

Hardwick Parish Council Response to the C2C Independent Audit Register of Assumptions and Constraints: 25th April 2021

Thank you for the copy of the Assumptions and Constraints Register received on 25th March 2021. Our initial comments that I sent you on 12th March 2021 were largely a chronological summary of the events from the C2C conception through to the current Independent Audit and the impact and constraints as they impact on Hardwick.

As such, whereas our initial report generally and specifically addresses the issues presented in your Register, I felt it might be helpful to “line up” our comments against your referenced issues. As our Introduction and 10-point Assessment tended to discuss issues wider than the specific points in your Register, this leads to a certain amount of repetition but hopefully you will find this approach helpful.

We have not changed the text from our earlier report, just presented it in what I hope is helpfully aligned to the Assumptions and Constraints you have identified. Each of our comments is in line with your Register and preceded with a yellow identifier which relates each response to one or more of the Introductory comments and 10 points in our original report sent on 12th March 2021

Kind regards

Alan Everitt
Councillor, Hardwick Parish Council
Highways and Road Safety Working Group

Tel Contact 07739322905

CC Anthony Gill, Chairman, Hardwick Parish Council, Parish Clerk.

Table A: Policy Context

Assumptions & Constraints Register			
	Assumptions	Constraints	Reference
	A. Policy Context		
A.1	Greater Cambridge Partnership: Created in 2014 to implement City Deal agreed with government to deliver growth aspirations in support of regional and national economic policies.	The C2C corridor has been identified by the GCP’s Executive Board as a priority project for development in the first five years of the GCP’s transport programme.	<i>Greater Cambridge City Deal. GCP 2014</i>
A.2	Local Plan policies for the strategic developments of sites along the C2C corridor require High Quality Public Transport (HQPT) to link new homes to employment and services in and around Cambridge.	Local Plans prepared by Cambridge City & South Cambridgeshire Councils: Confirm targets for housing and employment growth and allocate sites in West Cambourne, Bourn Airfield and other sites along the A428 corridor for development as well as at West Cambridge and North West Cambridge.	<i>Greater Cambridge Local Plan. Transport Evidence Report. Cambridgeshire County Council Transport Strategy and Funding Team, November 2020.</i>
A.3	Policy within the TSCSC requires a range of infrastructure interventions on the St Neots and C2C corridor as a key part of the integrated land use and transport strategy responding to levels of planned growth.	The Transport Strategy for Cambridge and South Cambridgeshire (TSCSC) was prepared in parallel with the development of the Local Plans and was agreed 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.	<i>Transport Strategy for Cambridge and South Cambridgeshire, March 2014</i>

<p>Hardwick Response Document Submitted 12th March 2021 Point 1</p>	<p>Point 1. Not Just Expensive but poor value for money The stated objective of C2C from the outset in 2014 is to address the congestion on Madingley Hill and M11 junction and shorten journey time from Cambourne to Cambridge. Hardwick supports the view that shorter journey times are best achieved by</p> <ul style="list-style-type: none"> • tackling the Madingley Hill and M11 junction congestion - which can be achieved with Bus Lane and traffic management between Madingley Mulch and M11 – LLF proposition • A Girton/M11 connection which will avoid Madingley Hill and M11 junction being used as a slip road to M11 – good to hear Highways England are to reconsider this again • Trains which move more people faster than buses – EWR route to Cambourne • The CAM when the route has been verified. <p>“If the authorities had been doing their job properly years ago, we would have a multi-access junction at Girton”</p> <p>Implementation of all or a combination of these measures, will ease the congestion on Madingley Hill and M11 junction and ensure the local bus service through Hardwick will not be held up by commuters. It will provide a “rapid, regular, reliable and safe public bus” into Cambridge and beyond especially with buses through Hardwick having direct access to any Bus Lane provision and management on Madingley Hill and M11 junction.</p> <p>Update: Original Western Corridor Technical Brief 2014 C2C Technical Note Planning Policy Context 02.05.2014 (greatercambridge.org.uk) Short term recommended on-road with Bus priority This would include comparison with a do nothing scenario which is in fact is how it has been until Sept 2020 when the Mayor laid on some direct fast buses between Cambourne and Cambridge “West Cambourne requires - high quality segregated bus priority measures on the A1303 between its junction with the A428 and Queens Road, Cambridge”</p> <p>Full details of the plan to tackle congestion on the Madingley Hill and at M11 are provided by the LLF to which Hardwick provides 2 members and the Vice Chairman.</p>	
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<p>A.4</p>	<p>Cambridgeshire County Council are working with Greater Cambridge Shared Planning (GCSP) comprising Cambridge City and South Cambridgeshire, to provide a transport evidence base to support the preparation and examination of the Greater Cambridge Local Plan (GCLP) that runs to 2041.</p>	<p>Three growth level options being tested through the local plan are:</p> <ul style="list-style-type: none"> • Minimum – Standard Method homes-led • Medium – central scenario employment-led • Maximum – higher employment-led <p>The GCP City Deal constrained to deliver 44,000 jobs and 33,500 homes by 2031 and is consistent with the Minimum growth projection. Higher growth forecasts imply additional infrastructure and development sites beyond 2031.</p>	<p><i>Greater Cambridge Local Plan. Transport Evidence Report. Cambridgeshire County Council Transport Strategy and Funding Team, November 2020.</i></p>
<p>A.5</p>	<p>The Cambridgeshire and Peterborough Combined Authority is responsible for transport infrastructure improvement and the Local Transport Plan. Drawing on the CPIER the goals of the CPLTP published in 2020 are to deliver a transport system that delivers economic growth and opportunities, provides an accessible transport system and protects and enhances the environment to tackle climate change together.</p>	<p>The CPCA established the Cambridgeshire and Peterborough Independent Economic Review (CPIER). The review provides a robust and independent assessment of the Cambridgeshire and Peterborough economy and the potential for growth. The CPIER confirmed the growth targets established in the City Deal and the need for a package of transport and other infrastructure projects to alleviate the growing pains of Greater Cambridge including HQPT scheme from Cambridge to Cambourne.</p>	<p><i>CPIER - Cambridgeshire and Peterborough Independent Economic Review, CPCA, September 2018</i></p>
<p>Hardwick Response Document Submitted 12th March 2021 Point 10</p>	<p>Point 10. Large developments require good public transport</p> <p>Whereas both Cambourne West and Bourn Airfield developments were designed to require good Public Transport, both developments are going ahead without. We don't believe this is sensible but we do believe that the CAM and maybe EWR may provide better alternatives to a bus-based transport system.</p> <p>Rail and CAM are designed to carry more passengers, more reliably and in shorter time than buses. But we rely on local buses to keep cars off our roads.</p>		

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A.6	<p>In April 2020 the CPCA published a draft Sub-Strategy to the Local Transport Plan specifically dealing with CAM. The route along the A1303/A428 from Cambridge City centre towards Cambourne, St Neots and Bedford 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 issues.</p>	<p>The C2C proposals have been assessed against the policies in the Sub-Strategy and it is concluded that the scheme is compliant, although further review of the eastern end of the scheme (City Access) has been undertaken and a review of the western end will be required once there is clarity with regards to proposals for EWR and a station in the Cambourne area.</p>	<p><i>Cambourne to Cambridge Better Public Transport Project, Report to GCP Executive Board, 10 December 2020</i></p>
<p>Hardwick Response Submitted 12th March 2021 Point 7</p>	<p>Point 7. Incomplete Route Whereas the potential route from Cambourne to Grange Road Cambridge appears to have been drawn, there seems to be no real plan for what happens should this route be accepted and reach the outer City – currently Grange Road. If passengers are asked for a destination, we suggest Grange Road may not be the first place in the City that comes to mind Update: With the EWR plans recommending a Station in North Cambourne, we believe there is now more certainty about the modal shift from commuter cars which currently cause the congestion on Madingley Hill</p>		

