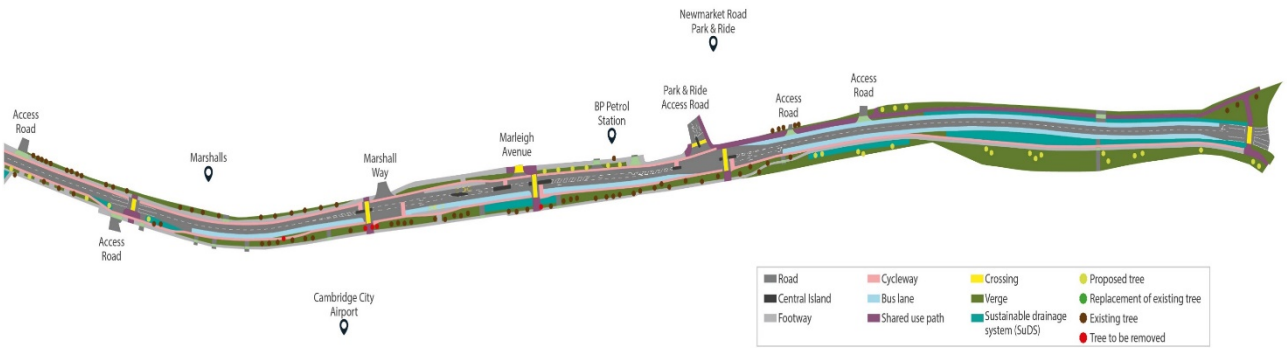
2.10 This section, which includes the Barnwell Road roundabout, is considered to be a priority because it complements the proposals for regeneration of East Barnwell. In particular, it overcomes the severance that the Newmarket Road currently creates, and the challenges of the roundabout for non-motorised users which are exacerbated by traffic accessing the adjacent drive-through McDonalds. Whilst the issues associated with McDonalds cannot be eliminated, provision of signal control NMU crossing will contribute greatly to safety. There is a degree of urgency to co-ordinate works with the East Barnwell works in order to ensure connectivity and minimise disruption to residents and travellers.



2.11 The proposed improvement would extend from the start of the Marleigh site to Coldhams Brook where it would connect to the Chisholm Trail to ensure connectivity with other active travel infrastructure.

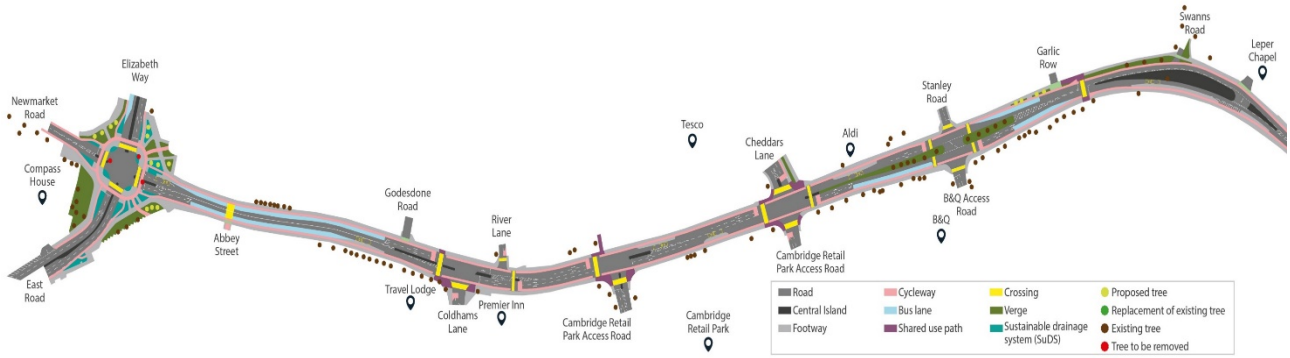
Phase A2 - Meadowlands to Airport Way

2.12 This section of the Newmarket Road connects Airport Way, and the proposed P1 Park and Ride site, past the existing Park and Ride and the Marleigh site, as well as the potential Airport development site, to the Coldhams Brook to Meadowlands section. As such the requirement for this section is less urgent, but as the population of this section of Newmarket Road grows, so does the imperative to ensure that active travel is a priority from the start. The costs of this section are partly offset by Section 106 contribution from Marleigh, and the GCP are working with Cambridgeshire County Council as the highway authority, to co-ordinate infrastructure provision for this section.



Phase A3 from Elizabeth Way to Coldhams Brook

2.13 The infilling of Elizabeth Way has led to a wide variety of reactions. Some respondents are positive, citing the poor urban environment and perceived personal security both around the roundabout and in the underpasses. Others are attached to the structure and prefer the full segregation from traffic that it affords. Some responses are more focused on the impact on traffic of the proposed changes. Given the uncertainty associated with the Grafton Centre and Beehive Centre, it is proposed to pause this element. A wider strategy for the area is required when greater certainty exists over the Grafton and Beehive developments.



Park and Ride Issues

2.14 An OBC for the Park and Ride has now been produced. As requested by the Joint Assembly in September 2022, this work, and the spring 2023 consultation, revisited the site selection process but confirmed that site P1 from the previous consultation remains the most appropriate choice.

Figure 7: Shortlisted Park and Ride sites

2.15 A detailed optioneering process is outlined in full in the OBC and its supporting annexes. This started with a review of all sites meeting some general criteria and the elimination of those deemed undeliverable on the basis of a first sift. 5 shortlisted sites were then reviewed in greater detail and also included in the 2023 consultation as alternatives. The recommended site P1 is the site consistent with 2014 Transport Strategy for Cambridge and South Cambridgeshire, and the most popular in the recent consultation. Other headline issues to note include the following:

- Sites P2 and P3 are closer to Wilbraham Fen SSSI which is a sensitive area which should be avoided.
- Site P1 is contained within an existing hedgeline so benefits from being screened by existing vegetation.
- Site P10 would challenging to construct and manage given drainage issues from narrow site located between 2 major roads. Whilst a pumped drainage system is achievable, it is highly undesirable as a solution.
- P11 has greater proximity to heritage in and around Stow cum Quy.
- P10/11 are undesirable in operational terms as buses would need to cross Quy interchange in either direction, exacerbating much longer running times.
- P10/11 would also be much less attractive for Park and Cycle usage which could be expected to increase as the Marshalls site evolves.
- As noted previously, there was much stronger support for P1 than alternative sites amongst those expressing a preference at consultation.

2.16 Recognising the connectivity challenges with the villages to the north and east of the A14, as part of the development of the proposed Park & Ride site, officers will explore the opportunities to connect the villages with the proposed Park & Ride site by bus, walking & cycling.

Busway Issues

2.17 As indicated above, the physical constraints on Newmarket Road mean that high quality public transport cannot be provided alongside other road users, and the long term strategy would be a new busway from the Park and Ride towards the City Centre. Work on a future busway is proceeding but is linked to the progress of the redevelopment of the Marshalls site along the corridor. Further development is dependent on the allocation of the site in the forthcoming Greater Cambridge Local Plan. GCP will continue to engage with Marshalls, GCSP and the County Council to ensure that the busway is developed to provide a longer term solution for the corridor along with complementary sustainable travel solutions to ensure that the development proceeds in an appropriate manner..

Heavy Rail Issues

2.18 The recent Route Update for East West Rail included the announcement of a statutory consultation for the section from Bedford to Cambridge. This would follow a southern route into Cambridge which means that it remains possible for services to continue along the Cambridge to Newmarket Railway line. GCP will continue to engage with Network Rail and other stakeholders to explore the options for the longer term.

3. Consultation and Engagement

3.1 A report on the 2023 consultation accompanies this report and is discussed above.

The key changes that are being proposed following the public engagement are set out below.

Key Issues	Responses Received	Action Taken / Justification
Junction Improvements	• The majority of respondents, 62%, (522 of 836) did not support the proposals for the Elizabeth Way roundabout. Around a third, 32%, of respondents (267 of 836) support the proposals for the Elizabeth Way roundabout. The remaining 6% (47 of 836) did not have an opinion on the proposed change.	• Elizabeth Way proposals now paused. The options will be reviewed further once there is clarity on likely future traffic movements in the area.
Crossing Improvements	• The majority of respondents did not support the consolidation of the Abbey Street Toucan Crossing into the Elizabeth Way Junction, and under a third of respondents supported the replacement of the crossing.	• Abbey Street and Garlic Row proposals paused whilst wider changes in the area are assessed. These will be revisited as part of wider consideration of the western end of the scheme
Bus Improvements	• The majority of respondents did not support any of the bus stop changes and 34% of respondents supported some or all of the proposed bus stop changes. • Most respondents did not support any of the proposed changes to the bus lanes, and 35% of respondents supported some or all the proposed bus lane changes. • Some concerns were raised with regards to Floating Bus Stops	• Details of bus improvements will be revisited at detailed design for the sections being taken forward • Issues regarding Floating Bus Stops will be addressed at detailed design including the use of min-Zebras, raised pavements and tactile paving in line with Guidance
Park and Ride	• Detailed comments were made on matters such as general active travel connectivity, as well as links to Teversham specifically	• As plans progress, consultation comments will be reviewed and inform the designs taken forward for the planning application.

Response from the public engagement with no action proposed are set out below.

Key Issues	Responses Received	Action Taken / Justification
Junction Improvements	• The majority of respondents 56% (470 of 832) did not support the proposals for the Barnwell Road junction. Over a third, 36%, of respondents (298 of 832) supported the proposals for the Barnwell Road junction. The remaining 8% (64 of 832) did not have an opinion on the proposed change.	• Barnwell Road proposals to be taken forward as being integral to wider East Barnwell Regeneration Plan, and addressing longstanding concerns about safety in the area
Crossing Improvements	• A third of respondents, 33%, (272 of 825) supported a new Toucan Crossing at Garlic Row and Airport Way. 43%, (355 of 825) did not support either of the new proposed crossing locations. The number of respondents who supported having one or both new crossings was 42% (339 of 825). The remaining 16% (131 of 825) had no opinion.	• Airport Way Toucan Crossing to be advanced to enable connectivity to proposed Park and Ride
Cycling Improvements	• The majority of respondents did not support the introduction of segregated cycleways, 53%, (446 of 833) and under half of the respondents, 42%, (347 of 833) supported them.	• Cycle improvements are consistent with adopted road user hierarchy, and were part of package positively received in previous consultations.
Park and Ride	• The highest proportion of responses, 46%, (378 of 829) was that the respondent did not support the expansion and relocation of the Park and Ride. Just over a third, 34% (281 of 829) supported the expansion and relocation of the Newmarket Road Park and Ride.	• The current Park and Ride site, located too close to the city centre, is leased, with the landowner having an option to terminate in a few years, a new, larger, site is needed

4. Emerging Recommendations

4.1 The Joint Assembly is asked to comment on the recommendations likely to be presented to the Executive Board, including:

a) the outcomes of the recent consultation on Newmarket Road and the Park and Ride.
b) the Outline Business Case for the new Newmarket Road Park and Ride proposals.

c) progressing the Eastern Access Phase 1 works along Newmarket Road, from the Chisholm Trail to Airport Way to detailed design stage.
d) pausing the scheme around Elizabeth roundabout to allow for the development of a wider strategy for the area reflecting the emerging Grafton and Beehive developments.
e) the preferred option for the new Newmarket Road Park and Ride and the preparation of a planning application.
f) Noting the budget for the scheme of £58,472,000.

5 Alignment with City Deal Objectives

5.1 The proposed investment is consistent with the deal agreed between Government and Greater Cambridge which allows Greater Cambridge to maintain and grow its status as a prosperous economic area. Specifically, this initiative removes a barrier to new homes and jobs and enables the provision of better greener transport and improved air quality.

5.2 Phase A proposed measures address existing barriers to growth represented by congestion on the Newmarket Road. Phase B improvements relate directly to growth by unlocking the Marshalls site for development and provision of housing and jobs.

5.3 In addition, the proposals set out in this report will support the realisation of a series of benefits, including:

- Securing the continued economic success of the area through improved access and connectivity;
- Significant improvements to air quality and enhancements to active travel, supporting a healthier population;
- Reducing carbon emissions in line with the partners' zero carbon commitments;
- Helping to address social inequalities where poor provision of transport is a contributing factor; and
- Wellbeing and productivity benefits from improving people's journeys to and from employment.

6. Citizen's Assembly

6.1 Citizens' Assembly members developed and prioritised their vision for transport in Greater Cambridge. The range of solutions being considered for CEA directly contributes to delivery of 5 of the highest 7 scoring priorities, namely:

- Provide affordable public transport (32).
- Provide fast and reliable public transport (32).
- Be environmental and zero carbon (28).
- Be people centred – prioritising pedestrians and cyclist (26).
- Enable interconnection (e.g. north/south/east/west/urban/rural) (25).

6.2 In addition, CEA has the potential to complement delivery of the other highest scoring priorities:

- Restrict the city centre to only clean and electric vehicles (27).
- Be managed as one coordinated system (e.g. Transport for Cambridge) (25).

6.3 The Citizens' Assembly voted on a series of measures to reduce congestion, improve air quality and public transport. Of the measures considered, Assembly members voted most strongly in favour of road closures, followed by a series of road charging options (clean air zone, pollution charge and flexible charge). These will be considered further as packages develop.

7. Financial Implications

7.1 There are no implications relating to this round of decision-making. Broadly speaking the removal of the Elizabeth Way section of Newmarket Road helps to keep the project aligned with the original budget as reviewed in the Programme Prioritisation exercise.

7.2 It should be noted that the infrastructure is to enable development on this corridor and will be forward funded by GCP but will be funded, in part, from current and future developer contributions. The proposed infrastructure enables major developments on this corridor which would not have been permitted, or likely to be permitted without the infrastructure.

Have the resource implications been cleared by Finance? Yes
Name of Financial Officer: Sarah Heywood

8. Next Steps and Milestones

8.1 The following activities are proposed.

- Phase A: Newmarket Road. The proposed next steps would be to develop the detailed design for Coldhams Brook to Meadowlands, and on to Airport Way to be brought back to the Assembly and Executive Board. The Elizabeth Way to Coldhams Brook section will be paused whilst wider travel demand in the area is understood better and the implications of changes to Elizabeth Way can be considered in that context.

- Phase A: Newmarket Road Park and Ride. The proposed next steps would be to further develop the proposal for the new Park and Ride on site P1 with the development of a detailed design and planning application.

- Phase B: High Quality Public Transport Scheme. The next steps for this are dependent on the development of the draft Local Plan and a decision whether or not to recommend further allocations along the corridor. The formal indication on this decision is expected later in 2023 with the publication of a Regulation 18 Draft Plan for consultation.

- Phase B: Longer term rail Improvements. A route update for the section of East West Rail west of Cambridge was published in summer 2023. It is recommended that GCP continue to work with East West Mainline Partnership, Network Rail and other partners to promote improvement to the corridor.

Background Papers

Source Documents	Location
Consultation Report	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Public-Transport/Cambridge-Eastern-Access/Board-papers-0923/CEA-phase-1-report-v1.2-final.pdf
Outline Business Case for Park and Ride Main Report	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Public-Transport/Cambridge-Eastern-Access/Board-papers-0923/Newmarket-Road-PR-OBC-20230209-exc-app.pdf
Outline Business Case for Park and Ride Appendices	www.greatercambridge.org.uk/asset-library/Sustainable-Transport/Public-Transport/Cambridge-Eastern-Access/Board-papers-0923/Newmarket-Road-PR-OBC-20230209-appendices-only.pdf
Consultation Brochure	greatercambridge.org.uk/asset-library/Sustainable-Transport/Public-Transport/Cambridge-Eastern-Access/CEA-Consultation-Brochure-2023.pdf

Agenda Item No. 11

Quarterly Progress Report

Report to: Greater Cambridge Partnership Joint Assembly

Date: 7th September 2023

Lead Officer: Rachel Stoppard – Chief Executive, GCP

1. Background

1.1 The Quarterly Progress Report updates the Joint Assembly on progress across the Greater Cambridge Partnership (GCP) programme.

1.2 The Joint Assembly is invited to consider the progress to be presented to the Executive Board and in particular:

(a) Note the update on the future maintenance of the GCP Active Travel infrastructure;

(b) Note the recommendation to support an £80k contribution to funding of the City Council's secure cycle parking scheme at Queen Anne Terrace car park;

(c) Note the request to approve fast tracking of the Detailed Design for the Addenbrooke's Roundabout section from the A1134 Cycling Plus scheme;

(d) Note the update to the GCP Assurance Framework (Appendix 9).

2. 2023/24 Programme Finance Overview

2.1 The table below gives an overview of the 2023/24 budget and spend as of June 2023.

Funding Type	*2023/24 Budget (£000)	Expenditure to Jun 2023 (£000)	2023/24 Forecast Outturn (£000)	2023/24 Forecast Variance (£000)	Current Status**
Infrastructure Programme Operations Budget	47,286	6,056	51,157	+3,871	G

Please note:

* *2023/24 Budget now accounts for year-end actuals for the 2022/23 financial year so may differ slightly to the allocations agreed at the March 2023 Executive Board depending on whether accelerated spend occurred last year.*

** *RAG explanations are at the end of this report. As part of an officer led review the RAG explanations have been revised to ensure continued accuracy as spend significantly increases. Forecast spend remains well within expected tolerance levels over the whole programme given such significant scale.*

3. GCP Programme – Strategic Overview

3.1 This section of the paper provides the updated context in terms of the economy, providing an overview of the economic landscape in which the City Deal is being delivered, setting out how the City Deal continues to be a critical element of delivery of sustainable economic growth and successful delivery of statutory documents such as the Local Plan and the Local Transport and Connectivity Plan. Without the successful delivery of the City Deal, the aims and objectives of these plans would not be met.

3.2 The current business environment makes it important to have timely data on employment changes. Cambridge University's Centre for Business Research (CBR) examined the performance of businesses that are based around the Cambridge City Region (20 miles radius around Cambridge). CBR use their annual corporate database of all businesses based in the wider region to do this, sampling companies representing 63% of corporate employment in Greater Cambridge.

3.3 The latest update covers the accounting year ending between May 2022 and December 2022 (the median year end is mid-October 2022). This median period captures the impact of recent and ongoing geopolitical issues as well as the recovery from Covid. Comparing this period with the previous year is useful, as the previous year covered the second and third Covid lockdowns and the transition out of them.

3.4 A summary of the recent analysis is presented in the Economy and Environment Workstream report (Appendix 5) and shows that corporate employment growth in the Greater Cambridge area is continuing to recover from the effects of the pandemic despite the ongoing geopolitical unrest.

3.5 The strong performance of the Greater Cambridge corporate economy during 2021- was driven by a buoyant knowledge intensive economy and overall employment growth also benefited from the robust performance of non-knowledge intensive sectors, pointing to continued recovery amongst sectors that were severely hit by lockdowns and other Covid related restrictions.

3.6 In previous updates, there were some concerns over the pace of the recovery from Covid and continued disruption on both supply and demand resulting in the cost-of-living crisis. However, overall, the CBR results tell a story of strong corporate resilience during a turbulent period. Ongoing analysis from the CBR will assess with this resilience continues as inflation continues to grow, or whether sectors start to plateau or stagnate.

Gateway Review Update

3.7 GCP are now well underway with the next Gateway Review process which seeks to evaluate the GCP City Deal programme to determine the extent it has achieved attributable economic growth as a result of the progress the projects have made.

3.8 As previously reported GCP carried out a robust competitive tendering exercise to appoint a consultant; SQW, to assist with the full gateway review process. The development and submission of the Local Evaluation Framework (LEF) was the first step in a comprehensive and robust 2-year process which concludes in the submission of a final report in the Autumn of 2024.

3.9 Local Evaluation Framework

The Gateway review process has two key parts; the completion of the LEF and then the implementation of the evaluation itself. The GCP Local Evaluation Framework sets out in detail the proposed methodologies for evaluating project impact and progress in line with the National Evaluation Framework which will form the evidence for the Gateway review.

3.10 GCP were the first of the cohort 1 areas to submit their Local Evaluation Framework, and the feedback from the Independent Evaluation Panel (IEP) was very good. As a result of the GCP submitting strong early drafts, the area was used as a best example case study for cohort 2 areas.

3.11 Evaluation Evidence

Following the successful submission of the LEF, the GCP and SQW team have been gathering evidence of progress and impact of all the projects. This includes the provision of logic models and management information of each project, as well as interviews with the project managers and programme team. Additional primary evidence is being gathered from users of the Chisholm Trail as well as secondary evidence from the Skills (phase 1) and Histon Road projects. Once the evidence is fully gathered, analysed and synthesised into evidence papers these will be supplied to the Independent Evaluation Panel to enable them to draft the mid-term report which will be submitted to DLUHC.

3.12 The priority at this stage of work is the gathering of the evaluation evidence to complete the various evidence papers for submission to the Independent Evaluation Panel. However, the GCP team have commenced other programme level evaluation activities, including a review of the sensors supporting the monitoring of air quality, programme wide analysis of Biodiversity net gain and a map showing the connectivity of both places and assets (such as green spaces, community facilities and schools) as a result of our schemes. The results of this work will feed into the final and complementary reports.

3.13 Multiple City Deal areas are underway with their gateway reviews. To ensure that the Independent Evaluation Panel and therefore DLUHC receive evidence and reports in a systematic and structured way, templates are provided to all areas. Unfortunately, due to some delays in the DLUHC sign off and distribution of these, cohort 1 areas are subsequently delayed in the completion of this stage of work. As such, the submission of the evidence papers and therefore the development of the mid-term report is likely to conclude by October 2023, one month behind the previously reported deadline.

3.14 The Gateway Review deadlines are as follows:

- Submission of the Local Evaluation Framework – May 2023 (complete);
- Mid-term report – October 2023;
- Final and complementary reports – Autumn 2024.

Cambridge 2040

3.15 As referred to in the FIS paper (item 7 on this agenda) in July this year, the Secretary of State for Levelling Up, Housing and Communities announced ambitions for 'Supercharging Europe's science capital' with a vision to be brought forward for Cambridge in 2040 (link). GCP officers are working with colleagues across the Partnership to understand what opportunities this might provide for the meeting the infrastructure needs of Greater Cambridge and supporting the delivery of the Local Plan – but at a minimum reinforces the need for the ambitions of the City Deal to be delivered. As the FIS paper sets out, officers will be exploring any potential opportunities in the context of the FIS prioritisation recommendations.

4. Workstream Updates

4.1 This section includes key updates on progress, delivery and achievements across the GCP programme in the last quarter. Full reports for each workstream are attached to this report (Appendix 1-Appendix 5).

Transport

4.2 Over the last quarter, progress has continued across the Transport programme. This has included continued construction on CSETS Phase 1 with Bartlow Roundabout underway and continued construction on Milton Road. In addition, work on the Horningsea Greenway began in August. Public engagement has also been completed on the Fulbourn Greenway and the Grantchester section of the Haslingfield Greenway.

4.3 In the next quarter progress is expected across the Transport programme. This will include continued construction for the Milton Road and CSETS Phase 1 projects. Construction of works on the Haslingfield and Comberton Greenways will also begin. These will be works within the Highway Boundary.

4.4 The full workstream report for Transport, including tables outlining delivery and spend information, is available at Appendix 1.

4.5 This quarter's report asks Joint Assembly to consider several Transport related notes/recommendations, as set out in the following paragraphs.

4.6 **Maintenance**

4.7 Background
When the City Deal was signed, there were no specific provisions for ongoing maintenance of highway assets (in common with other City Deals across the country). Rather, there was the assumption that the highway authority (Cambridgeshire County Council) would assume responsibility for the future maintenance and upkeep of delivered schemes at public expense and it is accepted

that by assuming responsibility for these highway assets, a financial burden will be placed on the County Council for their ongoing maintenance.

4.8 Commuted Sums Policy

The County Council has considered the issue of commuted sums for highways maintenance twice in recent years. In January 2021 the Highways and Transport Committee approved the principle of commuted sums being levied for highway schemes, including for schemes delivered by the Greater Cambridge Partnership (GCP) and the Cambridgeshire and Peterborough Combined Authority (CPCA). The County Council would use the provisions of the Highways Act 1980 to collect contributions. At the same time, the Committee acknowledged that where the scheme improves the existing highway asset, such as resurfacing an existing carriageway, this will reduce the existing maintenance burden on the County Council. The principle of a “maintenance spend foregone” sum was therefore also recognised.

4.9 This position was a change to the basis upon which the City Deal was agreed and impacted the GCP programme. For example, all schemes which proposed additional highway such as the planned busway schemes, would incur a future maintenance levy. By contrast, schemes such as Histon Road and Milton Road which improved existing carriageway would, in effect, see money transfer the other way.

4.10 The Highways and Transport Committee considered and agreed an updated Commuted Sums Policy in March 2023. This policy specifically excluded the GCP and CPCA from the policy, in effect reverting to the basis upon which the City Deal was agreed. The report did however recognise that separate discussions are taking place with CPCA and GCP regarding how best to offset the increased maintenance burden to the Council associated with infrastructure provided by these bodies. Such infrastructure includes cycleways, the Greenways and busways. The March 2023 report is a helpful clarification of the position but does mean that the highways improvement costs of the Histon and Milton Road schemes will now be borne by the GCP.

4.11 Ongoing Dialogue

Discussions have continued between the County Council and GCP on the future maintenance costs of new infrastructure. The two main areas likely to incur future cost are the busways and the Greenways. The busways have an existing solution with access charges already in place on the St. Ives busway. The Greenways network conversations are continuing and will be informed by a highways maintenance hierarchy that specifically encompasses active travel infrastructure.

4.12 Highway Maintenance Hierarchy

The County Council Highways Service is currently undertaking work to establish a hierarchy to enable prioritised maintenance and management of the network to support Active Travel in and around Cambridgeshire. A network hierarchy framework is an important asset management tool that supports prioritisation of resource and service delivery towards locations of greatest need and/or strategic importance. Network hierarchies are well established for footways and carriageways but are less well developed as an approach for cycling infrastructure and for public rights of way (PROW). The work will also assist in making the case for maintenance funding of existing Active Travel infrastructure.

4.13 The hierarchy will need to include all aspects of walking and wheeling infrastructure including:

- Dedicated footways, both remote from and associated with carriageways;
- Dedicated cycle routes, both remote from and associated with carriageways;
- Shared infrastructure, including the use of carriageways for cycling and walking;
- Use by equestrians;
- Public rights of way.

4.14 The hierarchy will be used to;

- set and deliver maintenance standards;
- inform strategy and asset management approaches;
- inform the support and delivery of development through council decision making and responses to planning consultations;
- protect PROW network to support wellbeing and recreational use whilst developing the network for active travel.

4.15 This work is essential to support the development of final proposals for maintaining the Greenways network, once completed. The current work is expected to be completed in the autumn, allowing for further discussions on the Greenways proposals.

4.16 **Queen Anne Terrace Car Park- Secure Cycle Parking**

4.17 In June 2020 the GCP Board agreed to support a range of transport measures related to supporting the Covid 19 recovery process within Greater Cambridge (link to paper: here).This included through the provision of additional secure cycle parking. One of the schemes developed in response to this, in partnership with the City Council is additional cycle parking at Queen Anne Terrace (QAT) Car Park.

4.18 The City Council are redesigning the current undercover cycle parking provision at QAT car park with the aim of replacing the existing 52 Sheffield cycle stands with ‘toast-rack’ style Sheffield stands, whilst also increasing cycle parking spaces from 67 to 110 (6 of these being described as cargo/non-standard spaces). Improvements are also planned for the external areas and will see an increase of 8 [Sheffield] cycle stands to 26 [‘toast-rack’ style Sheffield] cycle stands, meaning an increase of cycle parking spaces from 16 to 52.

4.19 Other improvements will include an extension to the undercover cycle parking area and the existing ‘Parent and Child’ car parking spaces plus an extension floor-to-ceiling (Park Mark accredited) perimeter fencing, separating the cycle park and car park. In addition to this, access control will be improved and a small area to paid secure-access parking will be created plus improved signage and CCTV cameras installed. Delivery of this scheme is anticipated to be in Spring/Summer 2024.

4.20 As was agreed and following costing work, recently calculated by the City Council for materials and installation, it is recommended that the GCP contribute £80k towards the total cost. The City Council will pick up the remaining projects costs which are anticipated to be in the region of £30k subject to detailed costings.

4.21 **Addenbrooke's Roundabout**

4.22 The need to improve cycling infrastructure at Addenbrooke's roundabout was identified by Cambridgeshire County Council as a priority last year as part of the highway improvement assessment process. In addition, following the results of a recent public consultation it was clear that there is public support to accelerate improvement works on the Addenbrooke's roundabout.

This location falls within the GCP's Cycling Plus A1134 scheme, due to come to the GCP Board for final design approval in December 2023. This will include a detailed design and construction works package for the entire scheme.

In advance of the full scheme coming for Board approval, there is an opportunity to accelerate the Addenbrookes roundabout element of the overall works. This element of the works has also been granted funding from the Cambridgeshire and Peterborough Combined Authority which is time limited.

Officers intend to ask the Board for approval to commence this element of the works ahead of the remainder of the scheme. This would accelerate the delivery of the scheme overall.

4.23 **GCP Assurance Framework**

4.24 In line with the annual review process of the GCP's Assurance Framework, officers have updated the Framework (Appendix 9). Only very minor amendments were required and no substantive updates were proposed.

As Accountable Body, the updated Framework was agreed by the Statutory Officers at Cambridgeshire County Council on 1 August 2023.

Assuming the Board are content to agree the updated Framework it will be sent to DLUHC for agreement and approval.

Skills

4.25 The full workstream report for Skills is available in Appendix 2.

Smart

4.26 The Strategic Sensor Network has now been deployed and is operational within the Greater Cambridge area.

4.27 The Smart programme team is working with the City Access team to shape the next stage of the systems and operations workstream which will involve close collaboration with the relevant County Council teams.

4.28 The full workstream report for Smart is available in Appendix 3.

Housing

4.29 The full workstream report for Housing is available in Appendix 4.

Economy and Environment

4.30 **Sectoral Employment Analysis:** This is the eighth of a series of updates from the Centre for Business Research (CBR) at Cambridge University and brings up-to-date information about what is happening to corporate employment in the Greater Cambridge area.

4.31 The April 2023 Update covers accounting year ends between May 2022 and December 2022 (the median year end is mid-October 2022). This median period captures the impact of the war in the Ukraine on the recovery from Covid. This period is compared with the previous year, which covers the second and third Covid lockdowns as well as the coming out of lockdowns.

4.32 The picture that emerges is one of continued and faster employment growth in Greater Cambridge during the year to mid-October 2022. This faster employment growth was driven by a buoyant KI economy, which continued to expand at fast rates despite the supply chain disruptions and inflationary pressures following the start of the Ukraine war. The next update will analyse whether the robust performance of Greater Cambridge-based businesses continued into the Autumn of 2022, when the UK cost of living crisis worsened as inflation peaked at 11.1% (a 41-year high).

4.33 **Energy Grid Capacity**

4.34 As was reported during the last meeting cycle, GCP officers continue to work with UKPN colleagues to progress the project. It is understood that the project remains on target to be complete by 2026. Officers will continue to work with UKPN to support the delivery of the project.

4.35 The full workstream report for Economy and Environment is available in Appendix 5.

5. Strategic Risks

5.1 The following are the key Strategic Risks for the GCP Programme, further risks specific to Transport, are set out in Section 6.4.

Strategic Risk	**Mitigating action**
Cost of schemes increases due to inflation or demand for materials in the market, leading to insufficient budgets for delivery of all GCP schemes.	Regular costing of schemes to ensure on budget. Liaison with the market including contractors to ensure pipeline is understood and issues of cost are raised early. Inclusions of risk, Optimism Bias and inflation in cost estimates. Scheme prioritisation as necessary A paper on the Future Investment Strategy (FIS) is on this agenda. The FIS sets out a prioritisation of schemes, including potential pausing of projects, to ensure the programme tackles the unprecedented issues around inflation.

Failure to unlock further funding for the GCP Programme - The opportunity to deliver the area's identified infrastructure needs and further economic and social benefits are lost due to an inability to access future funding. This could be as a result of inadequate delivery, Government considering Greater Cambridge a poor investment, and/or unforeseen circumstances.	Ensure progress is regularly, and accurately, reported to ensure there are 'no surprises' - e.g. if delivery is delayed. Through preparation for Gateway Review 2024/25, evidence why Greater Cambridge requires continued investment in order to meet growth aspirations.
If there is a lack of capacity in the supplier market, from overall demand, Brexit, Covid, unforeseen global events, this could lead to delays, increased costs and the potential for non delivery.	Maintain a clear pipeline of requirements. Provide early notification of requirements to give suppliers time to mobilise and give confidence of the flow of work. Maximise potential of existing professional services frameworks.
Public feedback and opinion on the Programme is not demographically representative of the Greater Cambridge area as a whole, reducing the ability to understand the needs and priorities of the current and future population of Greater Cambridge.	Through regular engagement exercises, work closely with wider communities and Members to ensure feedback is captured and understood.
Failure of the partnership arrangement, including Partners' statutory functions, means that the agreement cannot be delivered. Opportunities to deliver wider economic benefits are missed because of the complexity of decision making in this geography.	Alignment of GCP schemes with the LTCP, and the Local Plans. Regular coordination between GCP officers and key partners to ensure joined up approach. Shared resourcing where appropriate. Ensuring sufficient Member Induction throughout the governance cycle, including around Election periods.
A lack of public confidence in the GCP impacts programme delivery and hinders the extent to which the overall City Deal objectives can be delivered.	Through regular engagement exercises, work closely with the community and Members to ensure feedback is captured and understood. Ensure that feedback from consultation exercises is fully understood and input into early scheme design and delivery. Through further regular engagement, work with communities and Members to ensure the benefits of the GCP programme are clearly defined and understood.

APPENDIX 1: QUARTERLY TRANSPORT WORKSTREAM REPORT

"Creating better and greener transport networks, connecting people to homes, jobs, study and opportunity"

6. Transport Delivery Overview

6.1 The table below gives an overview of progress for ongoing projects. This table has been updated to include the original target completion date for each scheme. The RAG status is related to the difference between Revised Completion Date and Forecast Completion Date. For an overview of completed projects, including their relation to ongoing projects, please refer to Appendix 7.

Project	Current Delivery Stage	Original Target Completion Date for whole Project	Revised Target Completion Date for whole Project	Forecast Completion Date for whole Project	Status		
					Previous	Current	Change
Cambridge Southeast Transport (CSET) Phase 1	Construction	2022	2023	2024	R	R	⟷
Cambridge Southeast Transport (CSET) Phase 2	Design	2024	2024	2026	A	A	⟷
Cambourne to Cambridge / A428 Corridor	Design	2024	2026	2026	G	G	⟷
Waterbeach to Cambridge	Early Design	2027	2027	2027	G	G	⟷
Eastern Access	Early Design	2027	2027	2027	G	G	⟷
West of Cambridge Package (Inc Foxton)	Design	2021	2024	2025	R	R	⟷
Milton Road	Construction	2021	2024	2024	G	G	⟷
City Access Project	Design	2024	2024	2024	G	G	⟷
Whittlesford Station Transport Infrastructure Strategy (formerly Travel Hubs)	Initial Options	2023	2023	2023	G	G	⟷
Cycling Plus	Initial Options	2027	2027	2027	G	G	⟷
Chisholm Trail Cycle Links Phase 2	Design	2022	2023	2024	R	R	⟷
Madingley Road (Cycling)	Design	2022	2023	2025	R	R	⟷
Waterbeach Greenway	Project Initiation	2024	2025	2025	A	A	⟷
Fulbourn Greenway	Early Design	2024	2024	2025	A	A	⟷
Comberton Greenway	Design	2025	2025	2025	G	G	⟷
Melbourn Greenway	Design	2025	2025	2025	G	G	⟷

St Ives Greenway	Design	2023	2024	2025	A	A	↔
Barton Greenway	Design	2025	2025	2025	G	G	↔
Bottisham Greenway	Design	2025	2025	2025	G	G	↔
Horningsea Greenway	Design	2025	2025	2024	G	G	↔
Sawston Greenway	Design	2025	2025	2025	G	G	↔
Swaffhams Greenway	Design	2025	2025	2025	G	G	↔
Haslingfield Greenway	Design	2025	2025	2025	G	G	↔
Waterbeach Station	Design	2025	2025	2025	G	G	↔

Please note:
Histon Road has been taken out of the above table as it is now complete. It has a small budget for 2023/24 for final snagging works so will appear in the Finance Overview table in Section 7.1

Key: R = Red, A = Amber, G = Green – see Appendix 6 for RAG explanations.

6.2 Specific updates on each scheme are set out in section 7 of this report. There are 4 schemes with a red status.

- CSETS Phase 1 is red due to the requirement for the Haverhill Road and Wandlebury schemes to go through planning which is taking longer than originally envisioned. This was originally submitted in June 2022, issues are being worked through which will lead to construction in 2024. There have also been land acquisition issues for the scheme, but these are now resolved.
- Cambridge South West Travel Hub (CSWTH) was originally due to be completed in 2024 but due to delays in achieving planning approval is now forecast for 2025.
- Chisholm Trail Phase 2 was due to be completed in 2023 but following feedback to the Summer 2022 consultation and ongoing dialogue with Network Rail, the designs are being updated which will lead to delivery in 2024.
- Madingley Road was originally scheduled to complete in 2023 but due to issues with the design, and the West of Cambridge development site, the forecast date is now 2025.

6.3 In principle, target completion dates will only be changed subject to more significant updates on schemes being provided to the Executive Board.

6.4 Whilst the forecast completion dates captured above are the anticipated opening dates for each project, delivery risks e.g. land acquisition timescales, remain across the programme. Due to the significant scale of the programme and its associated spend, delivery risks, such as these, are expected and are being managed through appropriate mitigation strategies. As it currently stands, the top risks across the transport programme are identified as follows:

Risk	**Mitigating Action**
If the cost of materials continues to increase it will have a significant impact on the cost of delivery and therefore programme	Early engagement with contractors during pricing to ensure that the latest market situation is reflected in both early estimates and risk apportionment.

	A paper on the Future Investment Strategy (FIS) is on this agenda. The FIS sets out a prioritisation of schemes, including potential pausing of projects, to ensure the programme tackles the unprecedented issues around inflation.
If initial budget estimates for projects are either not realistic, do not include appropriate allocations for risk, optimism bias, or come under pressure through inflated prices from contractors then projects may not be delivered and confidence in the programme will be impacted	Ensure robust management of the commercial aspects of major projects, including the setting of realistic budget requirements and contingency levels. Follow government green book guidance on Optimism Bias.
If there is a failure of schemes at key decision gateways including Planning Decisions, Public Inquiry or following Judicial Review, the schemes will have to be significantly altered and/ or reprioritised	Ensure scheme development complies with all legal, national, local and internal governance requirements and that subsequent decisions are made on the basis of that process, fully documented and communicated in a transparent manner. The GCP continue to work closely with the Local Planning Authorities.
If there is a failure to reflect climate crisis policy agenda including carbon impacts and biodiversity net gain then the schemes may be subject to challenge, delay or reprioritisation at business case approval or consenting	CCC policy created, GCP to review and create an aligned strategy for the programme.
If projects are unable to acquire land within a timely fashion and/or landowners are unwilling to sell then statutory processes may be required or take longer due to significant objections which will lead to delays in the programme	Appropriate professional advice on land acquisition, issues with land to be identified as early as possible within projects. CPO to be utilised as a last resort.

7. 2023/24 Transport Finance Overview

7.1 The table below contains a summary of this year's budget and forecast outturns for 2023/24. It should be noted that this table only provides forecast costs for the annual year. The Future Investment Strategy (Agenda item 7) provides an update on the forecast scheme costs for the whole life of projects.

Project	Total Budget (£000)	2023-24 Budget (£000)	Actual Year to Date (£000)	2023-24 Forecast (Jun 2023)	Current 2023-24 Budget status
Cambridge South East (A1307) – Phase 1	16,950	4,780	1,228	6,750	+1,970

Cambridge South East (A1307) – Phase 2	132,285	2,712	294	2,715	+3
Cambourne to Cambridge (A428)	157,000	3,549	445	3,000	-549
Waterbeach to Cambridge	52,600	893	99	1,000	+107
Eastern Access	50,500	2,200	72	2,200	0
West of Cambridge Package (inc Foxton)	42,000	1,500	2	1,500	0
Milton Road Bus, Cycle and Pedestrian Priority	24,000	9,960	1,638	13,420	+3,460
Histon Road Bus, Cycle and Pedestrian Priority	10,600	189	3	20	-169
City Access Project	20,320	5,003	776	5,003	0
Whittlesford Station Transport Infrastructure Strategy (formerly Travel Hubs)	700	396	0	3	-393
FIS Allocation – Public Transport Improvements	65,000	-	-	-	-
- Cycling Plus	10,200	500	27	500	0
Chisholm Trail – Phase 2	5,000	1,998	63	1,000	-998
Madingley Road Cycling	993	196	-10	254	+58
Greenways Programme	76,000	8,251	544	8,251	+0
Waterbeach Station	37,000	2,000	264	2,000	0
Programme Management and Scheme Development	5,450	308	152	350	+42
Total	**£706,598**	**£44,435**	**£5,597**	**£47,966**	**+3,531**

Please note:

* *These budgets now account for the actuals in 2022/23 and therefore may be slightly lower depending on whether accelerated spend occurred last year.*

Key: R = Red, A = Amber, G = Green – see Appendix 6 for RAG explanations.