A.7	National Infrastructure Commission: The NIC has identified the Cambridge – Milton Keynes – Oxford arc as a national priority stating that its world-class research, innovation and technology can help the UK prosper in a changing global economy.	NIC has proposed the development of EWR. Integrating mass rapid transit with this scheme will enable effective first/last mile connectivity, in a way that enhances the value of these strategic infrastructure projects.	<i>NIC Report, November 2020.</i> https://nic.org.uk/studies-reports/national-infrastructure-assessment/
Hardwick Response Document Submitted 12th March 2021 Point 9.2	<p>Point 9.2 The CAM</p> <p>The CAM operation however should be available medium term. It is designed to provide fast, reliable, urban transport with underground connectivity that solves the current congestion problems of cars and buses congestion problems. The CAM operation has repeatedly claimed that it will replace the C2C Off Road and run on C2C tarmac and although the CAM plans seem insufficiently developed, this would represent Cambridge’s answer to a modern “MRT”.</p> <p>However, route selection for any proposed bus way will be paramount as the CAM has been promoted as a 24/7 service and would therefore be entirely inappropriate to run close to village homes in Hardwick or Coton unless it was tunnelled.</p> <p><i>We envisage the CAM as a “Metropolitan Line” or “District Line” in terms of the London Underground Network which might get more support if we knew more about it, especially in respect of how it will replace the C2C or require C2C tarmac for its operation. How is this short-term usefulness of C2C factored into the C2C Business case?</i></p>		
A.8	Highways England. Dualling of A428 Black Cat to Caxton Gibbet included in RIS2 programme, 2020-2025. HE has no other major road schemes planned for the GCP area having recently completed the upgrade to the A14 and Girton interchange with the M11.	DCO submitted in February 2021 for this Nationally Significant Infrastructure Project connecting the A1 to the A14. Preparatory works are underway. Scheduled for completion by 2023-24?	<i>Highways England. Route Investment Strategy. Road projects in the Eastern Region.</i> https://highwaysengland.co.uk/our-work/east/#roadprojectform
Hardwick Response Document Submitted 12th March 2021	<p>Point 1</p> <ul style="list-style-type: none"> tackling the Madingley Hill and M11 junction congestion - which can be achieved with Bus Lane and traffic management between Madingley Mulch and M11 – LLF proposition A Girton/M11 connection which will avoid Madingley Hill and M11 junction being used as a slip road to M11 – good to hear Highways England are to reconsider this again 		

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<p>Points 1 and 9.1</p>	<p>Update: Highways England have confirmed they will now reconsider the Girton Interchange geometry to resolve a connection between the A428 and M11 and thus avoid the daily misery on Madingley Hill</p> <p>Point 9.1 As early as 2014, completing the Girton Interchange was in consideration, see quote below *C2C Technical Note Analysis of Consultation Proposals 01.02.2016 (greatercambridge.org.uk) Page 16 “A428 Upgrade and connection to A14 / development of cloverleaf at Girton This proposal involves improving the connectivity between the A428 and the A14 northbound) and (southbound) –towards M11 at the Girton interchange... The main advantage of this proposal would be to provide car users with an alternative method for accessing the M11 southbound, therefore alleviating queues on Madingley Hill and M11 junctionwould be unlikely to get a Girton cloverleaf before 2020” Not only was this entirely true but the option was completely ignored.</p>		
<p>A.9</p>	<p>East West Railway Company formed to create a new railway connection between Oxford and Cambridge. Consultation is anticipated on the preferred route alignment which includes stations at Cambourne and in the Sandy/St. Neots area.</p>	<p>The Bedford to Cambridge section is the third stage of the project and construction is not expected to start before 2025 with the train service beginning later this decade at the earliest.</p>	<p><i>Connecting Communities: The Preferred Route Option between Bedford and Cambridge Executive Summary. EWR, 2019</i></p>
<p>Hardwick Response Submitted 12th March 2021 Point 5</p>	<p>Point 5 The C2C Off Road Busway is unnecessary The Combined Authority Mayor responsible for Transport Strategy in our Region has shown by facilitating the direct, non-stop, reliable, fast Service 905 from Cambourne to Cambridge via the Science Park into Cambridge - a reworking of the X5 bus from Bedford. Scaling this up to other locations would provide Cambourne and Bourn residents the fast public transport required in the very short term until a better solution using EWR and CAM are available.</p> <p>Update: Implementation of the 905 service has been complemented by the X2 – a new non-stop service from Cambourne to Addenbrookes/Bio Medical centre. These services use the A428 and M11 respectively.</p>		

Table B: Scheme Objectives

	Assumptions	Constraints	Reference
	B. Scheme Objectives:		
B.1	<ul style="list-style-type: none"> ● Achieve improved accessibility to support the economic growth of Greater Cambridge ● Deliver a sustainable transport network/system that connects areas between Cambourne and Cambridge along the A428/A1303 ● Contribute to enhanced quality of life by relieving congestion and improving air quality within the surrounding areas along the A428/A1303 and within Cambridge city centre 	<ul style="list-style-type: none"> ● Existing car mode share and car ownership within the A428/A1303 corridor is high, and future growth is expected to generate additional demand for car use in this area. ● Traffic data shows that AM peak hour traffic speeds are 75% slower than night time average speeds on the route between the Madingley Mulch Roundabout and M11 Junction. ● Planned growth, between 2011 and 2031, along the A428/A1303 corridor eastbound car trips are forecast to increase by 14% in the AM Peak hour, 82% in the Inter-peak period and, 37% in the PM Peak period. Without intervention this could lead to a further deterioration in traffic speeds and reliability of journey times. ● Travel to work data for key origins along the C2C corridor also illustrate the high level of car use along the route, with the car mode share for residents of Cambourne being particularly high (65%). ● Residents of Cambourne and surrounding villages currently have limited options to use public transport due to the low level of service and current unreliability. ● In the absence of substantial bus priority in the corridor, congestion and delays mean journeys of around 10 miles can take over an hour during peak times. Buses therefore offer no competitive advantage over private cars in terms of journey times and reliability. 	<p><i>C2C Outline Business Case, Strategic Case GCP January 2020.</i></p>