7.2 Commentary relating to each project is set out below. This includes their financial RAG status and an update on spend and any anticipated variances for 2023/24.

Finance and Programme updates by Scheme

7.3 Cambridge South East (A1307) – Phase 1
Financial Status: Green

A full construction programme is planned for 2023/24 so it is anticipated that there will be accelerated spending this year. The Bartlow Roundabout and Dean Cross

schemes began construction in May and the Puddicombe Way project at Addenbrooke's is anticipated to start this autumn.

7.4 Cambridge South East (A1307) – Phase 2
Financial Status: Green

The forecast for this financial year has been updated to reflect the current status of the scheme based on the updated programme. Attendance at Full Council for approval of the Transport and Works Act Order (TWAO) application is rescheduled for Autumn 2023 and submission of the TWAO is now scheduled for this winter. Please note, this is subject to the outcome of agenda item 7 (Future Investment Strategy) on this meeting agenda.

7.5 Cambourne to Cambridge (A428)
Financial Status: Amber

Consultants continue to work on the TWAO for the project with a view to submission of the TWAO application during 2023. The project is currently scheduled to be delivered by the end of 2026.

Year-end forecast is currently showing as an underspend as expenditure could be reduced if progress on the TWAO cannot be made.

7.6 Waterbeach to Cambridge (formerly A10 North study)
Financial Status: Green

Public consultation on design options have now concluded and consultants are undertaking final technical work to reach a position on the preferred alignment option for the public transport route option and Park & Ride location at Waterbeach.

It is anticipated that this year's budget will be spent on the first stages of the preliminary design phase of work.

7.7 Eastern Access
Financial Status: Green

At this stage in the year, it is anticipated that this project will come in on budget. Forecast spend for the year depends on start of works for the first Phase of Newmarket Road. There have been some delays to the start of work on Drainage Surveys so this has reduced planned spend.

7.8 Cambridge South West Travel Hub and Foxton Travel Hub (West of Cambridge Package)
Financial Status: Green

In June 2022 the Planning Committee recommended approval of the application for CSWTH, subject to the Department for Communities and Local Government's acceptance, this was received in July 2022. Detailed Design is now underway on this scheme.

Purchase of the final parcel of land is now progressing and consultants have been appointed to deliver the Detailed Design. Due to delays as set out above, there was an underspend at year-end. The scheme is currently scheduled for delivery in 2025.

Foxton Travel Hub is close to finalising the planning application for submission. This scheme is subject to the outcome of agenda item 7 (Future Investment Strategy) on this meeting agenda.

7.9 Milton Road bus and cycling priority
Financial Status: Green

Construction of this project commenced last summer.

The forecast for end-year during 2023/24 is £13.4m which is an overspend on the annual budget. This predicted increase in spend is due to the effects of inflation.

In addition to this, the update to the commuted sums policy document from the County Council will mean that Milton Road will no longer receive the budgeted repayment (from the County) which means that this shortfall will need to be accommodated.

7.10 Histon Road bus and cycling priority
Financial Status: Amber

The remaining budget from 2022/23 has been carried over to 2023/24 and allocated to ongoing landscape maintenance and final utility costs.

7.11 City Centre Access Project
Financial Status: Green

The City Access budget funds multiple workstreams which focus on tackling congestion, improving bus services and the cycling network, addressing air quality issues and better management of parking. Significant technical work will continue during 2023/24.

7.12 Whittlesford Station Transport Infrastructure Strategy (formerly Travel Hubs)
Financial Status: Red

Work on developing and delivering various projects included in the strategy has been held over, awaiting the outcome of the Cambridgeshire and Peterborough Combined Authority funded multi-modal study of the A505 which is being undertaken by the County Council.

At year-end it is anticipated that the annual budget will be underspent by £393k.

7.13 Cycling Plus
Financial Status: Green

The 2023/24 budget for Cycling Plus is £500k and is split between active travel improvement projects for (1) the A1134 and (2) Hills Road (from the sixth form college to the to the Regent Street/Gonville Place/ Lensfield Road junction). The

A1134 project also includes improving provision for cyclists at the Addenbrooke's roundabout.

As the implementation of works on Addenbrooke's roundabout is planned to be fast tracked, the 2023/24 budget allocation for the A1134 is likely to be spent. It is also anticipated that the budget for Hills Road will be spent as preferred design options are reviewed during the year.

7.14 Chisholm Trail cycle links – Phase 2
Financial Status: Amber

At this stage in the year, it is anticipated that there will be an underspend of £1m as Network Rail decisions to approve the scheme are taking longer than expected.

7.15 Madingley Road
Financial Status: Green

The design for Madingley Road will be engaged on in 2023/24 and spend will increase this year.

The programme date for competition is currently 2025, this reflects the Street Works requirement that major work on Madingley Road cannot start until work on Milton Road is completed.

7.16 Greenways Programme
Financial Status: Green

The Greenways programme has been split geographically between two consultants (appointed via the Joint Professional Services Framework) and work has now begun on the design of each scheme. In addition, work has begun on key workstreams such as the Wayfinding Strategy and updated land referencing across the entire programme.

In addition to this, a number of sections of the Linton Greenway were delivered during 2022/23. Construction is now underway on the Horningsea Greenway Early Works.

7.17 Waterbeach Station
Financial Status: Green

At this stage in the financial year, it is anticipated that the project will come in on budget.

7.18 Programme Management and Scheme Development
Financial Status: Green

At this stage in the financial year, it is predicted that the project will come in on budget.

APPENDIX 2: QUARTERLY SKILLS WORKSTREAM REPORT

"Inspiring and developing our future workforce, so that businesses can grow"

8. Update on Current Skills Delivery (2021-2025)

8.1 GCP's new skills and training contract began delivery on 1st April 2021. Progress against targets can be seen below:

Indicator	Quarterly Status			Target (2023-2024 Year 3)	Status against overall target	Target (2021-2025)
	Previous	Change	RAG*		RAG* (for end of year stage boundary)	
600 apprenticeship and training starts in the region as a result of intervention by the service, broken down by sector and level of apprenticeship *(Seasonal peaks and troughs in academic year)*	15	7	G	175	255	600
1520 adults supported with careers information, advice and guidance, broken down by sector where applicable *(Post-COVID need in community far lower than originally projected, with reprofiling and resource reallocation under discussion)*	52	56	A	420	530	1520
600 Early Careers Ambassadors/YP Champions recruited, trained and active, broken down by sector *(Affected by year one delays to YP Champion programme, which has now launched and is beginning recruitment)*	15	0	A	125	63	600
450 employers supported to access funds and training initiatives, broken down by sector *(Some seasonality, as employers are more motivated to engage when considering training starts)*	32	57	G	150	278	450
400 students accessing work experience and industry placements, as a result of intervention by the service, broken down by sector *(Seasonal, with vast majority taking place in July each year)*	0	83	G	100	136	400
2486 careers guidance activities aimed at students aged 11-19 (and parents where appropriate) organised by the service and their impact *(Year-round, but with peak in middle of academic year)*	91	66	G	621	1134	2486
CRC – Develop a suite of 30 careers videos for post-16 education with employers to highlight careers specialisms and further development of careers and make available to Form the Future for use in their school-facing events	0	0	A	8	8	30
All Primary Schools (73) accessing careers advice activities aimed at children aged 7-11 (and parents where appropriate) organised by the service and their impact *(Non-cumulative, the focus is on developing and sustaining engagement over time, rather than a cumulative output, year-on-year)*	84	N/A	G	73	84	73 *(sustained)*
200 students accessing mentoring programme as part of this service *(Highly seasonal, with delivery between November-April each academic year)*	20	30	G	50	100	200
Form the Future partnership with Unifrog enabling Form the Future to better monitor, measure and assess the impact of the	1	0	A	21	16	21

GCP Skills and Apprenticeships programme in 21 secondary schools in the Greater Cambridge area *(Reporting is termly, therefore three reporting rounds per year)*	
Re-establishment of Cambridge Curriculum steering group *(further detail to be provided on this next quarter)*	To be confirmed

Please note:
**The RAG status highlights whether the work to achieve these targets is on track rather than the current actual.*

Key: R = Red, A = Amber, G = Green – see Appendix 6 for RAG explanations.

8.2 This quarter saw the start of the third year for The Greater Cambridge Partnership Skills and Apprentice Service and involved a lot of planning for the remainder of the project. The ninth quarter consisted of a range of events including the continued delivery of Careers, Information, Advice and Guidance to students and adults; with the latter including positive talks regarding expansion of delivery into satellite towns. Form the Future (FtF) supported private companies in recruitment and onboarding of work experiences places, as well promoting opportunities via their online platform. Cambridge Regional College (CRC) made good progress with employers, and the remaining mentoring sessions from Year 2 were completed. Unifrog onboarding progressed at a steady pace, with lots of engagement from the outstanding schools at the end of the quarter. This quarter saw a lot of planning for Cambridge Curriculum, with the first meeting scheduled for July 2023.

8.3 Key points from this quarter's performance against the contract KPIs are shown below.

8.4 Apprenticeship starts - at the end of Quarter 9 (Q2/23), there were seven new apprenticeship starts. This period is traditionally the lowest for apprentice enrolments due to the peak in September. The build-up is currently in progress, but CRC can report that 7 apprentices started between April-June 2023. It is worth noting that there are still recruitment challenges / barriers in certain industries, and it is difficult to predict if and when these may subside, but CRC confirm that there is no risk related to this KPI.

8.5 Adult career advice – this area of work is shared between FtF (career guidance) and CRC (roadshows/events). During Quarter 9 the service has engaged with a further 27 adults providing Careers, Information, Advice & Guidance. Those receiving the support come from a wide variety of situations, however CRC are still supporting a high number of individuals from Ukraine seeking English for Speakers of Other Languages (ESOL) and other training opportunities. The demand for ESOL courses is at an all-time high and CRC are constantly looking for further tutors to support this demand. In addition to this, FtF continued supporting adults at the Cambridge Job Centre Plus and are in discussion with Legal & General Real Assets and NatWest to run pop-ups in the Grafton Centre and bank. These pop-ups will be a pilot and if successful, FtF will look to run regularly.

8.6 Recruitment of Early Careers Ambassadors/Young People Champions – this area of work is delivered jointly by FtF and CRC, with FtF focussed on Early Careers Ambassadors, who do careers outreach, and CRC on Young People Champions, who support young people in their workplace. A new 'Aspiring / New Managers Network' has now been set up which FtF/CRC believe will attract more members to the Network where the focus is not mainly aimed at supporting 'young people' and will support personal development and career progression of those participating.

These new skills being developed can then be utilised effectively to support those that are new to the world of work within their respective employers. The website and marketing materials are currently being updated to reflect this new approach and a marketing campaign will follow shortly. CRC plan to promote and host the first event in October for both members that have already signed up but also for those thinking about it as a formal launch of the Network.

8.7 Employers supported to access funds and training initiatives - The first quarter of the third year of the project saw an additional 57 meetings held with employers. During this period, CRC have seen an increase in enquiries requesting information about Engineering apprentices and hope to therefore see an increase in enrolment in this subject for September 2023. Demand from construction companies remains higher than CRC's own capacity and where they are unable to accept further enquiries for specific subjects, they are attempting to support with signposting to alternative providers, however CRC are aware of these challenges nationally.

8.8 Students accessing work experience and industry placements – 83 students applied for work experience and industry placements this quarter and look forward to completing these in Quarter 10. Placements will be at Abcam, Birketts, Cambridge Unlocked and PA Consulting. This follows on from FtF's call out to companies in Quarter 8. Communications to all GCP schools for students in Year 10 or above (over 3,000 students) also went out regarding the places and applications were also encouraged via calls with career leaders throughout Quarter 9.

8.9 Other key points shown from this FtF's quarterly report:

- Careers guidance aimed at students 11-19 - the number of events and personal guidance sessions delivered in Quarter 9 was lower than planned due to strikes and the additional public holiday in May. FtF has agreed to move events that couldn't be delivered before the end of the academic year to September and will look to make up the shortfall by increasing delivery for Year 3. 'Parent webinars' will now be delivered under the virtual 'Insights' events following a successful pilot in March. FtF's post-16 Options event for schools is also being launched online this summer, and an update on this event will be mentioned in next quarter's report. In addition to this, CRC have met with 3 further businesses (Arm, Coveris and Milestone Infrastructure) who have expressed an interest in participating in the creation of the Careers Videos.
- Primary schools accessing careers advice – work is continuing to develop engagement to help provide careers advice to children aged 7-11. Updates on this work includes organising the 2024 Primary Careers Fair and Apprenticeship Jobs & Careers Fair (5th March). Latest figures also show that LaunchPad was accessed by 493 users last quarter (480 of these were new users, with 990 unique page views).
- Mentoring – 30 students accessed the mentoring programme this quarter. There have been some delays in scheduling mentoring so FtF is working with schools to prevent further delays in future. Previously, the programme has been affected by some schools delaying start dates, schools cancelling the programme etc.
- Partnership with Unifrog - FtF and Unifrog discussed next steps regarding schools delaying onboarding this quarter. FtF worked with schools at the end of the school year to establish whether they intended to implement the

system to ensure they wouldn't have subscription funding withdrawn. FtF also met with Unifrog to discuss reporting and will be working with them to refine and improve reporting for the next reporting round.

- Cambridge Curriculum – a meeting is scheduled this summer to look at school needs and priorities and the approach (complimentary rather than competitive) – to include representatives from Arm, FtF, CRC, Milton Road Primary and Ignite 2 Inspire. An update on this will follow in next quarter's report.

APPENDIX 3: QUARTERLY SMART WORKSTREAM REPORT

"Harnessing and developing smart technology, to support transport, housing and skills"

9. Smart Programme Overview

Project	Target Completion Date	Forecast Completion Date	Status		
			Previous	Current	Change
Better Use of data					
Set up of data platform before operational	Jul 2023	Complete	G	G	↔
Mobility Monitoring Network - operational	Jun 2023	Complete	G	G	↔
Bus Pinch Point work	Mar 2023	Complete	G	G	↔
Real Time Bus Data Audit	Jan 2024	Jan 2024	G	G	↔
Improved public and sustainable travel offer					
Autonomous Vehicle Study – Eastern Corridor	Nov 2023	Nov 2023	G	G	↔
Autonomous Vehicle Deployment	May 2025	May 2025	G	G	↔
MaaS Options Appraisal	Nov 2023	Nov 2023	G	G	↔
Better Operation of the Highway					
Smart Signal Trial	Mar 2024	May 2024	G	A	↓
Innovation Prospectus Launched	Jun 2023	Complete	G	G	↔

Progress reported up to 31st July 2023.

Key: R = Red, A = Amber, G = Green – see Appendix 6 for RAG explanations.

9.1 The table above gives an overview of progress for ongoing projects. For an overview of completed projects, including their relation to ongoing projects, please refer to Appendix 7.

9.2 The Smart programme of work continues to be developed to reflect requirements in the context of the increasing pace of delivery across all GCP workstreams.

9.3 **Better use of data** - 'The Better use of data' theme aims to work with GCP partners and key stakeholders to develop the availability and usage of data. Highlights this period include the following:

9.4 **Mobility Monitoring (Strategic Sensor) Network** – the strategic network of 60 sensors continues to operate effectively with data being collected and made available to the CCC Research team to support on-going monitoring as well as providing a knowledge base of mobility data available to all partner organisations. The team are also investigating the deployment of additional sensors to support short-term ANPR surveys to provide more detailed information about the movement of vehicles in the city centre and surrounding areas (listed at Section 10.8 in last quarter's report as 'Routes taken in the city centre areas').

9.5 **Data platform requirements** - to support officers in extracting intelligence and insight from data collected from the Mobility Monitoring (Strategic Sensor) Network and other related data streams, a 'data platform' is needed. This is a central point for the automated uploading of data and to support different types of data analysis and visualisation required by GCP and its partners. Following engagement with the CPCA and County colleagues, an interim solution has been procured and is in place which will support GCP data analysis over the next 2 years. Key data sets have now been ingested and a training session for relevant officers will be arranged shortly.

9.6 **Bus pinchpoints** - by developing a more robust evidence base about where buses are being held up, the GCP and County will be able to prioritise investments including bus priority measures, and target enforcement actions more accurately. An initial piece of work is complete and has ranked junctions in Greater Cambridge by the amount of time bus services are held up, considering nearby stops and other junctions. A further piece of work is analysing the capacity of buses through junctions and the potential impact of delays on CO2 levels. This report is now complete and will be used by colleagues in the Making Connections workstream.

9.7 **Real Time Bus Data Audit –** The availability, timeliness and accuracy of real time data is important to the quality of the customer experience. On street real time displays, travel apps, web pages and information screens give travellers real time information on bus arrival times and cancellations. If this information is inaccurate, it undermines confidence in the public transport system. The Smart Team are in the process of procuring support to carry out an audit on the Real Time system to identify areas where the accuracy of real time bus data can be improved.

9.8 **Improved public and sustainable travel**

The Smart programme is leading several initiatives to support improvements in the public and sustainable travel 'offer' including the following:

9.9 **Guidance System Review** - the Cambridge Guided Busway has been very successful and as the GCP builds out its transport scheme, there is a desire to replicate that success by drawing on guidance technologies that have already been applied elsewhere in Europe, but don't require the same level of costly and complex infrastructure. The Smart team continue to work in collaboration with the GCP Transport programme to coordinate investigations of those technologies and how they can safely and effectively support and enhance the schemes being proposed for Greater Cambridge.

9.10 **Autonomous Vehicle Work** – the GCP and partners have secured funding from the latest Centre for Connected and Automated Vehicles (CCAV) competition to deliver two Autonomous Vehicle (AV) projects in our area.

- **Eastern Access Study** – The study is exploring how Connected and Automated Mass Transit could be implemented in Cambridge to help to solve its complex transport problems. The first draft of the interim report has been produced and is currently being reviewed by the team and will then be discussed with CCAV. The final report will be completed at the end of summer and the project closeout will be completed by the end of October

2023. The total project cost is £153,548 with a grant from CCAV of £92,474 and the remainder funded from industrial contributions of the partners (ARUP and Costain).

- **Automated Mobility: Deployment (Project Connector)** – This project focuses on deployment and will see up to 13 vehicles running two routes in Cambridge. The first three months of the project have been completed and the first quarterly review meeting held with all consortium members represented as well as InnovateUK and CCAV. Positive feedback was received from InnovateUK, especially around the cohesiveness of the consortium. We confirmed that all deliverables expected in Quarter 1 have been completed. This means that the specifications and requirements of the various systems and solutions are now available. The building of the virtual simulation environments that will be used to test the automated systems have been built and will continue to be refined. Work is also well underway on the design of the private 5g network which will support the safe operation of the vehicles. The total project costs are £17,563,648 with a grant of £8,772,218 from CCAV and the remainder from industrial contributions.

9.11 **Mobility as a Service (MaaS)** - consultants have now completed the initial MaaS study which outlines the potential for MaaS to support sustainable transport modes. The next stage of work has been procured and will deliver an options appraisal, setting out the role the public sector should play in the deployment of MaaS, potential geographic scope and the delivery and commercial models. The options appraisal will be delivered at the end of August 2023.

9.12 **Better operation of the highway** - the Smart programme is working to look at how the highway can be better operated to support the GCP's aims of improving sustainable transport journeys.

9.13 **Smart Signals** - the VivaCity control method continues to be tested at the Robin Hood junction and data gathered on its performance compared to the existing Microprocessor Optimised Vehicle Actuation (MOVA) control method. This phase of testing was due to finish in March 2023 however, there have been a couple of control issues within the VivaCity system and final testing has been extended to ensure that the fixes put in place are operating as expected. This has subsequently delayed the next phase at Hills Road with testing expected to begin in late August. The next phase will look at sequential control on 3 junctions on Hills Road and the potential prioritisation of non-motorised modes.

9.14 **Innovation Prospectus –** the Innovation Prospectus will be used to actively engage with the market, setting out the challenges that the GCP is working to address and inviting the market to trial new and innovative technologies. The prospectus has now been launched and has generated press coverage resulting in a number of companies approaching the Smart Workstream.

9.15 **City Access workstreams**

The Smart programme has continued to support the City Access team in technical and behaviour change aspects of the work. The current focus includes:

- supporting the identification of potential operating models for a future City Access scheme, including technical, systems and operational aspects;

- Developing a data baseline for behaviour change work – soft market testing has been carried out and a procurement is expected in October;
- understanding the approaches taken in other cities and how these might be applied to the Greater Cambridge Travel for Work area;
- looking at the range of initiatives to affect behaviour change (in particular modal shift away from private cars).

9.16 The key dates and progress are being reported via the City Access project.

APPENDIX 4: QUARTERLY HOUSING WORKSTREAM REPORT

"Accelerating housing delivery and homes for all"

10. Delivering 1,000 Additional Affordable Homes

10.1 The table below gives an overview of progress for ongoing projects. For an overview of completed projects, including their relation to ongoing projects, please refer to Appendix 7.

Indicator	Target	Timing	Progress/ Forecast	Status		
				Previous	Current	Change
Delivering 1,000 additional affordable homes on rural exception sites**	1,000	2011-2031	479 (approx.)	G	G	↔
		Anticipated by 2031	1,841		G	

*** Based on housing commitments as included in the Greater Cambridge Housing Trajectory (April 2023) and new sites permitted or with a resolution to grant planning permission at 30th June 2023 on rural exception sites and on sites not allocated for development in the Local Plans and outside of a defined settlement boundary.*

Key: R = Red, A = Amber, G = Green – see Appendix 6 for RAG explanations.

10.2 The latest housing trajectory, based specifically on currently known sites, shows that 37,715 dwellings are anticipated in Greater Cambridge between 2011 and 2031, which is 4,215 dwellings more than the housing requirement of 33,500 dwellings. By 2023 it is projected that there will have been 1,190 affordable housing completions on rural exception sites and other schemes outside of village boundaries. Adding these to the 651 affordable dwellings in the pipeline post-2023 gives a total of 1,841 affordable dwellings anticipated by 2031, exceeding the 1,000 dwellings identified in the City Deal.

10.3 The methodology, agreed by the Executive Board for monitoring the 1,000 additional homes, means that only once housing delivery exceeds the level needed to meet the Cambridge and South Cambridgeshire Local Plan requirements (33,500 homes between 2011 and 2031) can any affordable homes on eligible sites be counted towards the 1,000 additional new homes.

10.4 The Greater Cambridge Shared Planning Service published an updated Housing Trajectory in May 2023. This shows that it is anticipated that there will be a surplus, in terms of delivery over and above that required to meet the housing requirements in the Local Plans, in 2024/25. This is one year later than the previous trajectory projected. Until 2024/25, affordable homes that are being completed on eligible sites are contributing towards delivering the Greater Cambridge housing requirement of 33,500 dwellings.

10.5 Eligible homes are "*all affordable homes constructed on rural exception sites and on sites not allocated for development in the Local Plans and outside of a defined settlement boundary*".

10.6 The table above shows that on the basis of known rural exception schemes and other sites of 10 or more dwellings with planning permission or planning applications with a resolution to grant planning permission by South Cambridgeshire District Council's Planning Committee, approximately 479 eligible affordable homes are anticipated to be delivered between 2024 and 2031 towards the target of 1,000 by 2031.

10.7 In the last quarter no eligible affordable dwellings were approved.

10.8 Anticipated delivery from the known sites has been calculated based on the affordable dwellings being delivered proportionally throughout the build out of each site, with the anticipated build out for each site being taken from the Greater Cambridge Housing Trajectory (April 2023) or based on officer assumptions for build out of sites (if not a site included in the housing trajectory). When actual delivery on these known sites is recorded, more or less affordable dwellings could be delivered depending on the actual build out timetable of the affordable dwellings within the overall build out for the site and also depending on the actual delivery of the known sites compared to when a surplus against the housing requirements in the Local Plans is achieved.

10.9 There are still a further eight years until 2031 during which affordable homes on other eligible sites will continue to come forward as part of the additional supply, providing additional affordable homes that will count towards this target.

APPENDIX 5: QUARTERLY ECONOMY AND ENVIRONMENT WORKSTREAM REPORT

11. Greater Cambridge Sectoral Employment Analysis

11.1 In June this year, Cambridge Ahead and the Centre for Business Research (CBR) at the University of Cambridge presented the latest Cambridge Cluster Insights annual dataset - this is the eighth of a series of updates from the CBR and analyses data from accounting year ends between May 2022 and December 2022 (the median year end is mid-October 2022). The update is obtained by sampling the CBR annual corporate database of all businesses based in the wider Cambridge region. The full report can be found at: Research and evidence (greatercambridge.org.uk)

11.2 Key points from the presentations are summarised below:

11.3 This analysis captures the impact of the war in the Ukraine on the recovery from Covid. This period is compared with the previous year, which covers the second and third Covid lockdowns as well as the coming out of lockdowns.

11.4 Corporate employment growth in the Greater Cambridge area increased from 5.1% in 2020-21 to 6.2% in 2021-22, suggesting that corporate employment growth continued to recover from the effects of the pandemic despite the onset of the war in the Ukraine. The strong performance of the Greater Cambridge corporate economy during 2021-22 was driven by a buoyant KI economy, which saw employment grow by 7.7% in 2021-22 (8.8% in 2020-21).

11.5 Non-KI employment growth was substantially higher in 2021-22 (4.3%) than it was in 2020-21 (0.9%), pointing to continued recovery amongst sectors that were severely hit by lockdowns and other Covid-related restrictions.

11.6 Both Cambridge and South Cambridgeshire achieved faster employment growth in the latest year compared with one year earlier. Employment growth in Cambridge was high at 6.9% in 2021-22, up from 5.8% in 2020-21. Similarly, employment growth in South Cambridgeshire was 5.7% in the last year against a 4.6% rate in the previous year. However, there is variation in these growth rates across both industry sectors and firm sizes.

11.7 Knowledge intensive services continued to grow during 2021-22 yet at a lower rate compared with 2020-21 (3.3% and 7.8%, respectively). ‘Information technology and telecoms’ was the fastest growing sector during 2021-22 (14.3% compared with 8.3% in 2020-21) and ‘Life science and healthcare’ grew its employment by 5.0% while the ‘High-tech manufacturing’ sector returned to growth after suffering a fall in employment in the previous year. For the non-KI sector, ‘Other services’ (e.g. hotels, pubs and restaurants), ‘Other business services’ (e.g. employment agencies) and ‘Wholesale and retail distribution’, which were severely hit by lockdowns and other Covid-related restrictions, saw a strong bounce back in employment. In contrast, sectors such as ‘Construction and utilities’ and ‘Transport and travel’ have been struggling to return to growth following the pandemic. Total

corporate employment in these sectors during 2021-22 remained below its pre-pandemic levels.

11.8 Looking at growth within different size businesses, the group of 10+ employee businesses tends to dominate employment growth given its large aggregate size. These businesses are significant contributors to the growth achieved by sectors such as 'Information technology and telecoms', 'Other services' and 'Other business services'. In this group, although non-KI employment increased much faster in 2021-22 compared with 2020-21, employment growth was substantially higher in KI sectors than it was in non-KI sectors. As a result, employment growth in this size class was 6.9% in 2021-22.

11.9 To compare employment and turnover growth, a sample of 122 companies was examined with accounting year ends between May 2022 and December 2022 (all companies have provided employment and turnover data for the last three years). Previously, turnover had fared worse than employment, partly due to the furlough scheme during the pandemic. The latest analysis shows that, with the recovery from Covid, normal service has been resumed and turnover growth exceeds employment growth as it did pre pandemic. Employment growth was stronger among the KI companies, which saw employment increase by over 10% in both years. Non-KI companies achieved positive but lower employment growth. Turnover grew by 19.5% in 2021-22 (15.3% in 2020-21) for KI sectors, while non-KI sectors achieved turnover growth of over 10% in each year.

11.10 In addition to this analysis, a snapshot of the impact of events in the Greater Cambridge corporate economy has been provided by considering a small sample of companies with interim results for the six-month periods ending between May and December 2022. Within this group of companies (all KI), total turnover grew by 25% in their latest six months (2021-22) compared with a growth of 19% in the same period last year (2020-21). This shows that the growth of these successful KI companies has remained robust into 2022 despite the impact of the pandemic and the cost-of-living crisis on their business.

12. Electricity Grid Reinforcement

12.1 As was reported during the last meeting cycle and in section 4 above, GCP officers continue to work with UKPN colleagues to progress the project. It is understood that the project remains on target to be complete by 2026. Officers will continue to work with UKPN to support the delivery of the project.

13. Citizens' Assembly

13.1 The contributions of individual projects to the GCP's response to the Citizens' Assembly are contained in reports relating specifically to those items.

14. Financial Implications

14.1 At a strategic level the GCP has agreed to over-programme. Planned over-programming in this way is in place to provide future flexibility in programme delivery. Based on the budget agreed by the Executive Board in March 2023, the proposed over-commitment is c.£111million. This assumes that the GCP will be successful in passing the second Gateway Review and will receive the third tranche of funding (£200million). Please see agenda item 7 (Future Investment Strategy) for a further contextual update.

Have the resource implications been cleared by Finance? Yes
Name of Financial Officer: Sarah Heywood

List of Appendices

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Appendix 2	Quarterly Skills Workstream Report
Appendix 3	Quarterly Smart Workstream Report
Appendix 4	Quarterly Housing Workstream Report
Appendix 5	Quarterly Economy and Environment Workstream Report
Appendix 6	RAG Explanations
Appendix 7	Completed GCP Projects
Appendix 8	Executive Board Forward Plan
Appendix 9	Greater Cambridge City Deal Assurance Framework

Appendix
Background Papers

Source Documents	**Location**
None	-

APPENDIX 6: RAG EXPLANATIONS

Finance Tables

- **Green**: Projected to come in on budget or accelerated spend within overall budget
- **Amber**: Projected to come in under budget, but with measures proposed/in place to bring it in on budget
- **Red**: Projected to come in over budget in year and overspend the overall budget, or under spend the budget in year, without measures in place to remedy

Indicator Tables

- **Green**: Forecasting or realising achieving/exceeding target
- **Amber**: Forecasting or realising a slight underachievement of target
- **Red**: Forecasting or realising a significant underachievement of target

Project Delivery Tables

- **Green**: Delivery projected on or before target date
- **Amber**: Delivery projected after target date, but with measures in place to meet the target date (this may include redefining the target date to respond to emerging issues/information)
- **Red**: Delivery projected after target date, without clear measures proposed/in place to meet the target date

APPENDIX 7: COMPLETED GCP PROJECTS

Project		Completed	Output	Related Ongoing Projects	Outcomes, Monitoring & Evaluation
Transport projects					
Ely to Cambridge Transport Study		2018	Report, discussed and endorsed by GCP Executive Board in February 2018.	Waterbeach to Cambridge	
A10 Cycle Route (Shepreth to Melbourn)		2017	New cycle path, providing a complete Cambridge to Melbourn cycle route.	Melbourn Greenway	
Cross-City Cycle Improvements	Hills Road / Addenbrookes Corridor	2017	Range of improvements to cycle environment including new cycle lanes.	Cross-City Cycling	
	Arbury Road Corridor	2019	Range of improvements to cycle environment including new cycleway.	Cross-City Cycling	Impact evaluated by SQW in 2019 as part of GCP Gateway Review.
	Links to Cambridge North Station & Science Park	2019	Range of improvements to cycle environment including new cycle lanes.	Cross-City Cycling	Impact evaluated by SQW in 2019 as part of GCP Gateway Review.
	Links to East Cambridge and NCN11/ Fen Ditton	2020	Range of improvements to cycle environment including new cycle lanes.	Cross-City Cycling	

	Fulbourn/ Cherry Hinton Eastern Access	2021	Range of improvements to cycle environment including new cycle lanes.	Cross-City Cycling	
Greenways Quick Wins		2020	Range of cycle improvements across Greater Cambridge e.g. resurfacing work, e.g. path widening etc.		
Greenways Development		2020	Development work for 12 individual Greenway cycle routes across South Cambridgeshire.	All Greenways routes	
Cambridge South Station Baseline Study (Cambridgeshire Rail Corridor Study)		2019	Report forecasting growth across local rail network and identifying required improvements to support growth.	Cambridge South Station	
Travel Audit – South Station and Biomedical Campus		2019	Two reports: Part 1 focused on evidencing transport supply and demand; Part 2 considering interventions to address challenges.	Cambourne to Cambridge; CSETS; Chisholm Trail; City Access; Greenways (Linton, Sawston, Melbourn)	
Chisholm Trail Cycle links - Phase 1		2021	A new walking and cycling route, creating a mostly off-road and traffic-free route between Cambridge Station and the new Cambridge North Station	Chisholm Trail Cycle links – Phase 2	
Histon Road bus and cycling priority		2021	Better bus, walking and cycling facilities for those travelling on this busy key route into Cambridge.		

Smart programme projects				
ICP Development – Building on the Benefits	2021	Data platform in operational use. Parking, Bus and Road Network datasets and analytic tools available for use.	Strategic Sensing Network CPCA Transport Data Platform	Better insight and information for the transport network is now available
Data Visualisation – Phase Two	2021	Visualisations of Automatic Number Plate Recognition (ANPR) data Connectivity to County Council PowerBI services enabled.	Strategic Sensing Network CPCA Transport Data Platform	Enhanced insights extracted from 2017 ANPR survey
New Communities - Phase One (Extended)	2021	Three topic papers for North East Cambridge Area Action Plan (AAP) and input into Local Plan		Smart solutions and connectivity principles embedded in area action plan
Smart Signals – Phase One	2021	Installation of smart signal sensors at 3 junctions (Hills Road)	Smart Signals – Phase Two Smart Signals – Phase Three	Will be realised as part of the following phases
Strategic Sensing Network – Phase One	2021	Gathering requirements and developing specification	Strategic Sensing Network – Phases Two and Three	Will be realised as part of the following phases
C-CAV3 Autonomous Vehicle Project	2021	Successful trial of autonomous shuttle on the West Cambridge site. Development of safety cases for this trial and to support future work. Development of business cases for potential future opportunities in Greater Cambridge		Successful demonstration of the utilisation of autonomous vehicles as part of the future public transport system
Digital Wayfinding	2021	Upgrade of wayfinding totem at Cambridge station and		Improved wayfinding experience for travellers

		development of walking routes map for display.		
Housing projects				
Housing Development Agency (HDA) – new homes completed	2018	New homes directly funded by the GCP have all been completed. 301 homes were completed across 14 schemes throughout Greater Cambridge.		

APPENDIX 8: EXECUTIVE BOARD FORWARD PLAN OF KEY DECISIONS

Notice is hereby given of:

- Decisions that that will be taken by the GCP Executive Board, including key decisions as identified in the table below.
- Confidential or exempt executive decisions that will be taken in a meeting from which the public will be excluded (for whole or part).

A 'key decision' is one that is likely to:

a) Result in the incurring of expenditure which is, or the making of savings which are, significant having regard to the budget for the service or function to which the decision relates; and/or
b) Be significant in terms of its effects on communities living or working in the Greater Cambridge area.

Executive Board: 28th September 2023	**Reports for each item to be published 14th September 2023**	**Report Author**	**Key Decision**	**Alignment with Combined Authority**
Making Connections: Public Transport and City Access Strategy.	To consider an Outline Business Case (OBC) which looks at a range of scenarios for amending the Making Connections proposals.	Lynne Miles	Yes	CA LTP Passenger Transport / Interchange Strategy
Future Investment Strategy.	To consider and agree an updated investment strategy for the GCP's Programme.	Niamh Matthews	Yes	N/A
Cambridge South East Transport Scheme Phase 2.	To receive an update the on the scheme and agree next steps.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy

Waterbeach to Cambridge.	To consider the Outline Business Case and programme for delivery for the Waterbeach to Cambridge Public Transport Corridor and to agree to the change of route alignment for the Waterbeach Greenway.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Eastern Access	To consider the Outline Business Case and programme for delivery for the Eastern Access Public Transport Corridor.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
GCP Quarterly Progress Report.	To monitor progress across the GCP work streams, including financial monitoring information [to include update on maintenance arrangements].	Niamh Matthews	Yes	N/A
Executive Board: 14th December 2023	**Reports for each item to be published 4th December 2023**	**Report Author**	**Key Decision**	**Alignment with Combined Authority**
GCP Quarterly Progress Report.	To monitor progress across the GCP work streams, including financial monitoring information.	Niamh Matthews	Yes	N/A
Making Connections: Public Transport and City Access Strategy.	TBC	Lynne Miles	Yes	CA LTP Passenger Transport / Interchange Strategy
Foxton Travel Hub. (Subject to Cambridgeshire County Council Planning Decision).	To sign off the Full Business Case and agree next steps.	Peter Blake	No	CA LTP Passenger Transport / Interchange Strategy

Waterbeach Station.	To sign off the Full Business Case and next steps.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Chisholm Trail – Phase 2.	To receive feedback on the consultation and agree next steps.	Peter Blake	No	CA LTP
Cycling Plus.	To consider the Strategic Outline Business Case.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Greenways: Fulbourn.	To consider the Outline Business Case	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Executive Board: 7th March 2024	**Reports for each item to be published 26th February 2024**	**Report Author**	**Key Decision**	**Alignment with Combined Authority**
GCP Quarterly Progress Report.	To monitor progress across the GCP work streams, including financial monitoring information.	Niamh Matthews	Yes	N/A
Greenways: St Ives (Swavesey) and Waterbeach.	To consider the Outline Business Case.	Peter Blake	No	CA LTP Passenger Transport / Interchange Strategy

Cambridge Road Network Hierarchy Review.	To consider feedback on the consultation and agree next steps.	Isobel Wade	No	CA LTP Passenger Transport / Interchange Strategy
Cambridge South West Travel Hub. (Subject to Cambridgeshire County Council Planning Decision).	To sign off the Full Business Case and next steps.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Madingley Road.	Consider the outcome of the consultation and agree next steps.	Peter Blake	Yes	CA LTP Passenger Transport / Interchange Strategy
Executive Board: 17th June 2024	**Reports for each item to be published 17th June 2024**	**Report Author**	**Key Decision**	**Alignment with Combined Authority**
GCP Quarterly Progress Report.	To monitor progress across the GCP work streams, including financial monitoring information.	Niamh Matthews	Yes	N/A

Executive Board meeting	Reports for each item published	Joint Assembly meeting	Reports for each item published
28th September 2023	18th September 2023	7th September 2023	25th August 2023
14th December 2023	4th December 2023	23rd November 2022	13th November 2022
7th March 2024	26th February 2024	15th February 2024	5th February 2024
27th June 2024	17th June 2024	6th June 2024	24th May 2024
26th September 2024	16th September 2024	5th September 2024	23rd August 2024
12th December 2024	2nd December 2024	21st November 2024	11th November 2024

GREATER CAMBRIDGE CITY DEAL ASSURANCE FRAMEWORK

PART 1
MEMBERSHIP, GOVERNANCE AND WORKING ARRANGEMENTS

1.1	This Local Assurance Framework (LAF) for the Greater Cambridge City Deal outlines the membership, responsibilities, processes and principles that are in place for agreeing and overseeing investments to deliver the overarching City Deal objectives (as set out in 1.9 below). Local partners are committed to ensuring that robust systems and processes are in place, in line with up to date Treasury and DfT guidance, to develop and agree a deliverable programme that offers value for money.
1.2	Part 1 provides an outline of the objectives, membership, governance and working arrangements of the Greater Cambridge Partnership (GCP). Part 2 sets out scheme prioritisation. Part 3 deals with scheme assessment and investment decisions. Part 4 focuses on scheme delivery and assurance.
1.3	The first version of this LAF was agreed at the Greater Cambridge City Deal Shadow Board on Wednesday 02 July 2014 and ensured compliance with DfT's minimum requirements for Assurance Frameworks[1]. This version of the Framework underwent an officer review in May 2023, and it was determined that the document is still in line with up to date national Guidelines and Legislation, and ensures compliance with the Ministry of Housing, Communities and Local Government's National Local Growth Assurance Framework (NLGAF). As required by the NLGAF, this Framework will be reviewed and refreshed by the Greater Cambridge Partnership (GCP) regularly (at a minimum annually), who will notify the Ministry of Housing, Communities & Local Government (MHCLG) if considering any significant changes to this LAF.
1.4	Since this LAF was initially agreed, at the direction of the Executive Board, officer and delivery capacity has been significantly increased through the establishment of a dedicated officer team. This includes a dedicated Transport Director post and a Chief Executive post, which work in partnership with senior officers at partner local authorities and with business and academia to deliver the City Deal objectives. In addition, and at the direction of the Executive Board, the City Deal was rebranded and has since become known as the GCP.