<p>Hardwick Response Document Submitted 12th March 2021 Points 1, 2, 6</p>	<p>Point 1. Not just expensive but poor value for money</p> <p>The Busway would be a £200m plus spend and by GCP own figures represents a very poor business case. The stated objective of C2C from the outset in 2014 is to address the congestion on Madingley Hill and M11 junction and shorten journey time from Cambourne to Cambridge. Hardwick supports the view that shorter journey times are best achieved by</p> <ul style="list-style-type: none"> • tackling the Madingley Hill and M11 junction congestion - which can be achieved with Bus Lane and traffic management between Madingley Mulch and M11 – LLF proposition • A Girton/M11 connection which will avoid Madingley Hill and M11 junction being used as a slip road to M11 – good to hear Highways England are to reconsider this again • Trains which move more people faster than buses – EWR route to Cambourne • The CAM when the route has been verified. <p>“If the authorities had been doing their job properly years ago, we would have a multi-access junction at Girton”</p> <p>Implementation of all or a combination of these measures, will ease the congestion on Madingley Hill and M11 junction and ensure the local bus service through Hardwick will not be held up by commuters. It will provide a “rapid, regular, reliable and safe public bus” into Cambridge and beyond especially with buses through Hardwick having direct access to any Bus Lane provision and management on Madingley Hill and M11 junction.</p> <p>Point 2 Destructive for Hardwick</p> <p>2.1 We don’t cause the delay</p> <p>Hardwick does not cause any delays to the journeys between Cambourne and Cambridge but we seem to be getting the major share of the desecration. We have provided over 1000 signatures against removal of our tree line. Our Village petition to Save our Trees has reached over 730 verifiable signatures on Change.org Petition · Protect Hardwick’s environment and ecological diversity by stopping the destruction · Change.org and 319 signatures for the less internet savvy residents. Hardwick is a village of around 1200 homes and growing – the petitions are not just the views of those who live on St Neots Road. Desecrating our village road to improve journey times for residents to the west of Hardwick would appear to be like throwing your rubbish over your neighbour’s fence.</p> <p>2.2. Retention and Improvement of existing Services.</p> <p>Whereas with appropriate “congestion busting” measures we see no need for C2C Off road busway, we need reassurance that the local bus service or equivalent will be retained and improved.</p>	
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	<p>“Currently Hardwick local bus service on Neots Road serves 4 stops. We believe with appropriate measures to remove congestion on Madingley Hill and at the M11, we shall see an increase in popularity in bus travel versus car use. See points 8 and 9 page 7 and 8.”</p> <p>“We also need reassurance that the mixed-use Footpath upgrade due to be implemented under funds from two different developments to our west is not going to be withdrawn when the plans for the busway are withdrawn. This is a well-used route to Cambridge by many.”</p> <p>“Hardwick residents should have the opportunity to share in the benefits offered by Public buses unhindered by congestion between Hardwick and Cambridge without losses to the belt of trees along St Neots Road which would be removed for an off-road C2C Busway.”</p> <p>Point 6. Peace of Mind Hardwick residents do not want to be looking out over 8 lanes of tarmac, even more traffic and wooden fences. A line of trees gives a more tranquil outlook and we would not want to see peace of mind trivialised in any audit of the potential C2C Off Road busway</p>	
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<p>B.2</p>	<p>Supporting development through the busway corridor: The scheme is assumed to promote growth in the area and increase investment. It is designed to be the first in a series of steps to push forward growth.</p>	<p>Longer-term plans for the CAM network and EWR need to be taken into account.</p>	<p><i>'C2C Outline Business Case, Strategic Case GCP January 2020.</i></p>
<p>B.3</p>	<p>Support for the labour market: Through the wider effects of the scheme it is assumed that there will be an increase in accessibility to jobs, education and training. This has the potential to give easier access into both Cambourne and Cambridge and thereby expand the labour market.</p>	<p>Constraints in this are linked to ticketing and frequency of service. If this is an expensive service, then some may still be priced out. There is no information on ticketing and service schedules have yet to be confirmed.</p>	<p><i>'C2C Outline Business Case, Strategic Case GCP January 2020.</i></p>
<p>B.4</p>	<p>The scheme will create a congestion free, high quality public transport corridor: The OBC assumes that the scheme will be able to create this corridor as a segregated busway.</p>	<p>There are still several pinch points and interactions with general traffic that could create congestion and delay along the route.</p> <ul style="list-style-type: none"> • Scotland Farm P&R access • The section of the scheme which runs through Bourn Airfield must comply with the SPD for the site and complement the development Masterplan. • The section of the scheme which runs through West Cambridge must complement the development Masterplan. Consideration must be given to vibration and EMI impacts on sensitive receptors such as the Department of Materials Science and Metallurgy. 	<p><i>'C2C Outline Business Case, Strategic Case GCP January 2020.</i></p>

<p>Hardwick Response Document Submitted 12th March 2021 Point 10</p>	<p>Point 10 Large developments require good public transport</p> <p>Whereas both Cambourne West and Bourn Airfield developments were designed to require good Public Transport, both developments are going ahead without. We don't believe this is sensible but we do believe that the CAM and maybe EWR may provide better alternatives to a bus-based transport system.</p> <p>Rail and CAM are designed to carry more passengers, more reliably and in shorter time than buses. But we rely on local buses to keep cars off our roads.</p>	
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<p>B.5</p>	<p>In the City Centre, GCP’s City Access project is proposing measures to reduce reliance on car travel and free up the city centre’s congested road space, to run better public transport services.</p> <ul style="list-style-type: none"> • The objectives of the City Access scheme complement the C2C project by seeking to improve conditions for sustainable transport within the City Centre, thereby benefitting users of the C2C scheme either through improved journey times for public transport or better connectivity to pedestrians and cyclists. • City Access will also complement C2C by providing an alternative to car journeys for trips from new developments served by the scheme. 	<p>Bus services across the city centre incur substantial delays due to traffic congestion and the layout of city streets. Significant reallocation of road space to active travel and buses alongside on-street parking management measures will be required to improve bus journey times.</p>	<p><i>Report to GCP Executive Board, 18 March 2021</i></p>
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<p>Hardwick Response Document Submitted 12th March 2021 Point 7</p>	<p>Point 7 Incomplete Route Whereas the potential route from Cambourne to Grange Road Cambridge appears to have been drawn, there seems to be no real plan for what happens should this route be accepted and reach the outer City – currently Grange Road. If passengers are asked for a destination, we suggest Grange Road may not be the first place in the City that comes to mind?</p>	
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<p>B.6</p>	<p>On 31st October 2018 the CPCA Board agreed that the C2C scheme should be progressed by the GCP as an essential first phase of developing proposals for the CAM. They accepted the independent review of alignment between the C2C scheme and the CPCA plans for a CAM, undertaken by consultants Arup and commissioned by the CPCA in 2018.</p>	<p>Arup has undertaken a high-level review of route options and concluded that:</p> <ul style="list-style-type: none"> • The process undertaken to date to determine the route is robust and the optimal solution for the corridor is confirmed; • The route is reclassified as a CAM route to serve the wider network, and not an independent guided busway corridor; • The vehicle operating along the A428 corridor will comply with the principles of the CAM; • The route will continue to be designed to align and integrate with the overarching CAM network, comprising one of the phases of the CAM network; and • Options for mitigating the impact of the scheme at West Fields and Coton will be incorporated into scheme design for the SOBC. 	<p><i>Cambridgeshire and Peterborough Combined Authority CAM Expert Advice A428 Report. Arup, October 2018</i></p>
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<p>Hardwick Response Document Submitted 12th March 2021 Point 8 and 9</p>	<p>C2C Consultation Report 01.02.2016 (greatercambridge.org.uk)</p> <p>Page 10 Concerns were, however, raised about the potential impact on Hardwick village.</p> <p>Page 28 The existing roads can easily cope with normal on-road buses, with perhaps a dedicated lane from Madingley Mulch into Cambridge, otherwise nothing special needed, and certainly no guided buses at vast expense.</p> <p>Summary:</p> <ul style="list-style-type: none"> • Page 10 – concerns raised over impact on Hardwick! • Appendix 1 page 32 Conclusion 66% wanted Area 1 Central – Just a Bus lane on Madingley road - £18m <p>Point 8 Simpler ways of achieving the shorter journey time.</p> <p>8.1 If all buses towards Hardwick are to be routed via a potential Park and Ride site at Scotland Road, crossing two sets of roundabouts in and out plus traffic management at the Park and Ride, this will cause delay. If the objective is to shorten journey times, trailing around roundabouts and traffic lights would make these buses slower than the current 905 non-stop bus using the A428 from Cambourne to the Cambridge Science Park</p> <p>8.2 Bus priority links from A428 to Madingley Mulch roundabout would facilitate access to buses from Cambourne and beyond that rely on the Madingley Hill and M11 junction route into and beyond Cambridge.</p> <p>Point 9 More substantial alternatives due to be settled soon</p> <p>9.1 Girton 4 ways</p> <p>“The implementation of Girton 4 ways in the view of many goes a long way to solving congestion on Madingley Hill and M11 junction at commute times. We see this as absolutely necessary but on past performance maybe some years off. It must be part of the plan to take cars off the Madingley Road and fully support the plan by Highways England to consider it.”</p> <p>Girton Cloverleaf – from 2016 consultation process</p> <p>*C2C Technical Note Analysis of Consultation Proposals 01.02.2016 (greatercambridge.org.uk)</p> <p>Page 16</p> <p>“A428 Upgrade and connection to A14 / development of cloverleaf at Girton</p> <p>This proposal involves improving the connectivity between the A428 and the A14 northbound) and (southbound) –towards M11 at the Girton interchange... The main advantage of this proposal would be to provide car users with an alternative method for accessing the M11 southbound, therefore alleviating queues on Madingley Hill and M11 junctionwould be unlikely to get a Girton cloverleaf before 2020”</p>	
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	<p>9.2 The CAM</p> <p>The CAM operation however should be available medium term. It is designed to provide fast, reliable, urban transport with underground connectivity that solves the current congestion problems of cars and buses congestion problems. The CAM operation has repeatedly claimed that it will replace the C2C Off Road and run on C2C tarmac and although the CAM plans seem insufficiently developed, this would represent Cambridge’s answer to a modern “MRT”.</p> <p>However, route selection for any proposed bus way will be paramount as the CAM has been promoted as a 24/7 service and would therefore be entirely inappropriate to run close to village homes in Hardwick or Coton unless it was tunnelled.</p> <p><i>We envisage the CAM as a “Metropolitan Line” or “District Line” in terms of the London Underground Network which might get more support if we knew more about it, especially in respect of how it will replace the C2C or require C2C tarmac for its operation. How is this short-term usefulness of C2C factored into the C2C Business case?</i></p>	
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Table C: Project Deliverables

	Assumptions	Constraints	Reference
	C. Project Deliverables:		
C.1	<p>The project is made up of three key elements:</p> <ul style="list-style-type: none"> • a public transport link between Cambourne and Cambridge, • a new Park and Ride facility off the A428/A1303 to supplement the existing Madingley Road Park and Ride, and • new cycling and walking facilities. 	<p>The C2C scheme will need to deliver on the following elements:</p> <ul style="list-style-type: none"> • A HQPT system using rapid transit technology on dedicated routes. • High frequency, reliable services delivering maximum connectivity. • Continued modal shift away from car usage to public transport. • Capacity provided for growth, supporting transit-oriented development. • State of the art environmental technology, with easily accessible, environmentally friendly, low emission vehicles such as electric/hybrids or similar. • A fully integrated solution, including ticketing and linkages with the wider public transport network to maximise travel opportunities. <p>Achieving these may be constrained by factors outside of the GCP's control.</p>	<p><i>'C2C Outline Business Case, Strategic Case GCP January 2020.</i></p>

<p>Hardwick Response Document Submitted 12th March 2021 Point 1</p>	<p>Point 1. Not just expensive but poor value for money</p> <p>The Busway would be a £200m plus spend and by GCP own figures represents a very poor business case. The stated objective of C2C from the outset in 2014 is to address the congestion on Madingley Hill and M11 junction and shorten journey time from Cambourne to Cambridge. Hardwick supports the view that shorter journey times are best achieved by</p> <ul style="list-style-type: none"> • tackling the Madingley Hill and M11 junction congestion - which can be achieved with Bus Lane and traffic management between Madingley Mulch and M11 – LLF proposition • A Girton/M11 connection which will avoid Madingley Hill and M11 junction being used as a slip road to M11 – good to hear Highways England are to reconsider this again • Trains which move more people faster than buses – EWR route to Cambourne • The CAM when the route has been verified. <p>“If the authorities had been doing their job properly years ago, we would have a multi-access junction at Girton”</p> <p>Implementation of all or a combination of these measures, will ease the congestion on Madingley Hill and M11 junction and ensure the local bus service through Hardwick will not be held up by commuters. It will provide a “rapid, regular, reliable and safe public bus” into Cambridge and beyond especially with buses through Hardwick having direct access to any Bus Lane provision and management on Madingley Hill and M11 junction</p>		
<p>C.2</p>	<p>Scotland Farm site chosen as preferred location for Park & Ride site with a capacity for up to 2000 cars. It will also provide a travel hub with potential for cycle storage as well as waiting rooms/information point and retail outlet.</p>	<p>Scotland Farm is attractive location for commuters from areas to the west of Cambridge along the A428 corridor but less so for car users from the south exiting at jnc 13 of the M11. The success as a travel hub will depend on the number of car users and cyclists attracted to the site.</p> <ul style="list-style-type: none"> • Any new Park & Ride service will need to be to a standard similar to that currently operating for Cambridge’s Park & Ride services as set out in the current Access Agreement, which states that the 	<p><i>'C2C Outline Business Case, Strategic Case GCP January 2020.</i></p>

		<p>Bus Operator will operate the Park & Ride Bus Services in accordance with the established minimum requirements.</p> <ul style="list-style-type: none"> • Provide appropriate traffic calming and management proposals to mitigate rat-running to Park & Ride sites. • The alternative P&R site at Madingly Road may be redeveloped for other use when the lease expires later this decade. 	
C.3	<p>Increase active travel through improved infrastructure for cycling and walking:</p> <ul style="list-style-type: none"> • Comberton Greenway will complement the C2C project as it develops improved pedestrian and cyclist routes with a segregated path continuing beyond the proposed bus route. • Madingly Road cycling improvements enabled by reallocation of road space that complements C2C scheme 	<p>The scheme must provide a segregated route for non-motorised users, as a minimum to include cyclists and walkers, but where appropriate equestrians, and to ensure that all pedestrian facilities are accessible for all.</p> <p>The existing cycling network between Cambourne and Cambridge has sections of segregated links of uneven quality but is discontinuous and does not in total provide a high-quality segregated route which would cater for the potential increased modal share of cyclists along the corridor.</p> <p>Madingly Road potential bus lane/priority measures reallocated to cycling infrastructure.</p>	<i>'C2C Outline Business Case, Strategic Case GCP January 2020.</i>
<p>Hardwick Response Document Submitted 12th March 2021 Point 2</p>	<p>Point 2.2. Retention and Improvement of existing Services.</p> <p>Whereas with appropriate “congestion busting” measures we see no need for C2C Off road busway, we need reassurance that the local bus service or equivalent will be retained and improved.</p> <p>“Currently Hardwick local bus service on Neots Road serves 4 stops. We believe with appropriate measures to remove congestion on Madingly Hill and at the M11, we shall see an increase in popularity in bus travel versus car use. See points 8 and 9 page 7 and 8.” <i>(of our Document to the Auditor dated 9th March 2021)</i></p> <p>“We also need reassurance that the mixed-use Footpath upgrade due to be implemented under funds from two different developments to our west is not going to be withdrawn when the plans for the busway are withdrawn. This is a well-used route to Cambridge by many.”</p>		

C2C Independent Audit

	<p>“Hardwick residents should have the opportunity to share in the benefits offered by Public buses unhindered by congestion between Hardwick and Cambridge without losses to the belt of trees along St Neots Road which would be removed for an off-road C2C Busway.”</p> <p>Update: With the current Heads of Agreement with Countryside Developments for Bourn Airfield (3,500 homes) and the S106 Agreement for Cambourne West (2,500 homes), there is funded provision for continuous cycle and footpath provision all along the St Neots Road, IDEPENDENT of the provision of C2C.</p>	
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Table D: Strategic Fit

	Assumptions	Constraints	Reference
	D. Strategic Fit:		
D.1	A substantial level of housing and employment development is planned, or is already under development, along the C2C corridor include Cambourne West, Bourn Airfield, West Cambridge and North West Cambridge (Eddington).	Based on current plans, both those within the current Local Plan or well established through planning applications or known to be emerging, there are around 11,700 additional houses planned and around 13,400 additional jobs along the C2C corridor. Around 50% of all housing planned (c. 6,000 houses) would be directly linked to Cambridge City centre and other key employment locations via the C2C project.	'C2C Outline Business Case, Strategic Case GCP January 2020.
Hardwick Response Document Submitted 12th March 2021 Points 10	<p>Point 10 Large developments require good public transport</p> <p>Whereas both Cambourne West and Bourn Airfield developments were designed to require good Public Transport, both developments are going ahead without. We don't believe this is sensible but we do believe that the CAM and maybe EWR may provide better alternatives to a bus-based transport system.</p> <p>Rail and CAM are designed to carry more passengers, more reliably and in shorter time than buses. But we rely on local buses to keep cars off our roads.</p>		
D.2	The C2C project has been recognised in the Local Plans and local transport strategy as a key project to help address these infrastructure constraints on growth by linking Cambridge to growth areas to the west. The provision of a HQPT service supporting journeys to key employment sites presents a viable alternative to car use/purchase for residents in new developments.	Two significant new planned developments (Cambourne West and Bourn Airfield) are, in housing terms, judged to be fully dependent upon the C2C project given the clear policy position within the adopted Local Plan and as supported by Section 106 commitments and ongoing negotiations.	'C2C Outline Business Case, Strategic Case GCP January 2020.