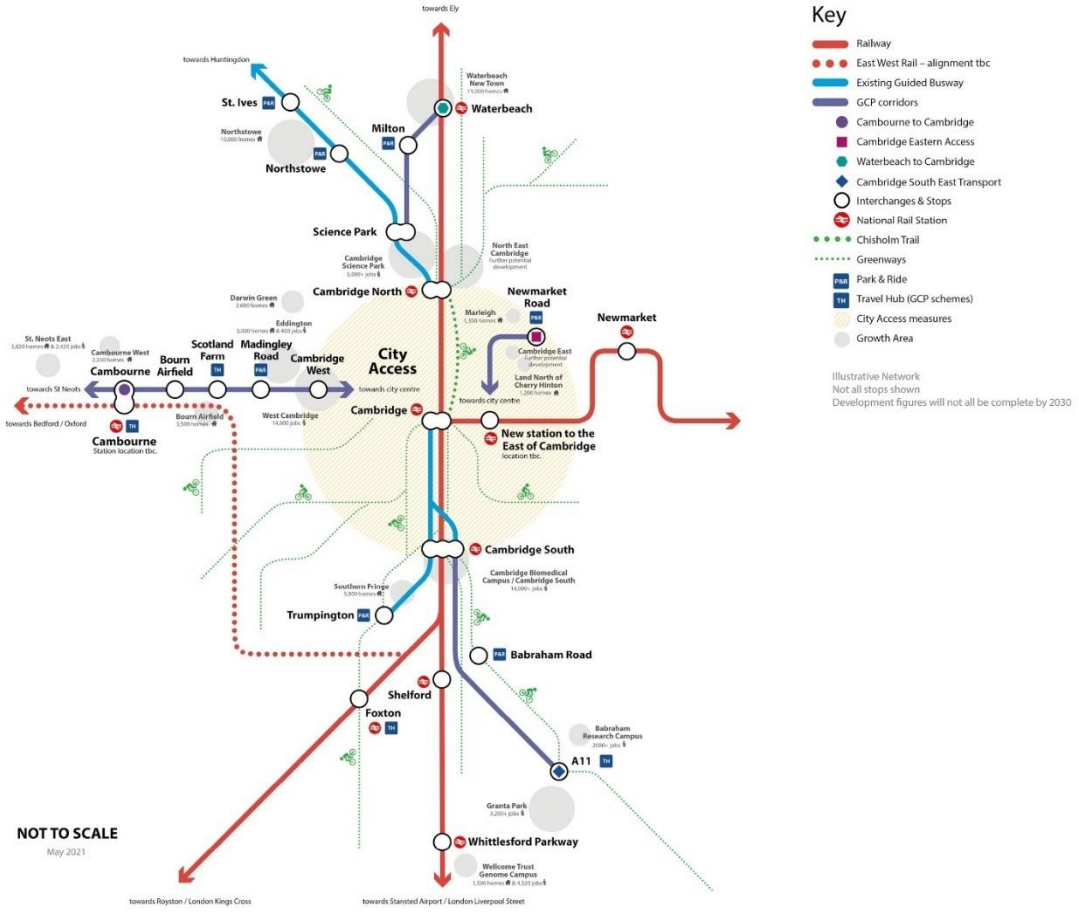
AIMS AND OBJECTIVES

1.5	The GCP area covers the administrative area of Cambridge City and South Cambridgeshire, which is referred to from here on as 'Greater Cambridge'.

[1] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/15176/guidance-local-transport-bodies.pdf

1.6	The core driving principle of the Greater Cambridge City Deal is to unleash the potential of the 'Cambridge Phenomenon' by relieving the transport, housing and skills constraints that currently prevent it from driving growth nearly as effectively as it could do. Investment is needed to deliver fast, reliable and affordable ways of travelling between employment and housing hubs. We need the right number, types and tenures of housing, in the right places and well-connected to employment centres, so that workers can find the housing they need and can afford, and can get to work to take up the jobs essential to the economic success of Greater Cambridge and the UK.
1.7	GCP partners will prioritise projects that deliver against four strategic objectives: • Nurture the conditions necessary to unlock the potential of Greater Cambridge to create and retain the international high-tech businesses of the future. • Better target investment to the needs of our economy by ensuring those decisions are informed by the needs of businesses and other key stakeholders such as the Universities. • Markedly improve connectivity and networks between clusters and labour markets so that the right conditions are in place to drive further growth. • Ease the labour market by investing in transport and housing, in turn allowing a long-term increase in jobs emerging from our internationally competitive clusters and more University spin-outs.
1.8	Investment decisions will be made with reference to statutory requirements, conditions of funding and local objectives, including those outlined in 1.6 and 1.7 above.

Greater Cambridge Future Network 2030



ROLE AND STRATEGIC OBJECTIVES

1.9	The overarching aims of the City Deal are to address inadequate transport infrastructure and links, poor housing affordability and the lack of alignment of skills provision with employer needs. The highest priority of the Greater Cambridge City Deal is about investing in transport infrastructure to help deliver high quality, efficient and reliable passenger transport links to provide better connections between key destinations, including the city-region's major employment hubs and development sites, and to help facilitate planned growth and unlock the next phase of the 'Cambridge Phenomenon'.
1.10	The programme was developed based on the Transport Strategy for Cambridge and South Cambridgeshire (TSCSC, agreed March 2014), a sub- strategy of the Cambridgeshire Local Transport Plan aligning with the emerging Local Plans for Cambridge and South Cambridgeshire. The transport policy objectives of the TSCSC were: • To ensure that the transport network supports the economy and acts as a catalyst for sustainable growth. • To facilitate the delivery of the new homes and settlements envisaged in the draft Local Plans. • To enhance accessibility to, from and within Cambridge and South Cambridgeshire (and beyond the strategy area). • To ensure good transport links between new and existing communities, and the jobs and services people wish to access. • To prioritise sustainable alternatives to the private car in the strategy area, and reduce the impacts of congestion on sustainable modes of transport. • To meet air quality objectives and carbon reduction targets, and preserve the natural environment. • To ensure that changes to the transport network respect and conserve the distinctive character of the area and people's quality of life. • To ensure the strategy encourages healthy and active travel, supporting improved well-being. • To manage the transport network effectively and efficiently. • To ensure high quality in the build and design of the built infrastructure and public realm. **Figure 1: TSCSC Transport Policy Objectives (2014)**
1.11	In May 2017 a Mayor for Cambridgeshire and Peterborough was elected and the Cambridgeshire and Peterborough Combined Authority (CPCA) was created. The CPCA became the Local Transport Authority for the area. It adopted an amalgamation of the existing Cambridgeshire Local Transport Plan and Peterborough Local Transport on an interim basis.

1.12	A new Local Transport Plan[2] (LTP) was adopted by the CPCA in 2020. The GCP programme aligns with the LTP, with GCP schemes included throughout relevant parts of the LTP. The objectives of the LTP are:

Figure 2: Cambridgeshire & Peterborough Local Transport Plan Objectives (2020)

NON-TRANSPORT INTERVENTIONS

1.13	Given the nature of the City Deal programme, which is substantially based on transport and infrastructure schemes, this Assurance Framework has been agreed on that basis. Additionally, the City Deal commits the local area to deliver less substantial interventions on skills and housing, in addition to interventions through the Smart Cambridge workstream to enable the local area to maximise the quality and longevity of the benefits delivered by City Deal investments. Interventions in those policy areas will take account of the related guidance in the MHCLG's Local Growth Assurance Framework. Relevant sections are as follows: ***Housing and Commercial Interventions*** *LEPs [in this case the GCP and its Accountable Body] will be expected to base their local arrangements on Homes England good practice, advice and guidance tailored to local circumstances, or put in place equivalent robust local arrangements to ensure value for money and effective delivery of housing, regeneration and related infrastructure schemes.*

[2] https://mk0cpcamainsitehdbtm.kinstacdn.com/wp-content/uploads/documents/transport/local-transport- plan/LTP.pdf

	Skills [Capital Schemes] *It is…expected that LEPs [in this case the GCP and its Accountable Body] will base their local processes on Education and Skills Funding Agency good practice, advice and guidance, tailored to local circumstances, or put in place equivalent robust local arrangements to ensure value for money and effective delivery of skills capital schemes, through strong project development, project and options appraisal, prioritisation, and business case development.*
1.14	Account of this guidance will be taken when the GCP is designing and delivering interventions in these policy areas.

MEMBERSHIP AND GOVERNANCE

1.15	The City Deal was initially expected to be governed by a Combined Authority based on a Greater Cambridge geography, including the area covered by Cambridge City Council and South Cambridgeshire District Council. Proposals for a Combined Authority on a Greater Cambridge geographic footprint were not agreed. As above, a proposal for a Mayoral Combined Authority covering the larger geography of Cambridgeshire and Peterborough was agreed in 2016 via the Cambridgeshire and Peterborough Devolution Deal. The Devolution Deal acknowledges the principle of subsidiarity in terms of the delegation of responsibility for 'City Deal mechanisms': *"The local authorities of Cambridgeshire and Peterborough recognise and have agreed that the principle of subsidiarity should apply to the discharge of functions by the Mayor and Combined Authority and governance of this devolution deal. This includes the delegation of responsibility from the Combined Authority to individual Councils or appropriate bodies, such as City Deal mechanisms, for delivery".*

THE EXECUTIVE BOARD AND JOINT ASSEMBLY

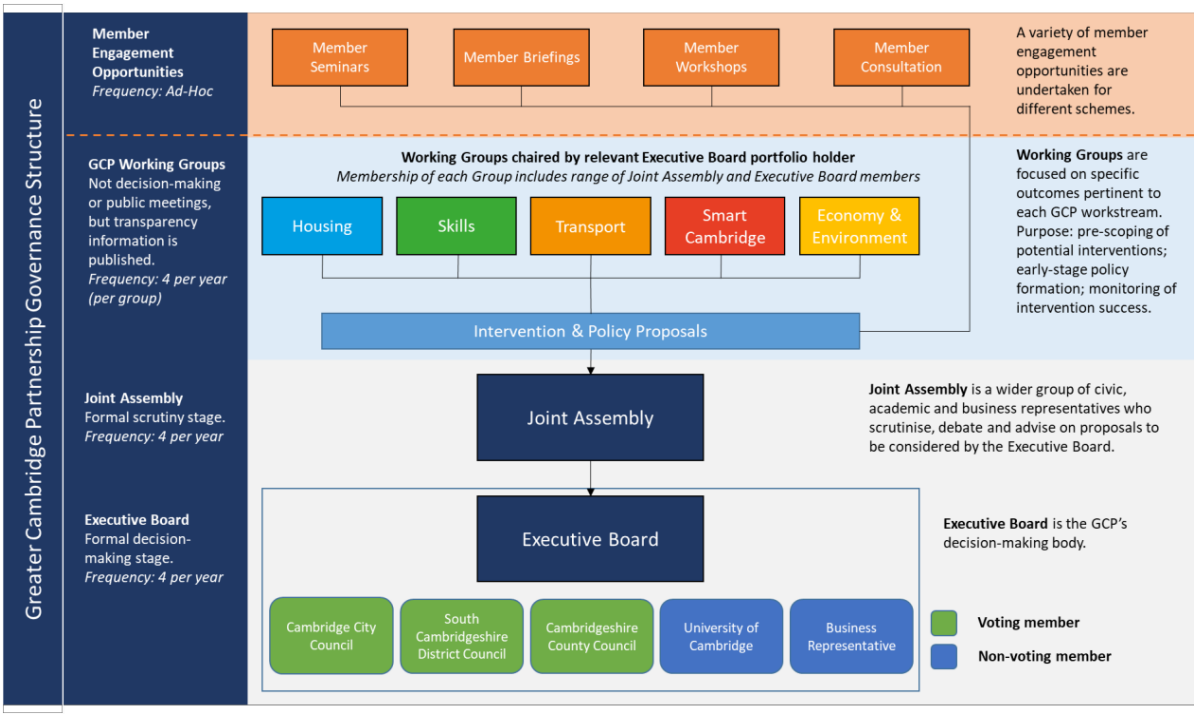


Figure 3: Greater Cambridge Partnership Governance Structure

LEGISLATIVE BACKGROUND AND DELEGATIONS

1.16	The GCP Executive Board has been established by Cambridge City Council, Cambridgeshire County Council and South Cambridgeshire District Council. It is a joint committee of the three Councils, established by Cambridgeshire County Council under section 102(1) (b) of the Local Government Act 1972 and by Cambridge City Council and South Cambridgeshire District Council under section 9EB of the Local Government Act 2000. The three Councils have agreed to delegate exercise of their functions to the Executive Board to the extent necessary to enable the Executive Board to pursue and achieve the objectives of the Greater Cambridge City Deal and to undertake any actions necessary, incidental or ancillary to achieving those objectives, and, accordingly, the three Councils have made the necessary changes to their respective schemes of delegation. The Executive Board may further delegate to officers of the three Councils.
1.17	The GCP Joint Assembly has been set up by the constituent councils as a joint advisory committee of the three Councils, established under section 102(4) of the Local Government Act, 1972. The Joint Assembly acts as a forum for discussion with a wider range of members and stakeholders across the Greater Cambridge area, so that the Executive Board benefits from a wider range of expertise in making its decisions.
1.18	Local democratic accountability is a key requirement for the GCP and, as such, local Members have a key decision-making role. Democratic accountability will be assured as both levels of governance consist of a majority of elected representatives (noting that the Joint Assembly plays a scrutiny role and therefore does not require voting arrangements).

ROLE OF GCP COMMITTEES IN THE DECISION-MAKING PROCESS

1.19	The Executive Board is the GCP decision-making body and its role is to ensure that the objectives of the Greater Cambridge City Deal are met. To this end, the Executive Board has oversight of the strategic direction and delivery of the City Deal and its objectives. The Executive Board is also responsible for the commissioning of projects funded by money provided through the City Deal and for overall control of that programme of investments. The Senior Responsible Owner (SRO) for each individual project is responsible for the management of that budget and the achievement of project objectives, under the oversight of the Executive Board. This arrangement also applies to circumstances in which funding is provided to the Executive Board by the member Councils or by other parties, such as the Business Board (constituted in September 2018, the Business Board of the Cambridgeshire and Peterborough Combined Authority is the Local Enterprise Partnership (LEP) for the region, replacing the previous Greater Cambridge, Greater Peterborough Local Enterprise Partnership
1.20	A key role of the Executive Board is to agree and oversee the delivery of a programme of major schemes that will help to achieve the City Deal aims and support the sustainable growth and continued prosperity of the Greater Cambridge city-region, in line with national and local policy objectives and the Business Board's overarching economic strategy for the area. In particular the Executive Board will: • Take responsibility for ensuring value for money is achieved. • Identify a prioritised list of investments within the available budget. • Make decisions on individual scheme approval, investment decision-making and release of funding, including scrutiny of individual scheme business cases. • Monitor the progress of scheme delivery and spend.

	Actively manage the budget and programme to respond to changed circumstances - these might include challenges (e.g. scheme slippage, cost increases, changes in national policy) or opportunities (e.g. to better align with other work programmes, to deliver additional benefits) at the operational or strategic level.
1.21	The Joint Assembly is established to advise the Executive Board on the discharge of its functions and the effective delivery of schemes to achieve the City Deal aims and support the sustainable growth and continued prosperity of the Greater Cambridge city-region, in line with national and local policy objectives and the Business Board's overarching economic strategy for the area. As noted in 1.18 above, the Joint Assembly may receive and comment on ("pre-scrutinise") reports to the Executive Board and may review its work.
1.22	As highlighted by Figure 3 above, consideration of proposals by the Executive Board and Joint Assembly constitutes the formal decision-making process for the GCP. Reports making recommendations to the Executive Board will typically be considered first by the Joint Assembly to enable it to fulfil its scrutiny function. The Joint Assembly's feedback on each report will be considered and summarised in the final reports made to the Executive Board, with effort made to address the feedback (e.g. by amending the recommendations made to the Executive Board) wherever possible. The Executive Board is then responsible for considering the final recommendations made within the reports presented at its meetings and deciding whether to approve the recommendations, voting on the basis outlined in 1.24.
1.23	In exceptional circumstances, the Executive Board may be asked to make a decision without prior scrutiny by the Joint Assembly. This should occur only where circumstances beyond the control of the SRO mean that that a report, or elements of a report, are not available in time for consideration by the Joint Assembly, and where a delay to consideration of the recommendation(s) to be considered by the Executive Board is considered to pose significant risks to the delivery of the City Deal objectives.

GCP COMMITTEE MEMBERSHIP AND WORKING ARRANGEMENTS

1.24	The Executive Board is made up of one representative of each of the City Deal partners. The legislation on voting rights for co-opted members of joint committees restricts voting rights to elected members of the constituent local authorities in this context. Accordingly, it is not possible for either the University of Cambridge or Business Board representative to have voting rights on the Executive Board. Standing Orders require the voting members of the Executive Board to act with due regard to the opinions of the non-voting members of the Board. The aim of the Executive Board is, where possible, to operate on the basis of consensus. Should it not be possible in a specific instance to find a consensus, the issue will be deferred to a later meeting of the Executive Board.
1.25	The Joint Assembly's membership is made up of three elected councillors from each of the three councils in the Greater Cambridge area, reflecting the political composition of the Greater Cambridge area. The other City Deal partners each nominate three representatives, including stakeholders from a range of organisations within the business and academic communities in order to reflect the interests of the remaining City Deal partners.
1.26	The terms of reference for the Executive Board and the Joint Assembly, agreed by the partner Councils, include details of the agreed timetable for publishing meeting papers, which exceed the statutory notice period. At least five clear working days before a meeting, a copy of the agenda and associated papers will be sent to every member of the committee set to meet. Other than in exceptional circumstances, this will take place five working days before the deadline for submission of public

	questions: in practice, this amounts to eight clear working days before the meeting in question.
1.27	Both the Executive Board and the Joint Assembly meet at least four times a year. A copy of their terms of reference and standing orders are attached as Appendix 1 and Appendix 2.

DELEGATIONS TO GIVE EFFECT TO GCP DECISIONS

1.28	As identified in 1.19, the Executive Board is responsible for the commissioning of projects. The SRO for each individual project is responsible for delivery of the agreed budget and the achievement of project objectives, under the oversight of the Executive Board.
1.29	The GCP also has a nominated Chief Finance Officer role. Due to Cambridgeshire County Council's responsibility as the Accountable Body for the GCP (discussed in more detail in sections 1.45-1.50), this is fulfilled by Cambridgeshire County Council's Section 151 Officer. Authority is delegated to the Section 151 Officer to give effect to Executive Board decisions and ensure effective management of the GCP's funds in accordance with: • Relevant provisions in Cambridgeshire County Council's Scheme of Delegation[3]; • The Financial Procedure Rules of Cambridgeshire County Council[4]
1.30	The GCP Transport Director has delegated authority to take all operational decisions necessary to secure the provision of services and/or discharge of statutory functions in relation to delivery of agreed Greater Cambridge Partnership infrastructure schemes. This includes the power to enter into contracts, in accordance with the approved policies and Financial Procedure Rules of Cambridgeshire County Council, and in consultation with the Greater Cambridge Partnership Solicitor.

OFFICER AND PARTNER SUPPORT STRUCTURE

1.31	As set out at 1.34 the GCP, at the direction of the Executive Board, has a dedicated, independent officer structure. To supplement the expertise of the dedicated officer structure, senior officers and appropriate counterparts from across the partners are included in a formalised Leadership Group.
1.32	The Leadership Group is made up of key senior officers and stakeholders that develop the programme, work up scheme details and inform a lead officer, where relevant, who reports to the Executive Board on progress and seeks decisions on key matters.
1.33	The Leadership Group works together to progress the City Deal agenda, with a focus on transport, affordable housing, skills and the economy and environment. GCP officers support the development of the programme, working hand-in-hand with the partners in support of facilitating delivery of the Local Plans and driving economic growth.
1.34	The officer Leadership Group consists of a core group of senior officers from across the Partnership: • GCP Chief Executive • GCP Transport Director

[3] *Found under Part 3D of the Cambridgeshire County Council Constitution, available online: https://www.cambridgeshire.gov.uk/council/meetings-and-decisions/council-constitution*

[4] *Found under Part 4-5 of the Cambridgeshire County Council Constitution, available online: https://www.cambridgeshire.gov.uk/council/meetings-and-decisions/council-constitution*

	• GCP Assistant Director, Strategy and Programme • GCP Assistant Director, Sustainable and Inclusive Growth • City Access Programme Director • GCP Head of Innovation and Technology • GCP Head of Communications • Assistant Director: Transport, Strategy and Network Management, Cambridgeshire County Council • Executive Director, Greater Cambridge Shared Planning Service • Assistant Chief Executive, Cambridge City Council • Section 151 Officer and Director of Finance, Cambridgeshire County Council (currently represented by nominated officer – Service Director finance and procurement (Deputy Section 151 Officer). • Director Smart Cambridge Programme, Cambridgeshire County Council • Public Affairs Manager, University of Cambridge
1.35	As above, the group includes the GCP's dedicated senior officer team and is supplemented with other senior officers relating to specific areas of specialism when required at differing times, recognising the variety of aspects of the City Deal. This needs to be flexible to allow appropriate consideration at the relevant times of issues that arise, recognising that the City Deal is about more than just transport infrastructure. The membership of the Leadership Group will remain agile in order to adapt to the workload at the time.
1.36	A key role of this group is to develop and deliver the City Deal programme. This involves putting in place processes, resources and guidance to steer, develop and deliver the programme in line with Executive Board and Government requirements. This includes advising on business case and scheme development work, reviewing appraisals, value for money statements and independent scrutiny advice. The Leadership Group will be responsible for making recommendations to the Executive Board on the basis of the evidence and technical/ independent advice in relation to priorities and progress including reporting on risks, resources, scheme development and delivery, as well as updating on next steps and reviewing progress.
1.37	In addition to the strategic oversight of the Leadership Group, the GCP transport programme is overseen by the Transport Programme Board, which offers assurance of project delivery across the overarching programme, including reviewing project status, progress and risks and meeting on a monthly basis. This Board provides a further layer of governance and oversight on the GCP transport programme, ensuring impact, benefits and value for money can be delivered across the programme.
1.38	The scrutiny and recommendations of each business case/case for investment are overseen by the GCP's Accountable Body (Cambridgeshire County Council). The GCP's Accountable Body including the S151 officer sits outside the dedicated officer structure/management unit. The SRO (inside the Management Unit) makes recommendations that are then reviewed and agreed by the Accountable Body.