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<p>Hardwick Response Document Submitted 12th March 2021 Point 10</p>	<p>Point 10 Large developments require good public transport Whereas both Cambourne West and Bourn Airfield developments were designed to require good Public Transport, both developments are going ahead without. We don't believe this is sensible but we do believe that the CAM and maybe EWR may provide better alternatives to a bus-based transport system.</p> <p>Rail and CAM are designed to carry more passengers, more reliably and in shorter time than buses. But we rely on local buses to keep cars off our roads.</p>		
<p>D.3</p>	<p>Supporting increased development density of the corridor: The assumption is that the added capacity of the scheme will support the densification in the areas easily accessible to the busway.</p>	<p>The growth depends on the scheme providing enough capacity to meet anticipated demands.</p>	<p><i>'C2C Outline Business Case, Strategic Case GCP January 2020.</i></p>
<p>Hardwick Response Document Submitted 12th March 2021 Introduction</p>	<p>Introduction Points 9 and 10</p> <p>9. C2C Off Road is seen by Hardwick Parish Council as less viable when more substantial alternatives are due to be firmed up very shortly – EWR, CAM are both designed to carry more passengers more quickly Planning rules for large developments used to mandate that building could not go ahead without the supported infrastructure of public transport systems yet both Cambourne West and Bourn Airfield are cleared to go ahead without.</p> <p>10. We believe large scale public transport schemes are essential for the wider Cambridge area in order to meet public transport needs but also to reduce car journeys but not through the deployment of buses nor using the specific C2C Off Road scheme currently on the design board. There is a good analysis by Bourn Parish Council to show the C2C Off Road is inadequate for the modal shift (from) cars (in C2C estimates).</p>		

D.4	The scheme offers further capacity and therefore underpins growth. Whilst there is a wealth of supporting evidence for this assertion, it is hard to establish how much effect on relieving the capacity this scheme will have and how much growth that this scheme in isolation will enable. The scheme is assumed to be the launch point for further connections and shift away from private vehicles.	Existing network cannot increase travel capacity much further. A major constraint is whether this scheme can successfully create the conditions for modal shift? Are other measures required to achieve the 30% modal shift targeted in the GCP transport strategy?	'C2C Outline Business Case, Strategic Case GCP January 2020.
Hardwick Response Document Submitted 12th March 2021 Point 1	<p>Point 1 Not just expensive but poor value for money</p> <p>Hardwick supports the view that shorter journey times are best achieved by</p> <ul style="list-style-type: none"> • tackling the Madingley Hill and M11 junction congestion - which can be achieved with Bus Lane and traffic management between Madingley Mulch and M11 – LLF proposition • A Girton/M11 connection which will avoid Madingley Hill and M11 junction being used as a slip road to M11 – good to hear Highways England are to reconsider this again • Trains which move more people faster than buses – EWR route to Cambourne • The CAM when the route has been verified. <p>“If the authorities had been doing their job properly years ago, we would have a multi-access junction at Girton”</p> <p>Implementation of all or a combination of these measures, will ease the congestion on Madingley Hill and M11 junction and ensure the local bus service through Hardwick will not be held up by commuters. It will provide a “rapid, regular, reliable and safe public bus” into Cambridge and beyond especially with buses through Hardwick having direct access to any Bus Lane provision and management on Madingley Hill and M11 junction.</p>		

Table E: Connections to CAM and EWR

	Assumptions	Constraints	Reference
	E. Connections to CAM and EWR		
E.1	The CAM project proposes an expansive metro network that seamlessly connects Cambridge City Centre, key rail stations (Cambridge, Cambridge North and the future Cambridge South), major City fringe employment sites and key ‘satellite’ growth areas, both within Cambridge and the wider region.	The GCP routes will form the first phase of the Combined Authority’s CAM project. This scheme is still at the planning stage (SOBC) and the preferred alignment, scheme costs and appraisal has yet to be confirmed in an Outline Business Case. There is uncertainty regarding the timeline for CAM implementation; the SOBC indicated a construction period between 2024 - 2030 but the timeline for the preparation of the OBC has already slipped so this appears to be optimistic.	<i>Cambridgeshire Autonomous Metro Strategic Outline Business Case, CPCA, February 2019</i>
E.2	CAM SOBC assumes the portal connecting the city centre underground section to the C2C route will be in West Cambridge at the southern edge of the proposed development area. The CAM station will be at ground level in this vicinity.	Alternative route options for the CAM are still being explored. So far, these rule out any alignment going via the Girton Interchange. A northern route corridor option(s) has been proposed. These would follow an alignment to the north of the A1303 and American Cemetery and connecting to the north side of the A428 and proceeding to Scotland Farm P&R and then crossing over to Bourn Airfield development. An alternative option to extend the CAM tunnel to the west of the M11 on the northern side of A1303 has also been explored. A preliminary evaluation of these route options indicates that they would be higher cost alignments for the busway/CAM and would have environmental impacts on the American Cemetery, 800 Wood, Madingley village and White Pits Plantation, incur longer journey times compared to the preferred busway option and would not attract as many bus riders.	<i>CAM Indicative Northern Route Corridor Options Map, CPCA, October 2020.</i>

<p>Hardwick Response Document Submitted 12th March 2021 Points 1 and 9.2</p>	<p>Point 1.</p> <p>Hardwick supports the view that shorter journey times are best achieved by</p> <ul style="list-style-type: none"> • tackling the Madingley Hill and M11 junction congestion - which can be achieved with Bus Lane and traffic management between Madingley Mulch and M11 – LLF proposition • A Girton/M11 connection which will avoid Madingley Hill and M11 junction being used as a slip road to M11 – good to hear Highways England are to reconsider this again • Trains which move more people faster than buses – EWR route to Cambourne • The CAM when the route has been verified. <p>“If the authorities had been doing their job properly years ago, we would have a multi-access junction at Girton”</p> <p>Implementation of all or a combination of these measures, will ease the congestion on Madingley Hill and M11 junction and ensure the local bus service through Hardwick will not be held up by commuters. It will provide a “rapid, regular, reliable and safe public bus” into Cambridge and beyond especially with buses through Hardwick having direct access to any Bus Lane provision and management on Madingley Hill and M11 junction.</p> <p>Point 9.2 The CAM</p> <p>9.2 The CAM</p> <p>The CAM operation however should be available medium term. It is designed to provide fast, reliable, urban transport with underground connectivity that solves the current congestion problems of cars and buses congestion problems. The CAM operation has repeatedly claimed that it will replace the C2C Off Road and run on C2C tarmac and although the CAM plans seem insufficiently developed, this would represent Cambridge’s answer to a modern “MRT”.</p> <p>However, route selection for any proposed bus way will be paramount as the CAM has been promoted as a 24/7 service and would therefore be entirely inappropriate to run close to village homes in Hardwick or Coton unless it was tunnelled.</p> <p><i>We envisage the CAM as a “Metropolitan Line” or “District Line” in terms of the London Underground Network which might get more support if we knew more about it, especially in respect of how it will replace the C2C or require C2C tarmac for its operation. How is this short-term usefulness of C2C factored into the C2C Business case?</i></p> <p>Update: It is a combination of all elements – An Integrated Transport Policy – that will provide the solutions required.</p>	
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E.3	CAM: As a segregated route, the preferred option for the C2C is aligned with the CAM project, at least on the section between West Cambridge and Bourn Airfield. CAM connections through/around Cambourne will depend on the EWR station location. Connections to rest of the CAM network will be via a tunnel through the City Centre.	C2C travel hubs at Scotland Farm P&R site and in Cambourne may require the CAM to follow a different alignment to the C2C busway in these sections in order to access these facilities depending on the vehicle technology chosen.	<i>'C2C Outline Business Case, Strategic Case GCP January 2020.</i>
E.4	EWR: The C2C full business case will also need to include a sensitivity test to assess the impact of EWR Rail once there is clarity with regards to the proposals. It is unlikely that EWR will have an impact of the core business case for C2C given that it is unlikely that any EWR proposals will have achieved consent during the C2C assessment period.	EWR focuses substantially on longer term growth beyond the Local Plan period and not the immediate and worsening issues of congestion and lack of connectivity for expanding communities west of Cambridge. Once a preferred alignment has been agreed for EWR and confirmation of the location of a Cambourne station there will need to be a programme to ensure integration between EWR, C2C and the wider CAM network.	<i>'C2C Outline Business Case, Strategic Case GCP January 2020.</i>
<p>Hardwick Response Document Submitted 12th March 2021 Point 9.3</p>	<p>9.3 EWR – East West Rail</p> <p>EWR is will provide substantial passenger numbers into and around the Cambridge area. Although still at the route selection for the Stage into Cambridge is still fluid and is unlikely to go to Government until 2024, it is already under construction to the west. With a station at Cambourne North, this has the attractive capacity for delivering commuters to Cambridge South Central and North and beyond to the East. We very much favour this option is considered against C2C Off-road Busway</p> <p>Update:The EWR is already under consultation for the station, the route and integration with destination hubs. EWR stated preferred options are a Station north of Cambourne and a route to planned Cambridge South Station and into Cambridge. Closes June 2021. EWR timeframe is for completion of the section into Cambridge by 2030 and with the Governments removal of the Expressway status for Oxford Cambridge Road upgrade, EWR would be prioritized ahead of the road network. A train with a capacity in the thousands rather than tens for a bus would provide the alternative fast reliable public transport for Cambourne commuters. This then alleviates the road congestion on the Madingley Hill and assists a fast reliable public transport route from Madingley Mulch to the M11.</p>		