ENGAGEMENT WITH LOCAL PARTNERS AND OTHER INSTITUTIONS

1.39	As noted above, the GCP committee structure incorporates key stakeholders from the civic, academic and business communities in Greater Cambridge, including ensuring that the political representation on the Joint Assembly reflects the political make-up of the constituent Councils.

1.40	The GCP is committed to working closely with the Mayor for Cambridgeshire and Peterborough and the Cambridgeshire and Peterborough Combined Authority to work towards shared objectives to the benefit of Greater Cambridge and the wider region. In view of this, the Mayor of Cambridgeshire and Peterborough is currently a regular invitee to the GCP Executive Board, at the discretion of the Chair of the Executive Board, in accordance with the Executive Board Terms of Reference.
1.41	Members of the public and other institutions are able to engage with the GCP throughout the scheme development and decision-making process in a range of ways. The GCP subscribes to the Cambridgeshire County Council consultation principles[5] which set out a commitment to carry out meaningful engagement and consultation with the public when making decisions. The GCP has a process to receive petitions regarding GCP projects through the Joint Assembly, which is set out on the GCP website[6]. Members of the public are also able to ask questions at meetings of both the Joint Assembly and the Executive Board, where questions relate to items that are on the agenda for discussion at the meeting in question.
1.42	On specific schemes, the GCP uses a variety of approaches to gather community feedback, in addition to formal consultations. Additionally, in October 2018, the Executive Board adopted a place-based public engagement strategy[7], which emphasises how schemes relate to and work with each other, as opposed to focusing purely on single projects. Place-based engagement also helps communities to offer their views on the benefits and impacts of GCP (and other) interventions in a holistic way.
1.43	In September and October 2019, a Greater Cambridge Citizens' Assembly met, supported by the GCP[8]. The recommendations from the Citizens' Assembly were presented to the Joint Assembly and Executive Board in early 2020. On 19th February 2020, the Executive Board agreed to the Citizens' Assembly's request for "regular reviews of progress in the longer-term"[9]. The GCP will meet this commitment, initially with reports presented to the Joint Assembly and Executive Board in December 2020 and a follow-up report scheduled for 2021.

REVIEWING MEMBERSHIP AND SUCCESSION PLANNING

1.44	The specific details and modus operandi are set out in the Executive Board and Joint Assembly Terms of Reference, as at Appendix 1 and 2 of this Assurance Framework. As set out in the appendices, given the Joint Committee status of the GCP, the GCP itself is not responsible for appointing its own Board members. It is for those responsible for appointing members to make sure that those appointed are skilled and have the necessary authority to speak/act on behalf of the body they represent. Local Authorities have in place training arrangements to ensure new members have access to training and mentoring to enable them to take on any such positions of responsibility.

[5] *Working Together CCC Engagement and Consultation Strategy 2017 (cambridgeshire.gov.uk)*

[6] *https://www.greatercambridge.org.uk/get-involved/get-involved*

[7] *https://scambs.moderngov.co.uk/documents/s107931/10a-PES%20Report.pdf*

[8] *Greater Cambridge Citizens' Assembly*

[9] *Decision statement for the February 2020 Executive Board meeting is available here.*

ACCOUNTABLE BODY

1.45	Cambridgeshire County Council acts as the Accountable Body for the GCP. As such, Cambridgeshire County Council holds funds and oversees payments to delivery partners and suppliers where relevant.
1.46	Cambridgeshire County Council accounts for City Deal funds in such a way that they are identifiable from the Authority's own funds, and provides financial statements to the Executive Board as required. As the Accountable Body, Cambridgeshire County Council will ensure that the following responsibilities are discharged appropriately and effectively: • Ensuring that the decisions and activities conform to legal requirements with regard to equalities, environmental, EU issues, etc. • Ensuring (through the Section 151 Officer) that the funds are used appropriately. • Ensuring that the Assurance Framework as approved by DfT is being adhered to. • Maintaining the official record of proceedings and holding all documents. • Responsibility for the decisions of the Executive Board in approving schemes (e.g. if subjected to legal challenge). • Ensuring all key financial control systems are regularly audited. • Ensuring that the use of all City Deal funds is subject to the usual Local Authority checks and balances – including the financial duties and rules which require councils to act prudently in spending and to ensure that annual accounts are published.
1.47	All financial decisions are overseen by the Section 151 Officer or delegated to an appropriately qualified and experienced member of their team. The S151 officer ensures further scrutiny and oversight by being an active member of the GCP's Leadership Group (as above at section 1.34). In addition, the S151 officer attends or is represented at every Joint Assembly and Executive Board meeting. To ensure transparency and scrutiny they play an active and challenging role.

ACCOUNTABLE BODY - TRANSPARENCY AND ENGAGEMENT OPERATING PRINCIPLES

1.48	The GCP adheres to the corporate polices of its Accountable Body, Cambridgeshire County Council. These include Whistleblowing[10], FOI and EIR Data Sharing[11] and Feedback[12].
1.49	As set out in the Terms of Reference and Standing Orders for the Joint Assembly and Executive Board, elected member conduct (including declarations of interest) is governed by the Code of Conduct of their nominating authority[13]. The non-voting co-opted members are required to have regard to the code of conduct of the administering authority. This is currently Cambridgeshire County Council[14]. Each of the authorities' member codes of conduct explicitly reflect the Seven Principles of Public Life ("the Nolan Principles") which underpin the NLGAF. Each member will adhere to the code of conduct applicable to them, in accordance with the National Local Growth Assurance Framework.

[10] *https://www.cambridgeshire.gov.uk/council/data-protection-and-foi/whistleblowing*

[11] *https://www.cambridgeshire.gov.uk/council/data-protection-and-foi/information-and-data-sharing/requesting- information-under-the-freedom-of-information-act*

[12] *https://www.cambridgeshire.gov.uk/council/contact-us/council-complaints-procedures*

[13] *Please see below links for each of the nominating authorities' codes of conduct:*

Cambridgeshire County Council: https://www.cambridgeshire.gov.uk/council/county-councillors/councillor-code-of-conduct
South Cambridgeshire District Council: https://www.scambs.gov.uk/your-council-and- democracy/feedback/councillor-code-of-conduct/

Cambridge City Council: https://www.cambridge.gov.uk/media/3420/councillors-code-of-conduct.pdf

[14] *https://www.cambridgeshire.gov.uk/council/county-councillors/councillor-code-of-conduct*

1.50	Subject to the usual considerations in local government law regarding confidential/commercially sensitive items, all formal GCP Executive Board and Joint Assembly meetings are held in public, providing an open forum for debate and decision-making, and all papers, technical reports supporting decision-making and scheme business cases will be made available, including publication on the appropriate website, unless there is a requirement for them to remain confidential under the provisions of the Local Government Act.

CONFLICTS OF INTEREST AND HOSPITALITY

1.51	Decisions on the prioritisation of investment for scheme funding are made on an objective basis, using robust business cases to provide evidence on: • Fit with objectives • Value for money • Deliverability • Quality
1.52	Under no circumstances are decisions made on the basis of organisations' subjective interests or individuals' personal gain. Members are asked to declare whether they have any interests up-front when proposals/schemes are being discussed.
1.53	All members are required to produce and regularly update a register of their interests, which is made publicly available on the appropriate website. All elected Members will be required to sign and adhere to their Authority's Member Code of Conduct or that of the Administering Body's for non-Councillor members.
1.54	Members are not allowed to accept any gift or hospitality from any individual or organisation that has a specific interest in any major scheme. Members are required to comply with requirements of the Code of Conduct in relation to this matter.

EQUALITY AND DIVERSITY

1.55	As noted in 1.48, the GCP adheres to the corporate policies of its Accountable Body, Cambridgeshire County Council. This also includes the Council's commitment to achieving equality and diversity. More details on this, including the full Equality Strategy, can be found on the Cambridgeshire County Council website[15].

RECRUITMENT

1.56	As noted in 1.48, the GCP adheres to the corporate policies of its Accountable Body, Cambridgeshire County Council. This also includes the Council's recruitment processes. More details on this, including on equality and diversity in employment and the Council's recruitment privacy notice, can be found on the Cambridgeshire County Council website[16].

[15] *https://www.cambridgeshire.gov.uk/council/communities-localism/equality-and-diversity*

[16] *https://www.cambridgeshire.gov.uk/council/jobs-and-careers*

PART 2
PRIORITISATION

INTRODUCTION

2.1	This Part of the Assurance Framework outlines the development of the GCP's programme prioritisation approach, including: • How the initial infrastructure investment programme was prioritised in January 2015 (section 2.3-2.4); • The subsequent prioritisation approach agreed within the Assurance Framework (section 2.5-2.9); • The GCP's implementation and refinement of this approach through the development of a Future Investment Strategy (FIS), first drafted in March 2018 and updated in December 2020 (section 2.10-2.13)
2.2	The majority of the GCP's investment will be focused on transport infrastructure schemes, such was the purpose of the City Deal. As such, the Assurance Framework is primarily guided by national, regional and local transport guidance and policies. Where there is a case to do so and the GCP invests in projects outside of the transport sector it will adopt a dedicated and bespoke approach based on the most up to date guidance for the relevant policy area. For example, MHCLG Appraisal Guidance and Homes England good practice guidance. In each case, robust local arrangements, to ensure value for money and effective delivery of schemes, through strong project development and prioritisation, will be implemented.

INITIAL PRIORITISED INFRASTRUCTURE INVESTMENT PROGRAMME (JANUARY 2015) AND PRIORITISATION APPROACH

2.3	As set out in sections 1.9-1.10 above, an initial indicative programme based on the Transport Strategy for Cambridge and South Cambridgeshire (TSCSC) was established and agreed by the GCP Executive Board (then known as the Greater Cambridge City Deal Shadow Board) on 14 August 2014. The TSCSC was initially endorsed by the Joint Transport and Spatial Planning Member Group (which includes all three partner Local Authorities) and adopted by County Council Cabinet on 4 March 2014. This Strategy went through extensive consultation, in which over 75% of respondents confirmed they agree or strongly agree with the strategy approach. Following that engagement and an independent economic assessment, the prioritised infrastructure investment programme was agreed by the GCP Executive Board (then known as the Greater Cambridge City Deal Executive Board) on 28 January 2015[17].
2.4	Schemes under consideration for inclusion in the City Deal programme underwent a high-level assessment in line with criteria agreed between local partners and Government within the Assurance Framework at the outset of the City Deal. This ensured that schemes which offered maximum benefits and value for money were prioritised for investment. Figure 4 (below) sets out the criteria used to assess scheme eligibility and prioritisation:

[17] https://scambs.moderngov.co.uk/documents/s78855/Transport%20Schemes%20Covering%20Report.pdf

Figure 4: Scheme Eligibility and Prioritisation Criteria (January 2015)

Eligibility Criteria		Prioritisation Criteria	
Criteria	**Description**	**Criteria**	**Description**
Purpose	The proposal should primarily be a transport scheme with specific user groups in mind (e.g. motorists, bus passengers, cyclists, pedestrians etc.)	**Contribution to objectives**	National policy objectives, regional policy objectives, City Deal, Local Transport Plan objectives (Figure 2), Local Plan and Business Board objectives.
Cost and type	Capital costs and type of scheme	**Value for money**	Value for money based on Benefit Cost Ratio (BCR) and wider economic impacts, significant non-monetised impacts and key uncertainties. Given the recent HMT review of the Green Book and likely emergence of associated guidance, GCP will ensure any such new guidance is reflected in scheme development as soon as available.
Benefits & impact	Key benefits and anticipated impacts to be assessed and would be expected to be over a larger than local area for major schemes	**Environmental and social distributional impact**	Potential benefits and adverse impacts, contribution to addressing Climate Crisis, Biodiversity Net-Gain, Public Sector Equality Duty
Scheme type	These could include highway improvements, public transport improvements, pedestrian/cycle improvement, integrated transport packages, rail improvements, waterways and major maintenance of City Deal-funded infrastructure.	**Deliverability**	Affordability, practicality, key risks, key milestones and stakeholder/public support.
Contribution to policy objectives	The schemes need to show how they contribute to policy objectives (see Figure 1), in particular schemes should demonstrate contribution to economic prosperity and sustainable growth, including through facilitating housing delivery, enhancing connectivity between key employment and development sites, and protecting/enhancing the		

	quality of the environment and quality of life.
Funding sources	What sources of funding are secured/ sought.
Deliverability	The proposed scheme needs a reasonable degree of public support and should be both affordable and deliverable within a clearly defined timescale.

2.5	For schemes considered for inclusion in the programme after the 28th January 2015, where a scheme was deemed to be eligible, the scheme's SRO used and will continue to use, the DfT's Early Assessment and Sifting Tool (EAST) methodology to enable a robust prioritisation exercise to be undertaken. The outcome of this was fed, and will continue to be fed, into the prioritisation process, including assessment against the prioritisation criteria as set out in Figure 4 (above).
2.6	The scheme's SRO then submitted/submits the scheme for prioritisation and review by the Leadership Group (see section 1.34). The Executive Board reserves the right to decide not to include a scheme in the prioritisation process if key information is missing or if it is not based on a robust set of assumptions.
2.7	As described below in section 2.10, the GCP's methodology for prioritisation of schemes has been refined and enhanced through the introduction of the FIS process. This process combines the criteria in Figure 4 with a set of strategic prioritisation criteria detailed in Figure 5. The prioritisation methodology assesses each candidate scheme against the core prioritisation criteria shown in Figure 4 and the strategic prioritisation criteria detailed in Figure 5. The methodology will make use of Multi Criteria Analysis (MCA) which can, where appropriate, assign weightings to ensure that higher priority objectives are used as the basis for scheme prioritisation.
2.8	The greater the Benefit to Cost Ratio (BCR) of a scheme, the higher the value for money it is considered to offer. Value for money assessments will, at the prioritisation stage, be based on available quantitative and qualitative criteria. On the quantitative side, schemes which benefit busier/congested parts of the highway network or larger areas of population may deliver higher value for money. Any existing scheme-specific economic/financial modelling can also be used to assess benefits. Qualitative information may point to benefits for certain target areas or populations, and could also use evidence of the success of similar schemes elsewhere. The important issue is that key assumptions are made explicit and subject to robust challenge. As above in Figure 4, given the recent HMT review of the Green Book and likely emergence of associated guidance, GCP will ensure any such new guidance is reflected in scheme development as soon as available.
2.9	The Executive Board will make decisions on which schemes to prioritise, based on a high-level assessment of contribution to objectives, value for money and deliverability within timescales and available budgets. The Executive Board will be assisted in its decision-making by the relevant senior officer. If a scheme is prioritised by the Executive Board the SRO will then have to undertake an appropriate level of business case work in order to provide the Executive Board with the information it needs to consider approval of the scheme for procurement and construction. Evidence of contribution to objectives (outlined in Figure 1) will be a qualitative assessment, although there will be a need to consider if there are particular objectives (e.g.economic development) that are considered to be a higher priority for

	major schemes. Deliverability will need to be assessed rigorously as the Executive Board cannot prioritise schemes if there is no evidence that they can be delivered within budget and on time. Typically, the Executive Board will review any scheme at the three stages defined by HM Treasury in the Green Book: • Stage 1 – Scoping the scheme and preparing the Strategic Outline Case (SOC) • Stage 2 – Planning the scheme and preparing the Outline Business Case (OBC) • Stage 3 – Procuring the solution and preparing the Full Business Case (FBC)

CURRENT PRIORITISED GCP INVESTMENT PROGRAMME – FUTURE INVESTMENT STRATEGY

2.10	As referenced in 2.7 above, the programme has been and will continue to be regularly reviewed through the FIS review process. The purpose of the FIS is to outline how the GCP will continue to invest in order to maximise the benefits realised by residents and businesses through the delivery of the City Deal. Regular reviews will ensure that the objectives are being met, with the Executive Board making decisions on priorities over time. Decisions continue to be made in line with the eligibility and prioritisation criteria outlined in Figure 4.
2.11	In March 2018, the Executive Board considered and agreed to a draft FIS[18]. The principles of the FIS are based on this Assurance Framework (including Figure 4) and ensure that the investment programme is delivering against its objectives. Following further evidence building (including evidence taken from the 2018 Cambridgeshire and Peterborough Independent Economic Review) and engagement, the FIS was updated and agreed in March 2019[19]. A further updated FIS was agreed in December 2020[20], following a review considering updated evidence, particularly in the light of Covid-19, and reflecting on the City Deal's priorities following the first gateway review. Further review points will be agreed with the Executive Board at appropriate intervals to ensure the programme takes account of new national and local policy and guidance or emerging evidence with a significant bearing on the GCP's programme.
2.12	The FIS agreed in December 2020 is based on a rigorous process of evidence gathering, ensuring that the GCP has identified and is actively delivering a linked network of evidence-based interventions and schemes (as illustrated by the map on page 2). Indicative allocations made by the FIS are supported on the basis of evidence from the Local Transport Plan and the Local Plans.
2.13	The FIS includes a series of strategic prioritisation criteria, designed to ensure that schemes are prioritised which have the greatest potential to deliver the City Deal's objectives. The criteria are based on the core eligibility and prioritisation criteria identified in Figure 4. However, the FIS has developed the core criteria over time in order to capture new and emerging strategic priorities. For example, in December 2020, the FIS strategic prioritisation criteria were updated to emphasise the importance of environmental objectives, reflecting the net zero carbon ambitions of the three partner councils, as shown in Figure 5 below and overleaf.

18 *https://scambs.moderngov.co.uk/documents/s105084/Item%2011_Future%20Investment%20Strategy.pdf*
19 *The FIS was updated and agreed in March 2019*
20 *A further updated FIS was agreed in December 2020*

Figure 5: 2020 Future Investment Strategy Programme Prioritisation Criteria

STRATEGIC		**New?**
How does the scheme facilitate City Deal objectives?	What is the likely impact on facilitating economic growth of doing the scheme vs. not doing the scheme?[21]	
	What is the impact on the labour market of doing the scheme? [22]	
How does the scheme facilitate environmental objectives?	Will the scheme clearly support the delivery of net-zero carbon objectives across Greater Cambridge?	✓
	To what extent will delivery of the scheme result in environmental 'net gain'?	✓
TRANSPORT		
What is the impact on people's travel choices?	Overall journey time improvement	
	Impact on journey reliability	
	Capacity improvement	
	Competitiveness analysis of car vs. public transport and/or active travel	
Scale of impact	Connecting how many homes to how many jobs, to include: - Existing homes - Enabling or facilitating new homes	
	Connecting different employment sites to encourage knowledge exchange	
OVERALL		
Is the scheme deliverable?	Is the scheme affordable for GCP?	
	Is the scheme deliverable within the City Deal timescales?	
	Consideration of other factors, including practicality, risk analysis and stakeholder support	
Is the scheme value for money and financially sustainable?	Including, if applicable: - funding identified beyond the City Deal period - potential to recycle funds or generate future revenue	
How does the scheme interact with other schemes (both GCP and non-GCP)?	In particular, alignment with CPCA schemes, and interaction with other proposed strategic infrastructure schemes e.g. East-West Rail	
Other policy impacts	To what extent is the scheme tailored to emerging trends in working and travel for work behaviours?	✓
	Social distributional impacts	
	Are there any impacts that severely deteriorate or negate the positive impacts?	
	What is the likely impact on air quality?	
	What is the impact on public realm? (alignment with spaces and movement SPD)	

2.14	When considering the deliverability of a given scheme, it is the responsibility of the SRO to ensure that sufficient mechanisms are in place to monitor and evaluate the proposal if progressed to delivery.

[21] This would be measured in line with government's criteria moving to Gateway 2025.

[22] For transport projects this measure would use connectivity and competitiveness measures. For other projects this could include looking at number of apprenticeships supported, or number of jobs created.

PART 3
SCHEME ASSESSMENT AND INVESTMENT DECISIONS

3.1	The NLGAF states that all LAFs should present robust processes for funding decisions which incorporate impartial advice and consider appropriate checks and balances "so that all competing business cases are presented fairly and accurately". The following sections outline the robust processes followed by the GCP. The GCP is committed to ensure transparency in decision-making processes and appropriate checks and balances, as outlined below and in the sections on the GCP's Accountable Body (1.45-1.50).

BUSINESS CASE PROCESS

3.2	The comprehensive process and stages for the development of a Full Business Case are shown in Figure 6 below. This provides an outline of how the process functions at a high level from Programme Entry through to Full Business Case development.

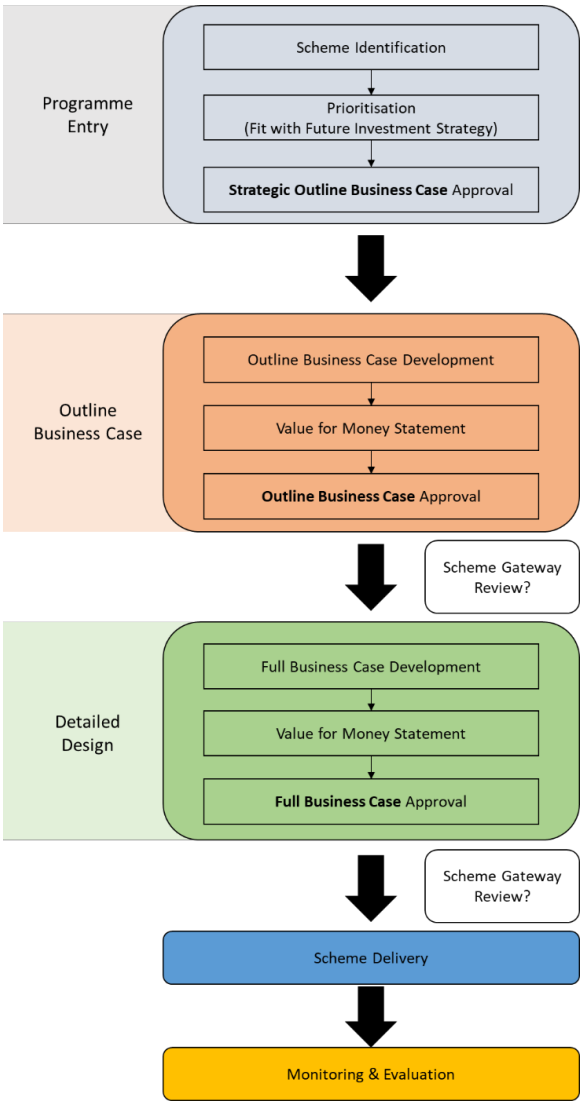


Figure 6 – Indicative Process for Business Case Development

3.3	Throughout Section 1 and 2 of this Assurance Framework, reference is made to the general role and responsibilities of a scheme SRO in relation to scheme prioritisation and oversight by the Executive Board (and Leadership Group). Section 3 discusses in more detail the role and responsibilities of the scheme SRO in scheme development and assessment, including in relation to the role of the GCP Transport Director. In some instances, the GCP Transport Director may take the role of scheme SRO. In those instances, references made to the GCP Transport Director will instead refer to the GCP Chief Executive.
3.4	A scheme SRO has the option to decide to produce a Strategic Outline Business Case (SOBC) for approval before submitting an Outline Business Case (OBC) and finally a Full Business Case (FBC) for full approval. It is for the scheme SRO to agree with the Transport Director (or Chief Executive), in consultation with the Transport Programme Board, whether to seek SOBC and OBC approval before proceeding to develop a FBC, as this depends on the inherent risks involved on potential abortive work and scale of funding requirements. To offer additional oversight, progress on all schemes is reported quarterly to the Executive Board. This allows them to assess the progress of every scheme on a regular basis. The Executive Board has the remit to request specific additional reports or specific additional action be taken on any scheme at any point in the programme.
3.5	Scheme Gateway Reviews in between the phases are also shown in Figure 6. Recognising that they add further cost and delay, decisions around whether or not to conduct a Scheme Gateway Review will be taken on a case-by-case basis by the SRO in consultation with the Transport Director (or Chief Executive).
3.6	Work will be required between or in parallel with the Business Case process which will then inform the next stages, for example securing planning or other consents, detailed design, procurement, etc. This work will support the decision-making process as the FBC cannot be approved without the completion of those tasks.

SCHEME APPRAISAL METHODOLOGY

3.7	For the major schemes, (which are generally those costing over £5m), individual scheme business cases will be expected to meet the requirements of the DfT's Transport Business Case Guidance and TAG with appropriate proportionality, reflecting the scale and nature of the individual scheme. The scale of impacts and scheme value will be considered to ensure a proportionate and pragmatic approach is taken to appraisals. For example, schemes above £5m would be expected to undergo full TAG appraisal. The Executive Board is expected to take a pragmatic and proportionate approach and ensure there is agreement regarding the scope of the TAG appraisal before any substantive work is undertaken.
3.8	It will be up to the scheme SRO to make the case for the proportionate use of TAG based on the type and scale of scheme, modelling requirements, potential environmental and other impacts, and projected social/distributional impacts. Relevant senior officers will need to advise and agree the use of proportionate appraisal in line with DfT guidance on the VfMS[23].

[23] *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/918479/valu_e-for-money-framework.pdf*

3.9	For all schemes, the central case scheme assessments will be required to adopt the latest NTEM (DfT planning dataset) forecasts and this approach will, if appropriate, be supplemented with locally specific land use change figures set out in Local Plans. Alternative options for scheme specifics, e.g. growth opportunities outside Local Plan allocations, may be considered through sensitivity testing.
3.10	Schemes judged to offer less than "High" VFM with a BCR of less than 2:1 will not normally be funded, unless wider appraisal evidence provides a compelling case that investment is required to unlock a barrier to growth, deliver wider economic benefits, environmental and or social/distributional impacts. Such compelling circumstances could include where a scheme clearly addresses strategic national or local objectives, specifically those defined in the Greater Cambridge City Deal, but also potentially in the Cambridgeshire and Peterborough Devolution Deal, the Local Transport Plan, the Local Plan and/or the OxCam Arc Spatial Framework. In determining this process, a formal options selection process will be carried out using the most up to date appraisal guidance e.g. Green Book (as set out in 2.9, Figure 4 and 3.17).
3.11	Where this evidence forms the basis for investment, the scheme SRO will be required to justify the investment through provision of an evidence base and a proportionate quantitative analysis of benefits not included in the central benefit-cost analysis, and to demonstrate how these help deliver the policy objectives, to enable a comparative assessment of the economic case and comparison of the value for money with other schemes in the programme.
3.12	Investment decisions must be based on high quality data and analysis. The scheme SRO should ensure quality analysis in line with the approach set out by the HMT Aqua Book[24]. In particular, the scheme SRO should ensure that a proportionate amount of effort goes into analytical projects, that confidence has been provided that the output is fit-for-purpose and that uncertainty and risks associated with the analysis have been quantified (where appropriate) and actively managed.
3.13	In addition, all proposals must take equalities impacts into account and the Public Sector Equality Duty (PSED) requires that public sector bodies have due regard to equality of opportunity for persons with protected characteristics, eliminating discrimination and fostering good relations between protected groups and others.
3.14	Projects outside the GCP transport infrastructure programme are managed as individual projects, in line with the NLGAF (as above at section 1.13), with governance arrangements made as appropriate to individual projects based on the cost, risk and importance of the scheme to GCP objectives.
3.15	An independent advisor, under the direction of the relevant senior officer, will be appointed to quality assure the work and provide external advice. The role includes providing advice to the scheme SRO, project team and Executive Board and managing the review and authorisation of individual scheme assessments of the schemes going forward. Advice on the requirements for proportionate assessment for individual schemes will be provided at the outset and will inform the need for subsequent reviews. This role will be particularly important if a scheme is controversial or is based on an innovative approach, and will ensure there is no conflict of interest and that scheme assessments are independently scrutinised.

[24] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/416478/aqua_book_final_web.pdf

SCRUTINY AND REVIEW OF BUSINESS CASES

3.16	At each stage of a business case sign off, a Value for Money Statement (VfMS) will be produced by the scheme SRO which will summarise the economic case for the scheme, so that stakeholders can understand the potential costs, benefits and impacts. The robustness of the VfMS will be scrutinised independently and the results of the independent assessment, which will also consider the quality of the evidence upon which it is based will be published as supporting papers, and through this made available to stakeholders and the wider public. Where appropriate, the VfMS will include an overall BCR and a likely Value for Money category, which will compare the monetised benefits with the costs (such as those in relation to journey time savings and the reduction in accidents).
3.17	Business cases must include the methodology used to assess value for money. The degree of detail to which business cases are developed in support of particular projects or programmes should be proportionate to the funding allocated and in line with established Government guidance, including the HM Treasury Green Book and other appraisal guidance (as set out in the NLGAF) for specific thematic interventions where appropriate.
3.18	The independent advisor (who will be independent of the promoting authority) will be responsible for scrutiny of VfMS's and business cases, and the subsequent recommendation to the S151 Officer, who will sign these off as appropriate on the basis of evidence ahead of consideration and approval by the Executive Board.
3.19	Once the major scheme has been included in the programme, the SRO will be required to provide evidence that the scheme still offers value for money and remains deliverable (and therefore should remain in the prioritised programme). The Executive Board then need to approve the relevant business case submissions before the next stage of work can be commenced. The Executive Board can decide to withdraw a scheme from the programme if the scheme is not progressing or the business case does not provide the required assurance of value for money. The assessment and approval of decisions will be based on expert advice provided by technical officers and an independent advisor.
3.20	If more detailed work on a scheme demonstrates that value for money is no longer expected to be delivered, then the SRO must halt further work at that time. Such a decision would require ratification by the Transport Director (or Chief Executive) and GCP Executive Board. The results of procurement for scheme delivery may in some cases reveal additional details that require a further review of the business case and value for money assessment.
3.21	SROs will submit quarterly monitoring information to the GCP Executive Board, which will confirm the programme and budget for each scheme, identify any changes and highlight any key issues. This information will be used to identify scheme specific risks and issues, and will enable the overall programme to be managed effectively.
3.22	SROs are responsible for informing the Executive Board of any changes to the scope of the scheme, the costs and implementation timescales. The Executive Board will be responsible for assessing the impact of any changes on the overall scheme programme and working with the SRO to address any specific issues. Delays to the scheme may mean the Executive Board may decide to re-prioritise the programme and bring forward another scheme that is deliverable within the timescales. It is acknowledged that funds will be required to support the business case development process. Funding required for business case and project development will only be released once initial project approval has been sought via the Executive Board.

	Full Business Case approval based on a final, agreed price, to include appropriate risk- based contingency allowances will be required to secure the release of funds for project implementation.
3.23	Senior officers must engage relevant stakeholders as part of the business case development process and include the results of this engagement in the business case and project documents. Upon completion, SROs will be required to make business case documents available (excluding any commercially sensitive documents) on the relevant website, well in advance of Executive Board meetings where a decision to approve will be considered.

PART 4
SCHEME DELIVERY AND ASSURANCE

CORPORATE POLICIES

4.1	The GCP adheres to the corporate policies of Cambridgeshire County Council as its Accountable Body. In line with the Local Government Transparency Code, information about GCP expenditure is published by Cambridgeshire County Council through its open data portal[25]. Information about contracts and procurement processes, which cover the GCP's activities, is published on the Cambridgeshire County Council website[26].

PROJECT ASSURANCE

4.2	During delivery, scheme costs, timescales, quality, scope and risks are managed using standard project management approaches.
4.3	A realistic and deliverable scheme schedule will be developed to deliver during the City Deal timeframe. This should include estimated timescales for: • Production of the business cases and all associated technical work. • Progress of outline and detailed design. • Statutory Orders. • Public consultation. • Scheme procurement. • Construction.
4.4	Each project within the GCP transport infrastructure programme (which consists of the majority of GCP spend) is considered within the scope of the GCP Transport Programme Board (Programme Board). The Programme Board is not intended to replace or duplicate the management of individual projects, instead seeking to enable effective delivery of the GCP transport infrastructure programme by seeking to address barriers to progress and risk, and by ensuring good governance across the programme. The Programme Board meets monthly, managing by exception. All projects are required to submit monthly project status reports for consideration by the Programme Board. The Programme Board is overseen by the Programme SRO and takes overall responsibility for the identification and management of risk.

25 https://data.cambridgeshireinsight.org.uk/dataset/cambridgeshire-county-council-expenditure-over-%C2%A3500
26 https://www.cambridgeshire.gov.uk/business/supplying-to-the-council

RISK MANAGEMENT

4.5	Risks to the delivery of the scheme will be identified, assessed, mitigated and managed from the outset. Risks will be reviewed, updated and monitored regularly. A robust system of project and risk management is in place for the individual schemes overseen by the Executive Board. This will enable spend profiles to be effectively monitored and managed. Appropriate and proportionate mechanisms have been established (as above) for independent assurance including the introduction of a dedicated senior officer team.

FINANCIAL ASSURANCE

4.6	The GCP is the local delivery body for the Greater Cambridge City Deal, which includes a Government Investment Fund worth up to £500m. The Investment Fund is currently the largest single funding stream made available to the GCP. The economic impact of local investments made using the Investment Fund will be appraised through Gateway Reviews undertaken in April 2020 and April 2025. The accounting of the Investment Fund, and all other GCP funding streams, is managed by Cambridgeshire County Council as the GCP's Accountable Body, as set out in 1.45.
4.7	The approval regime that is adopted by the Executive Board will ensure that the financial interests of the GCP and its Accountable Body are safeguarded and assured and will enable it to fulfil its responsibility to deliver value for money. There will be formal agreements in place between the GCP's Accountable Body and the relevant contractors or suppliers when funding is approved for a scheme, including funding agreements setting out respective responsibilities, milestones and deliverables, including reporting and audit requirements.
4.8	No funding will be allocated to a scheme until the Executive Board has been through the approval process. There will be a formal agreement in place between the GCP's Accountable Body including provisions regarding eligibility of expenditure, cash flow and cost escalation. The funding agreement will contain: • The overall agreed level of funding for the scheme. • The agreed funding profile of the scheme. • General approved conditions (such as the money only being able to be used on capital expenditure). • Any scheme-specific approval conditions (for example in relation to third party contributions).
4.9	SRO's will provide timely updates on progress in order for the programme to be managed effectively. The Accountable Body will regularly monitor and audit the expenditure by requesting evidence that it is being spent against the deliverables of the agreed scheme. The Accountable Body will also advise the Executive Board of any concerns that it has. The Executive Board reserves the right to withhold future funding, or request the return of previous funding, if it believes the money is not being spent on the agreed purpose.

MANAGEMENT OF THIRD PARTIES

4.10	Before any funding is released, the relevant contractor or supplier will need to confirm acceptance of the funding (and the conditions for its use) and that the money will be spent on the agreed purpose. If costs differ from the agreed funding profile, the SRO will need to explain any changes to the Executive Board. Any such changes should be reasonable and initially informally agreed through consultation between the SRO and the contractor or supplier.

MONITORING AND EVALUATING THE IMPACT OF SCHEMES

4.11	A mechanism for the monitoring and evaluation of schemes, which will reflect appropriate guidance, for example the DfT Monitoring and Evaluation (M&E) framework for Local Authority Major Schemes, will be developed by the relevant SRO for agreement by the Executive Board. In addition SRO's will, as part of the FBC, be required to clearly set out their proposed approach to monitoring and evaluation which should be developed to ensure benefit realisation and delivery of outputs and outcomes as defined in the FBC. The monitoring and evaluation will be funded through the scheme budget. At all times, a proportionate approach will be taken to the monitoring and evaluation of each scheme.
4.12	As above, investment and decision making will be underpinned by the Green Book Business Case process. The approach to monitoring and evaluation will be developed for each scheme on a proportionate and bespoke basis. To ensure the process is as meaningful as possible it will be developed in order to respond to the objectives as defined in the Strategic Case (for each scheme) and the approach to Benefit Realisation and monitoring and evaluation defined in the Management Case. The M&E plan in the Management Case will outline the broad scope and timing of monitoring and evaluation activity. This may include: • **Logic model:** an overview of the key elements of the project logic model to guide the development of the M&E plan and inform project evaluation; • **Evaluation objectives and questions:** linked to the project logic model, a concise summary of the overall objectives for the evaluation and the specific research questions that it will explore; • **Process evaluation methods:** an overview of the likely evaluation methods to assess whether an intervention is being implemented as intended within its budget and timescale, potentially including the collection of qualitative and quantitative data from stakeholders; • **Impact evaluation methods:** an overview of the likely evaluation methods to be used for impact assessment and attribution of impacts to project activities. This should include an exploration of the feasibility of counterfactual impact evaluation; • **Economic evaluation methods:** an overview of the likely evaluation methods to determine whether the project's benefits justified the costs, potentially including cost-effectiveness analysis or cost-benefit analysis, which places a monetary value on the changes in outcomes; • **Timing of M&E activity:** an outline timetable for the phases of evaluation research; • **Monitoring data requirements:** a summary of the output, outcome and impact indicators that the project will report against and a clear specification

	for the additional monitoring information that the project should collect to enable proportionate M&E.
4.13	It is acknowledged that the GCP's programme is currently time limited at 15 years (to 2030) but intelligence that can be obtained will be openly be available to inform future infrastructure and growth programmes.
4.14	The expectation is that the SRO will be required to publish an initial report based on data collected at least one year post scheme opening, and a final report based on both one-year-after data and further data collected approximately five years after scheme opening published. At the appropriate time, the results of the evaluation will be independently reviewed and will be made available including publication on the relevant website. To ensure independence the GCP will draw on a joint Professional Services Framework to procure an independent supplier. As the Framework has multiple suppliers, independence can be assured. This process is likely to benefit from being closely tied in to the formal five yearly Gateway Review process, as set out in the City Deal.
4.15	At the appropriate time, the Executive Board will prepare and publish a periodic programme evaluation update that will summarise the evaluation of individual schemes. As part of this the Executive Board will consider the performance of schemes, identify key scheme issues and review the success of the evaluation process. Through this the Executive Board will identify and share best practice to ensure ongoing monitoring and evaluation is efficient and effective, and that key lessons are used to inform scheme development and assessment.

GREATER CAMBRIDGE PARTNERSHIP EXECUTIVE BOARD
TERMS OF REFERENCE

1. Parties

Cambridge City Council.
Cambridgeshire County Council.
South Cambridgeshire District Council.
The Business Board of the Cambridgeshire and Peterborough Combined Authority [the Local Enterprise Partnership (LEP) for the region – hereafter referred to as the 'Business Board'].
The University of Cambridge.

2. Status

The Greater Cambridge Partnership (GCP) Executive Board has been established by Cambridge City Council, Cambridgeshire County Council and South Cambridgeshire District Council. It is a joint committee of the three Councils, established by Cambridgeshire County Council under section 102(1) (b) of the Local Government Act 1972 and by Cambridge City Council and South Cambridgeshire District Council under section 9EB of the Local Government Act 2000.

3. Membership

Three elected members with full voting rights (one from each of the three member Councils).
Two non-voting members (one from the Business Board and one from the University of Cambridge).

4. Functions of the Executive Board

4.1 The Executive Board is established to ensure that the objectives of the Greater Cambridge City Deal are met. The Greater Cambridge City Deal aims to enable a new wave of innovation-led growth by investing in the infrastructure, housing and skills

that will facilitate the continued growth of the 'Cambridge Phenomenon'. To this end, the Executive Board will have oversight of the strategic direction and delivery of the City Deal and its objectives.

4.2 The Executive Board will also be responsible for the commissioning of projects funded by money provided through the City Deal and for overall control of that programme of investments. The scheme promoter for each individual project will be responsible for the delivery of that budget, under the oversight of the Executive Board. This shall also apply to circumstances in which funding is provided to the Executive Board by the member Councils or by other parties, such as the Business Board.