Table F: C2C Options Selection

	Assumptions	Constraints	Reference
	F. C2C Options Selection		
F.1	Options Sifting: The scheme options were developed in two phases. In total 34 options were considered which were sifted through a multi-criteria assessment framework to derive 6 options (3 phase 1 & 3 phase 2) including the P&R site options. These were then combined into 5 options for both phases including a scheme comparator which was eventually selected as the preferred option. The optioneering process reviewed a wide range of options suggested by stakeholders and following consultation. The assessment criteria followed DfT appraisal guidelines and covered a broad range of issues from policygoodness-of-fit to local environmental impacts.	<p>The MCAF criteria is a qualitative exercise that measures the performance of each option against a wide range of factors grouped into 6 themes. The option scoring is justified on the available evidence but by its nature is subjective. The results indicated that the best performing option was the segregated off-road option with Park & Ride at Scotland Farm but only by a small margin.</p> <p>The preferred option would create a new busway crossing designated green belt in West Fields, Coton Orchards and National Trust lands.</p> <p>Options following alignments for the CAM and EWR were not evaluated as these are not confirmed, nor are they committed schemes.</p>	<i>C2C Outline Business Case, Options Appraisal Reports 1, 2 & 3, GCP January 2020.</i>
Hardwick Response Document Submitted 12th March 2021 Point 9	<p>Introduction Hardwick Parish Council voted by a majority to oppose the construction of the GCP C2C Off Road Busway. We believe the correct decision is to pause C2C plans while reconsidering the facts and progress of the EWR, CAM, Cambridge PPF and Girton 4ways. Our reasons are clarified below.</p> <p>Point 9 More substantial alternatives due to be settled soon</p> <p>9.1 Girton 4 ways “The implementation of Girton 4 ways in the view of many goes a long way to solving congestion on Madingley Hill and M11 junction at commute times. We see this as absolutely necessary but on past performance maybe some years off. It must be part of the plan to take cars off the Madingley Road and fully support the plan by Highways England to consider it.”</p> <p>9.2 The CAM The CAM operation however should be available medium term. It is designed to provide fast, reliable, urban transport with underground connectivity that solves the current congestion problems of cars and buses congestion problems. The CAM operation has repeatedly claimed that it will replace the C2C Off</p>		

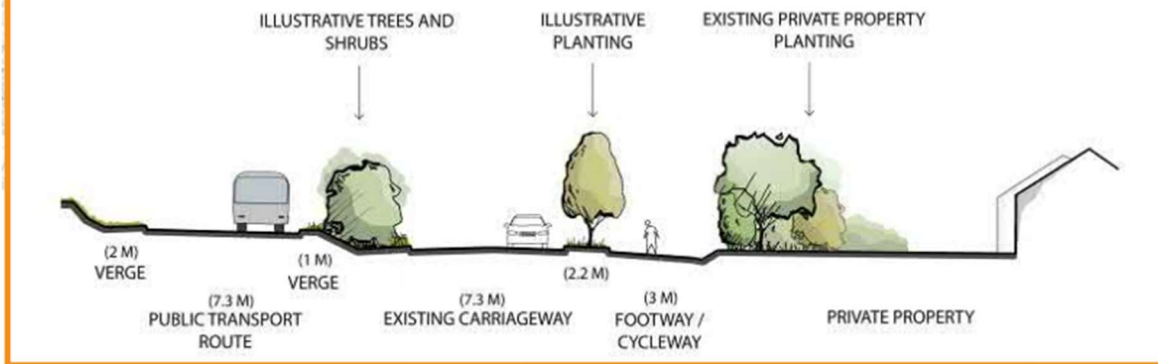
	<p>Road and run on C2C tarmac and although the CAM plans seem insufficiently developed, this would represent Cambridge’s answer to a modern “MRT”.</p> <p>However, route selection for any proposed bus way will be paramount as the CAM has been promoted as a 24/7 service and would therefore be entirely inappropriate to run close to village homes in Hardwick or Coton unless it was tunnelled.</p> <p><i>We envisage the CAM as a “Metropolitan Line” or “District Line” in terms of the London Underground Network which might get more support if we knew more about it, especially in respect of how it will replace the C2C or require C2C tarmac for its operation. How is this short-term usefulness of C2C factored into the C2C Business case?</i></p> <p>9.3 EWR – East West Rail</p> <p>EWR is will provide substantial passenger numbers into and around the Cambridge area. Although still at the route selection for the Stage into Cambridge is still fluid and is unlikely to go to Government until 2024, it is already under construction to the west. With a station at Cambourne North, this has the attractive capacity for delivering commuters to Cambridge South Central and North and beyond to the East. We very much favour this option is considered against C2C Off-road Busway</p>		
<p>F.2</p>	<p>Alternative alignments to avoid Coton and Hardwick were evaluated as part of the options development process. These were not found to be suitable and performed worse than the preferred option and no better than the other options assessed.</p>	<p>Alternative northern route options via Girton interchange are not deliverable within the time horizons for the project and not compatible with CAM route corridor options.</p> <p>Other northern route options to the north of the American Cemetery are constrained by environmentally sensitive areas and heritage assets. The Cambridge American Cemetery and the American Battle Monuments Commission is regarded as a unique national memorial which honours the American military personnel killed in the second world war. They would oppose any on-road or off-road scheme which impacted the setting of the cemetery including removing the verges along the A1303 and the</p>	<p><i>C2C Outline Business Case, Options Appraisal Reports 1, 2 & 3, GCP January 2020.</i></p> <p><i>Madingley Road ‘Quick-Win’ Options Outline. Technical Note. Mott Macdonald. May 2019.</i></p>

		<p>uninterrupted views to the north. On-road options for bus lanes/bus tidal flows are also constrained by impact on SSSI and American Cemetery along the A1303 as well as impacts on properties along the route.</p>	
<p>Hardwick Response Document Submitted 12th March 2021 Point 3</p>	<p>Point 3 Consultation Results not understood 3.1. First Consultation on the route 2015 The original Consultation on the route – north, south or central of the A428/A1303 corridor - ignored the input from Hardwick. In fact is also dismissed the overall support for just easing the congestion on the Madingley Road.</p> <p>- Consultation result. GCP Consultation Report Feb 2016 Page 36 - Overall Majority 66.8% wanted supported or strongly supported Area 1 Central – Just a Bus lane on Madingley road - £18m. A perfectly viable on road Bus Lane solution for Madingley Hill was the public’s first choice in the original consultation, “Central area 1”, a Bus lane into Cambridge from the Madingley Mulch roundabout along Madingley Rise and Madingley Road. Described here C2C Consultation Leaflet 12.10.2015 (greatercambridge.org.uk)</p> <p>The majority support was for this Option see page 18. C2C Consultation Report 01.02.2016 (greatercambridge.org.uk)</p> <p>- Hardwick Village Plan result</p> <ul style="list-style-type: none"> • Hardwick Village Plan survey (surveyed whole village 2016/17 but published December 2018) • Hardwick votes North of A428 – 62% for • Hardwick votes 54% against being on St Neots Road <p>3.2. Second consultation on the route through Hardwick – GCP Phase 2 The Parish Council held a public meeting (whole village invited) 12th March 2019 then held its Parish Council Meeting on 26th March 2019 to ensure the Village views were properly understood.</p> <p>As a result, the Parish Council sent a letter to the GCP Consultation dated 28th March 2019 which objected to all Options. It stated that Hardwick Parish Council does not support any of the Options 1-3 for Phase 2 but of the three considers Option 1 to be the “least worst” Option.</p>		

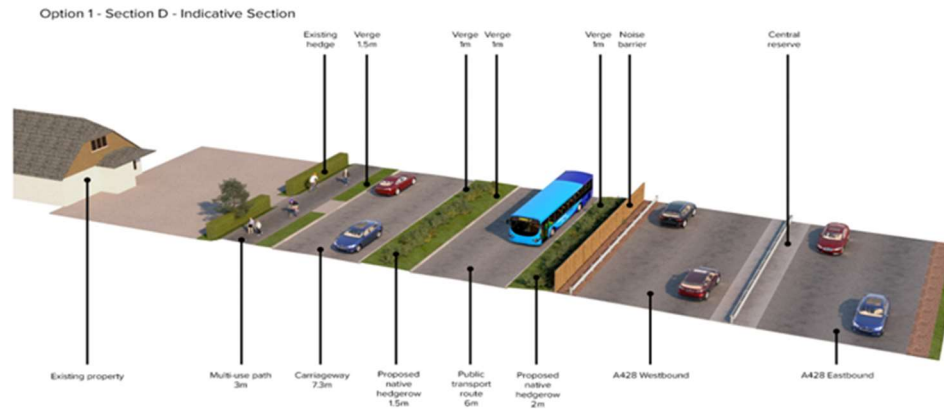
	<p>This is very different from regarding Hardwick as supporting the C2C Off-Road Option.</p> <p>Hardwick Result Results were presented with updated plans at two public meetings in July 2019 and then to Parish Council on 23rd July 2019 there was much debate driven by GCP Powerpoint presentation which referred to the Hardwick Village Plan but misrepresented the residents survey results especially that the Busway had been highlighted as important to the village. For example, the Hardwick Village Plan lists many issues that are important to the village including the Busway, Parking on the pavement and dog fouling. It does not mean we were in favour of them.</p> <p>Only 104 Residents completed the Phase 2 survey of which</p> <ul style="list-style-type: none"> • 40 voted Option 1 – (assuming trees were substantially retained or planted) • 64 didn't <p>Decision voiced by the GCP was that majority voted for Option 1 off-road – see below</p> <p>C2C Phase 2 Summary Report May 2019.pdf (storage.googleapis.com) “Executive summary May 2019! Just under half of respondents (48%) indicated ‘Option 1: off-road’ would be their preferred choice for the link between Madingley Mulch roundabout and Bourn Airfield, while the same percentage (48%) favoured one of the on-road options or not implementing any of the options.</p> <p>A great deal of detailed comments were received. Of these the issues that were highlighted more compared to previous consultation rounds for the route included: The impact of the proposals on residents of St Neots Road, Hardwick from the increased traffic and loss of vegetation. The need to consider the implications of the East-West rail proposals from Network Rail. The need for wider public transport network to be developed to improve accessibility for villages around the route. The possibility of locating a Park & Ride site closer to or within Cambourne.”</p> <p>3.3. The guiding images Respondents and those who didn't bother to respond were taken in by the images presented before the consultation. The consultation document clearly states trees and shrubs as a barrier</p>	
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Before Consultation

Artist's impression of a cross-section of the proposed route



After Consultation without trees



The 8 lanes of tarmac plus a wide cycle path right in front of residents' properties would have a severe social impact, too. Clearly states "Native Hedgerow" (between Busway and properties) - no mention of trees.

The announcement from **GCP Management**, at **GCP Joint Assembly Meeting on 30th of January 2020** was misleading and inaccurate. It was stated (recorded on video and confirmed in writing by the **GCP Communications Manager**) that, "*Hardwick for example supports an off-road route.*" This is not correct if the evidence is examined – see above vote statistics.

Table G: Economic Case

	Assumptions	Constraints	Reference
	G. Economic Case		
G.1	Options Appraisal: The preferred route from Cambourne to Grange Road has been analysed for its economic benefits and costs. Benefits were assessed at 3 levels following Transport Appraisal Guidelines: level 1 measures the transport user benefits to bus riders and decongestion benefits for car users; level 2 estimates the wider economic benefits assumed to accrue from the scheme from agglomeration; and level 3 estimates the wider economic benefits from land use changes at national and local level, including Gross Value Added through jobs created and the land value uplift from the scheme. These level 3 additionality benefits are what justify the scheme producing a BCR of 1.47 (increased to 3.48 with Greater Cambridge additionality benefits) compared with just 0.43 for the level 1 benefits and 0.48 for the adjusted level 2 benefits.	The scheme has been presented as creating 975 new jobs and increasing housing by around 6,000 which are dependent on the scheme. There is an increase in GVA of £102.8m per annum attributed to the scheme. Over a 30-year period this delivers a significant benefit of £676.1m plus £458m from land value uplift, giving a total benefit of £1.13bn. What constrains this assumption is that if the scheme does not support the housing and jobs growth as expected then there is a danger of reduced economic growth.	<i>C2C Outline Business Case, Economic Case GCP January 2020.</i>
G.2	Segregated busway: Comparison of wider economic impact assessment of the off-road (preferred option) and the on-road option estimates that the on-road option has a slightly positive BCR when local WEI are included whereas the off-road option has a much higher BCR.	The traffic growth generated by the developments along the corridor would increase congestion and impact on the journey times and reliability of an on-road scheme along the A1303 even with bus priority measures such as bus lanes or a tidal bus way.	<i>C2C Outline Business Case, Economic Case GCP January 2020.</i> <i>'C2C Outline Business Case, Options Appraisal Reports 1, 2 & 3, GCP January 2020.</i>