4.3 The three Councils agree to delegate exercise of their functions to the Executive Board to the extent necessary to enable the Executive Board to pursue and achieve the objectives of the Greater Cambridge City Deal and to undertake any actions necessary, incidental or ancillary to achieving those objectives, and, accordingly, the three Councils shall make the necessary changes to their respective schemes of delegation. The Executive Board may further delegate to officers of the three Councils.

4.4 The Executive Board will consider any reports and recommendations from the Joint Assembly as appropriate.

5. Professional and Administrative Support

5.1 Cambridgeshire County Council shall act as the accountable body for the Executive Board in respect of financial matters and its financial procedure rules will apply in this context.

5.2 Committee management and administrative support to the Executive Board will be provided by one of the constituent councils [Cambridgeshire County Council from May 2019].

5.3 The lead role on projects shall be determined by the Executive Board, subject to the principle that the lead authority should be the Council primarily responsible for the service in question for their area. The procurement and other rules of the lead authority will apply in respect of projects.

6. Standing Orders

6.1 The Executive Board will be governed by the Standing Orders set out in Annex A attached to these Terms of Reference.

7. Costs

7.1 The three Councils will each bear its own costs in relation to the operation of the Executive Board, with the exception of approved project delivery costs met from budgets managed by the Executive Board.

7.2 Each Council makes a legally binding commitment that, should it withdraw from or modify its role within the Executive Board, it agrees to pay all additional costs that fail to be met by the other partner Councils that are reasonably attributable to that decision. This could include, for example, the costs that are locked in to projects that have already been committed to, or the costs of dissolving integrated officer and Member arrangements and re-establishing independent arrangements.

7.3 The firm intention is that the Executive Board will continue until it is either replaced by a Combined Authority, subject to the carrying out of a governance review following necessary legislative changes, or until the programme is completed. Recognising the very serious implications of withdrawal from the Executive Board for the delivery of the City Deal programme, if a Council decides to withdraw from or modify its role within the Executive Board, it commits to sharing this with the GCP at the earliest possible opportunity, and to entering into constructive discussions to avoid this happening or to reach a way forward.

ANNEX A

GREATER CAMBRIDGE PARTNERSHIP EXECUTIVE BOARD
STANDING ORDERS

1. Membership

1.1 The Executive Board will have a voting membership of three, each Council being entitled to appoint one voting member.

1.2 The Executive Board will also have two non-voting members, to be co-opted by the Committee on a nomination by each of the Business Board and the University of Cambridge.

2. Alternate or Substitute Members

2.1 Each Council will be entitled to appoint one named alternate or substitute member who may act in all aspects as a voting member of the Executive Board in the absence of the voting member appointed.

2.2 Alternate or substitute members will be invited to attend all meetings of the Executive Board.

2.3 The Business Board and the University of Cambridge will each be entitled to nominate an alternate or substitute non-voting member to act in the absence of their principal co-opted member.

3. Term of Office

3.1 The term of office of voting and alternate or substitute voting members shall end:

- if rescinded by the appointing Council; or
- if the member ceases to be a member of the appointing Council.

3.2 The Business Board and University of Cambridge may at any time ask the Executive Board to replace their nominated co-opted member and alternate or substitute member by way of further nomination.

4. Appointment of Chairperson and Vice-Chairperson

4.1 The Executive Board will appoint a Chairperson and Vice-Chairperson at its first meeting and thereafter annually at the first meeting following the Annual Meetings of the three Councils. The Chairperson and, in his or her absence, the Vice-Chairperson shall have a casting vote.

4.2 The non-voting co-opted members of the Executive Board shall not act in the role of either the Chairperson or the Vice-Chairperson of the Executive Board.

5. Quorum

5.1 The quorum for meetings of the Executive Board will be three voting members.

5.2 If there is no quorum at the published start time for the meeting, a period of ten minutes will be allowed, or longer, at the Chairperson's discretion. If there remains no quorum at the expiry of this period, the meeting will be declared null and void.

5.3 If there is no quorum at any stage during a meeting, the Chairperson will adjourn the meeting for a period of ten minutes, or longer, at their discretion. If there remains no quorum at the expiry of this period, the meeting will be closed and the remaining items will be declared null and void.

6. Member Conduct

6.1 Executive Board members appointed by the three Councils shall be bound by the Code of Conduct of their nominating authority. Board members nominated by the Business Board and the University of Cambridge will be bound by the Code of Conduct of the council providing democratic services support to the GCP.

6.2 If a member persistently disregards the ruling of the Chairperson, or person presiding over the meeting, by behaving improperly or offensively or deliberately obstructs business, the Chairperson, or person presiding over the meeting, may move that the member be not heard further. If seconded, a vote will be taken without discussion.

6.3 If the member continues to behave improperly after such a motion is carried, the Chairperson, or person presiding over the meeting, may move that either the member leaves the meeting or that the meeting is adjourned for a specified period. If seconded, a vote will be taken without discussion.

7. Notice of and Summons to Meetings

7.1 Notice will be given to the public of the time and place of any meeting of the Executive Board in accordance with the Access to Information rules of the council providing democratic services support to the GCP.

7.2 At least five clear working days before a meeting, a copy of the agenda and associated papers will be sent to every member of the Executive Board. Other than in exceptional circumstances this will take place five working days before the deadline for submission of public questions. The agenda will give the date, time and place of each meeting and specify the business to be transacted, and will be accompanied by such details as are available.

8. Meeting Frequency

8.1 The Executive Board will meet on at least a quarterly basis, with one of those meetings acting as the annual meeting.

9. Voting

9.1 Executive Board members commit to seek, where possible, to operate on the basis of consensus.

9.2 Should it not be possible in a specific instance to find a consensus, the issue will be deferred to a later meeting of the Executive Board. Executive Board members can choose to simply re-submit the item to a following meeting, or to refer the item to the Joint Assembly for consideration and recommendation. Following this, a vote will be again taken and, if a consensus is still not achievable, the decision will be made on the basis of a simple majority.

9.3 The voting members of the Executive Board will act with due regard to the opinions of the non-voting members of the Board.

10. Reports from the Joint Assembly

10.1 The Executive Board will receive reports and recommendations from the Joint Assembly as appropriate and the Chairperson of the Joint Assembly, or a nominated representative on his or her behalf, will be entitled to attend meetings of the Executive Board to present them.

11. Questions by the Public and Public Speaking

11.1 At the discretion of the Chairperson, members of the public may ask questions at meetings of the Executive Board. This standard protocol is to be observed by public speakers:

(a) Notice of the question should be submitted to the GCP 'Public Questions' inbox by 10am at least three working days before the meeting;
(b) Questions should be limited to a maximum of 300 words;
(c) Questioners will not be permitted to raise the competence or performance of a member, officer or representative of any partner on the Executive Board, nor any matter involving exempt information (normally considered as 'confidential');
(d) Questioners cannot make any abusive or defamatory comments;
(e) If any clarification of what the questioner has said is required, the Chairperson will have the discretion to allow other Executive Board members to ask questions;
(f) The questioner will not be permitted to participate in any subsequent discussion and will not be entitled to vote;
(g) The Chairperson will decide when and what time will be set aside for questions depending on the amount of business on the agenda for the meeting;

(h) Individual questioners will be permitted to speak for a maximum of three minutes;

(i) In the event of questions considered by the Chairperson as duplicating one another, it may be necessary for a spokesperson to be nominated to put forward the question on behalf of other questioners. If a spokesperson cannot be nominated or agreed, the questioner of the first such question received will be entitled to put forward their question; and

(j) Questions should relate to items that are on the agenda for discussion at the meeting in question. The Chairperson will have the discretion to allow questions to be asked on other issues.

12. Petitions

12.1 Petitions received in relation to the Greater Cambridge Partnership will be referred to the Joint Assembly for consideration. Any matters arising from petitions considered by the Joint Assembly can be reported to the Executive Board, as per Standing Order 10.

13. Participation at Executive Board Meetings by Other Members of Partner Councils or Other Representatives of Partner Bodies

13.1 At the discretion of the Chairperson, other elected members of the three partner Councils or other representatives from the Business Board or the University of Cambridge may be entitled to speak and participate at meetings of the Executive Board.

14. Minutes

14.1 The Chairperson will sign the minutes of the proceedings at the next suitable meeting. The Chairperson will move that the minutes of the previous meeting be signed as a correct record.

14.2 The minutes will be accompanied by a list of agreed action points, which may be discussed in considering the minutes of the previous meeting should they not be specifically listed as items on the agenda for the meeting.

15. Exclusion of the Public and Press

15.1 Members of the public and press may be excluded from meetings in accordance with the Access to Information rules of legislation as applied by the administering authority with regard to the consideration of exempt or confidential information.

16. Recording of Proceedings

16.1 The recording in any format of meetings of the Executive Board is permitted, except:

- Where the Chairperson, or person presiding over the meeting, rules that filming is being undertaken in such a way that is disruptive or distracting to the good order and conduct of the meeting;
- Where the public have been excluded from the meeting during the consideration of exempt or confidential information [see section 15].

17. Disturbance by Public

17.1 If a member of the public interrupts proceedings, the Chairperson, or person presiding over the meeting, will warn the person concerned. If the individual continues to interrupt, the Chairperson will order his or her removal from the meeting room.

17.2 If there is a general disturbance in any part of the meeting room open to the public, the Chairperson, or person presiding over the meeting, may call for that part of the room to be cleared.

17.3 If there is a general disturbance making orderly business impossible, the Chairperson, or person presiding over the meeting, may adjourn the meeting for as long as he or she thinks is necessary.

18. Interpretation of Standing Orders

18.1 The ruling of the Chairperson of the Executive Board as to the application of these Standing Orders shall be final.

19. Suspension of Standing Orders

19.1 Any of these Standing Orders may, as far as is lawful, be suspended by motion passed unanimously by those entitled to vote.

GREATER CAMBRIDGE PARTNERSHIP JOINT ASSEMBLY
TERMS OF REFERENCE

1. Parties

Cambridge City Council.
Cambridgeshire County Council.
South Cambridgeshire District Council.
The Business Board of the Cambridgeshire and Peterborough Combined Authority [the Local Enterprise Partnership (LEP) for the region – hereafter referred to as the 'Business Board'].
The University of Cambridge.

2. Status

The Greater Cambridge Partnership (GCP) Joint Assembly has been established by Cambridge City Council, Cambridgeshire County Council and South Cambridgeshire District Council. It is a joint advisory committee of the three Councils, established under section 102(4) of the Local Government Act, 1972.

3. Membership

3.1 Three elected members appointed by each of the three member Councils.
Three co-opted members nominated by the Business Board.
Three co-opted members nominated by the University of Cambridge.

4. Functions of the Joint Assembly

4.1 The Joint Assembly is established to advise the GCP with regard to the latter's role in achieving the objectives of the Greater Cambridge City Deal Agreement dated 19th June 2014.

4.2 The Joint Assembly will act as a forum for discussion with a wider range of members and stakeholders across the Greater Cambridge area, so that the Executive Board benefits from a wider range of expertise in making its decisions.

4.3 To this end, the Joint Assembly may receive and comment on ("pre-scrutinise") reports to the Executive Board, may offer advice to the Board on the discharge of its functions and may review its work.

4.4 The Joint Assembly may develop its own work programme and submit reports or recommendations to the Executive Board for consideration, as appropriate.

5. Professional and Administrative Support

5.1 Committee management and administrative support to the Joint Assembly will be provided by one of the constituent councils [Cambridgeshire County Council from May 2019].

5.2 Other professional support will be provided to the Joint Assembly on an ad hoc basis as agreed between the three Councils.

6. Standing Orders

The Joint Assembly will be governed by the Standing Orders set out in Annex A attached to these Terms of Reference.

7. Costs

The three Councils, the Business Board and the University of Cambridge will each bear its own costs in relation to the operation of the Joint Assembly.

ANNEX A

GREATER CAMBRIDGE PARTNERSHIP JOINT ASSEMBLY
STANDING ORDERS

1. Membership

1.1 The Joint Assembly will have a membership of 15, with each Council being entitled to appoint three members and the Business Board and the University of Cambridge both being entitled to nominate three co-opted members.

1.2 The appointments made by the three Councils will take account of the political composition of the Greater Cambridge area. Appointments by Cambridge City Council and South Cambridgeshire District Council will therefore be proportional to the political composition of the respective authority, whereas appointments by Cambridgeshire County Council will be proportional to those electoral divisions that fall within the Greater Cambridge area.

1.3 Members nominated by the Business Board and the University of Cambridge will become co-opted members on endorsement by the Executive Board.

2. Alternate or Substitute Members

2.1 No alternate or substitute members will be permitted on the Joint Assembly.

3. Term of Office

3.1 The term of office of members from the three Councils shall end:

- if rescinded by the appointing Council; or
- if the member ceases to be a member of the appointing Council.

3.2 The Business Board and University of Cambridge may at any time ask the Joint Assembly to replace any of their nominated co-opted members by way of further nomination.

4. Appointment of Chairperson and Vice-Chairperson

4.1 The Joint Assembly will appoint a Chairperson and Vice-Chairperson at its first meeting and thereafter annually at the first meeting following the Annual Meetings of the three Councils. The Chairperson and, in his or her absence, the Vice-Chairperson will have a casting vote.

4.2 Where there are three or more candidates for appointment and there is, after balloting, no candidate with a clear majority, meaning in this case the votes of more than 50% of members present and voting, the candidate with the least number of votes will withdraw

and there will be a fresh ballot of remaining candidates; and so on until a candidate has that majority.

5. Quorum

5.1 The quorum for meetings of the Joint Assembly will be five members.

5.2 If there is no quorum at the published start time for the meeting, a period of ten minutes will be allowed, or longer, at the Chairperson's discretion. In the absence of the Chairperson the Vice-Chairperson will have discretion to act. If there remains no quorum at the expiry of this period, the meeting will be declared null and void.

5.3 If there is no quorum at any stage during a meeting, the person presiding over the meeting will adjourn for a period of ten minutes, or longer, at their discretion. If there remains no quorum at the expiry of this period, the meeting will be closed and the remaining items will be declared null and void.

6. Member Conduct

6.1 Joint Assembly members appointed by the three Councils shall be bound by the Code of Conduct of their nominating authority. Assembly co-opted members nominated by the Business Board and the University of Cambridge will have regard to the Code of Conduct of the council providing democratic services support to the GCP.

6.2 If a member persistently disregards the ruling of the Chairperson, or person presiding over the meeting, by behaving improperly or offensively or deliberately obstructs business, the Chairperson, or person presiding over the meeting, may move that the member be not heard further. If seconded, a vote will be taken without discussion.

6.3 If the member continues to behave improperly after such a motion is carried, the Chairperson, or person presiding over the meeting, may move that either the member leaves the meeting or that the meeting is adjourned for a specified period. If seconded, a vote will be taken without discussion.

7. Notice of and Summons to Meetings

7.1 Notice will be given to the public of the time and place of any meeting of the Joint Assembly in accordance with the Access to Information rules of the council providing democratic services support to the GCP.

7.2 At least five clear working days before a meeting, a copy of the agenda and associated papers will be sent to every member of the Joint Assembly. Other than in exceptional circumstances this will take place five working days before the deadline for submission of

public questions. The agenda will give the date, time and place of each meeting; specify the business to be transacted, and will be accompanied by such details as are available.

8. Meeting Frequency

The Joint Assembly may set its own timetable for meetings but will initially meet quarterly, normally on a date preceding meetings of the Executive Board in order to allow the Joint Assembly to consider issues the Board will be taking decisions on and advise accordingly.

9. Voting

9.1 All Joint Assembly members will be voting members.

9.2 Voting for meetings of the Joint Assembly will be conducted on the basis of a simple majority.

10. Reports from the Joint Assembly to the Executive Board

10.1 The Chairperson of the Joint Assembly, or a nominated representative on his or her behalf, will be entitled to attend meetings of the Executive Board to present reports from the Joint Assembly as appropriate.

11. Questions by the Public and Public speaking

11.1 At the discretion of the Chairperson, members of the public may ask questions at meetings of the Joint Assembly. This standard protocol is to be observed by public speakers:

(a) Notice of the question should be submitted to the GCP 'Public Questions' inbox at the latest by 10am three working days before the meeting;
(b) Questions should be limited to a maximum of 300 words;
(c) Questioners will not be permitted to raise the competence or performance of a member, officer or representative of any partner on the Joint Assembly, nor any matter involving exempt information (normally considered as 'confidential');
(d) Questioners cannot make any abusive or defamatory comments;
(e) If any clarification of what the questioner has said is required, the Chairperson will have the discretion to allow other Joint Assembly members to ask questions;
(f) The questioner will not be permitted to participate in any subsequent discussion and will not be entitled to vote;
(g) The Chairperson will decide when and what time will be set aside for questions depending on the amount of business on the agenda for the meeting;
(h) Individual questioners will be permitted to speak for a maximum of three minutes;
(i) In the event of questions considered by the Chairperson as duplicating one another, it may be necessary for a spokesperson to be nominated to put forward the question on behalf of other questioners. If a spokesperson cannot be nominated or

agreed, the questioner of the first such question received will be entitled to put forward their question; and

(j) Questions should relate to items that are on the agenda for discussion at the meeting in question. The Chairperson will have discretion to allow questions to be asked on other issues.

12. Petitions

12.1 At the discretion of the Chairperson, members of the public may submit and present petitions to the Joint Assembly. This standard protocol is to be observed by petitioners:

(a) Petitions should include a clear statement of the petition organiser's concerns and what they would like the Joint Assembly to do;

(b) Petitions must relate to something which is within the responsibility of the Joint Assembly, or over which the Assembly has some influence;

(c) Petitions must include the name and contact details of the petition organiser;

(d) Petitions must include at least 500 signatures. Petitions below this threshold will not be presented to the Joint Assembly, but Assembly members will be notified of them as long as they contain at least 50 signatures;

(e) Petitions must be submitted to the Democratic Services Team at the County Council (as the administering authority) either in paper format or using its e-petitions facility at least 5 clear working days before the date of the meeting;

(f) Petition organisers will be permitted to present their petitions to the meeting and will be allowed to address the meeting for a maximum of three minutes;

(g) Where more than one petition is received in time for a particular meeting and they are considered by the Chairperson as supporting the same outcome or being broadly similar in intent, it may be necessary for a spokesperson to be nominated and present the petitions. If a spokesperson cannot be nominated or agreed, the petition organiser of the first petition received will be entitled to present their petition; and

(h) Petitions will be rejected if the Chairperson considers them to be abusive or libellous, frivolous, vague or ambiguous, rude, offensive, defamatory, scurrilous or time-wasting or require the disclosure of exempt information (normally considered as 'confidential').

12.2 Any matters arising from petitions considered by the Joint Assembly can be reported to the Executive Board as per Standing Order 10.

13. Participation at Joint Assembly Meetings by Other Members of Partner Councils or Other Representatives of Partner Bodies

13.1 At the discretion of the Chairperson, other elected members of the three partner Councils or other representatives from the Business Board or the University of Cambridge may be entitled to speak and participate at meetings of the Joint Assembly.

14. Minutes

14.1 The Chairperson will sign the minutes of the proceedings at the next suitable meeting. The Chairperson will move that the minutes of the previous meeting be signed as a correct record. The only part of the minutes that can be discussed is their accuracy.

14.2 The minutes will be accompanied by a list of agreed action points, which may be discussed in considering the minutes of the previous meeting should they not be specifically listed as items on the agenda for the meeting.

15. Exclusion of the Public and Press

15.1 Members of the public and press may be excluded from meetings in accordance with the Access to Information legislation as applied by the administering authority with regard to the consideration of exempt or confidential information.

16. Recording of Proceedings

16.1 The recording in any format of meetings of the Joint Assembly is permitted, except:

- Where the Chairperson, or person presiding over the meeting, rules that filming is being undertaken in such a way that is disruptive or distracting to the good order and conduct of the meeting; and/or
- Where the public have been excluded from the meeting during the consideration of exempt or confidential information [see section 15].

17. Disturbance by the Public

17.1 If a member of the public interrupts proceedings, the Chairperson, or person presiding over the meeting, will warn the person concerned. If the individual continues to interrupt, the Chairperson will order his or her removal from the meeting room.

17.2 If there is a general disturbance in any part of the meeting room open to the public, the Chairperson, or person presiding over the meeting, may call for that part of the room to be cleared.

17.3 If there is a general disturbance making orderly business impossible, the Chairperson, or person presiding over the meeting, may adjourn the meeting for as long as he or she thinks is necessary.

18. Interpretation of Standing Orders

18.1 The ruling of the Chairperson of the Joint Assembly as to the application of these Standing Orders shall be final.

19. Suspension of Standing Orders

19.1 Any of these Standing Orders may, as far as is lawful, be suspended by motion passed unanimously by those entitled to vote.

GCP Officer Sign Off	01 August 2023
GCP Executive Board Sign Off	