<p>Hardwick Response Document Submitted 12th March 2021 Points 1, 9 and 10</p>	<p>Point 1 Not just expensive but poor value for money The Busway would be a £200m plus spend and by GCP own figures represents a very poor business case. The stated objective of C2C from the outset in 2014 is to address the congestion on Madingley Hill and M11 junction and shorten journey time from Cambourne to Cambridge. Hardwick supports the view that shorter journey times are best achieved by</p> <ul style="list-style-type: none"> • tackling the Madingley Hill and M11 junction congestion - which can be achieved with Bus Lane and traffic management between Madingley Mulch and M11 – LLF proposition • A Girton/M11 connection which will avoid Madingley Hill and M11 junction being used as a slip road to M11 – good to hear Highways England are to reconsider this again • Trains which move more people faster than buses – EWR route to Cambourne • The CAM when the route has been verified. <p>Point 9 More substantial alternatives due to be settled soon 9.1 Girton 4 ways “The implementation of Girton 4 ways in the view of many goes a long way to solving congestion on Madingley Hill and M11 junction at commute times. We see this as absolutely necessary but on past performance maybe some years off. It must be part of the plan to take cars off the Madingley Road and fully support the plan by Highways England to consider it.”</p> <p>9.2 The CAM The CAM operation however should be available medium term. It is designed to provide fast, reliable, urban transport with underground connectivity that solves the current congestion problems of cars and buses congestion problems. The CAM operation has repeatedly claimed that it will replace the C2C Off Road and run on C2C tarmac and although the CAM plans seem insufficiently developed, this would represent Cambridge’s answer to a modern “MRT”.</p> <p>However, route selection for any proposed bus way will be paramount as the CAM has been promoted as a 24/7 service and would therefore be entirely inappropriate to run close to village homes in Hardwick or Coton unless it was tunnelled.</p> <p><i>We envisage the CAM as a “Metropolitan Line” or “District Line” in terms of the London Underground Network which might get more support if we knew more about it, especially in respect of how it will replace the C2C or require C2C tarmac for its operation. How is this short-term usefulness of C2C factored into the C2C Business case?</i></p>	
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	<p>9.3 EWR – East West Rail EWR is will provide substantial passenger numbers into and around the Cambridge area. Although still at the route selection for the Stage into Cambridge is still fluid and is unlikely to go to Government until 2024, it is already under construction to the west. With a station at Cambourne North, this has the attractive capacity for delivering commuters to Cambridge South Central and North and beyond to the East. We very much favour this option is considered against C2C Off-road Busway</p> <p>Point 10 Large developments require good public transport</p> <p>Whereas both Cambourne West and Bourn Airfield developments were designed to require good Public Transport, both developments are going ahead without. We don't believe this is sensible but we do believe that the CAM and maybe EWR may provide better alternatives to a bus-based transport system.</p> <p>Rail and CAM are designed to carry more passengers, more reliably and in shorter time than buses. But we rely on local buses to keep cars off our roads.</p> <p>In the meantime Hardwick would like to see a short term solution tackling the congestion on Madingley Hill and approach to M11 traffic congestion referred to in our Point 1</p>	
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G.3	<p>Journey Times, Reliability and Ridership: The traffic modelling for the preferred option estimates a 167% increase in bus ridership when the scheme opens and 233% by 2036 when all the housing and employment in the corridor is assumed to be built. This amount of mode shifting, mainly from private car, is predicated on the C2C delivering significant journey time savings to users from Cambourne, Bourn village and the Scotland Farm P&R. For instance, C2C passengers from Cambourne to Cambridge city centre are predicted to have 23 minutes lower journey time in the morning peak hour compared to a do minimum scenario. Alternative on-road options do not offer anywhere near this journey time saving or reliability.</p>	<p>Despite the forecast increase in bus ridership, there will still be a lot of traffic generated by the developments in the corridor so traffic congestion will remain a problem. The predicted mode shift only increases the bus mode share east of the Scotland Farm P&R site from 4% to 6% of travel demand. Off peak C2C journey times are slightly longer due to the diversion from the busway to the Scotland Farm P&R site.</p>	<p><i>'C2C Outline Business Case, Economic Case GCP January 2020.</i></p>
G.4	<p>Sensitivity Tests: A series of sensitivity test were performed to assess the robustness of the scheme against varying levels of growth. This supports the economic case for the scheme in that where costs may increase the VfM of the scheme remain unchanged, and that if a greater level of growth does materialise then the VfM of the scheme will increase.</p>	<p>The scheme is judged to have medium VfM but is sensitive to changes in land value uplift and GVA generated by additional jobs. If these are less than expected, then the VfM would be poor.</p>	<p><i>'C2C Outline Business Case, Economic Case GCP January 2020.</i></p>

<p>G.5</p>	<p>Environmental Impact: Overall it is assumed that environmental factors are very limited in terms of the schemes impact on the proposed route. Noise, Air quality and emissions are all very limited. It is assumed they will have minor benefits or be neutral. Similarly, for the landscape impact it is neutral for the proposed route. There is a slightly higher impact on biodiversity, however there are mitigation opportunities for the scheme to reduce impact.</p>	<p>The scheme must achieve a 20% net biodiversity gain. The segregated busway alignment has been designed to minimise the impacts on the environment. Nevertheless, it will require mitigation measures to lessen its impact on the landscape especially where it crosses the green belt and National Trust land. There is also the limitation that if the targets for modal shift are not reached then there will be reduced benefit to the environmental factors such as emissions and air quality.</p>	<p><i>C2C Outline Business Case, Economic Case GCP January 2020.</i></p>
<p>G.6</p>	<p>Green Belt: Whilst it is always preferable to avoid any impacts on the Green Belt, in the case of C2C, impact is inevitable. The National Planning Policy Framework establishes that “certain other forms of development are also not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it. These include local transport infrastructure which can demonstrate a requirement for a Green Belt location.”</p>	<p>The C2C scheme has been developed to provide linkage from new settlements located outside the Green Belt to the City of Cambridge. Given the need to connect development outside the Green Belt to the city, some degree of impact on the Green Belt is inevitable.</p>	<p><i>A428 Cambourne to Cambridge Segregated Bus Route Consideration of Green Belt Issues, LDA Design, August 2017 C2C: Report to GCP Executive Board, 10 December 2020 Interim Addendum Report to Planning Appraisal 2017: Cambourne to Cambridge public transport route (C2C) – Phase 1, Strutt and Parker, September 2019</i></p>

<p>Hardwick Response Document Submitted 12th March 2021 Point 4</p>	<p>Update: The impact of this Off Road Busway on Hardwick is highly disadvantageous as it plans to remove the St Neots Road Tree Line. At the last Parish Council Meeting, there was unanimous support to retain the St Neots Road, Hardwick Tree Line which the C2C off-road Busway is designed to remove.</p> <p>Point 4 Environmentally very Damaging</p> <p>A full report is being sent to the Auditor by the Hardwick Climate Action Group which will amplify these remarks.</p> <p>“The thousands of trees that are in line for removal would release tons of carbon into the environment at the same time denying the air cleaning and carbon capturing function they have at the moment.”</p> <p>“We are also very concerned about the storm water. The tree line is grown in a deep ditch metres wide. If a busway is built over it then flooding on St Neots Road becomes inevitable” Many properties are below the level of the St Neots Road and east of Millers Way there is no balancing pond that prevents flood water raining on to the A428.</p> <p>“The flora and fauna found in the tree line would be lost as would the natural screen, much more pleasing on the eye and provides peace of mind that we still live in a village”. Far more so than lanes of tarmac, traffic and wooden fences.</p> <p>“We would like to draw attention to the proposed P&R at Scotland Farm . If this goes ahead, it will cause light pollution, 2000 cars will cause noise and air pollution and we are very concerned that vehicles aiming at this P&R from the south of Hardwick will be using our Village as a rat run. Our proposal would be to site this P&R as an interchange by the Girton 4way.”</p> <p>4.1 Change.org</p> <p>Our argument of wide village support is evidenced by the Village Petition. In October 2019, a resident in Hardwick Village (not resident on St Neots Road) initiated an on-line survey through www.change.org to save the line of trees and hedges of nearly 2 miles length along St Neots Road that would be removed by the latest C2C Off Road plans. Replanting of saplings will make no contribution to this for probably 50 years or more.</p> <p>This was presented to GCP Management November 2019 along with a paper based petition (for those less internet savvy) against removal of the Trees from 319 residents.</p> <p>At present that survey (which ensures it can reference participants) Petition · Protect Hardwick’s environment and ecological diversity by stopping the destruction · Change.org stands at 730 signatures at time of writing</p>	
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	<p>4.2 Terrain</p> <p>Hardwick residents are very aware of the terrain that lies between the St Neots Road and A428. The trees are mostly growing in a wide ditch, 1m or so deep that acts as a drain for surface water from St Neots Road. The St Neots Road also undulates. In locations along St Neots Road the A428 is above or level with the premises along St Neots Road. Replacing the trees with tarmac, and depending upon elevation “could have a dramatic affect and present high risk of water flooding into residents’ properties”. The current noise barrier is entirely ineffective, particularly when the wheels of the lorries on the A428 can be seen above the barrier. It is a wholly unsuitable place to put Mass public transport.</p> <p>The C2C Off Road is designed to require 12.5m between the edge of St Neots Road and the soundproof barrier. Measurements show that east of the Village Entrance the required 12.5 m reduces to barely 4m at Long Road Comberton. If the intention was to rely upon the A428 embankment then that clearly drops away quite steeply towards Long Road. There are also multiple utilities in the current verge including telecommunications.</p> <p>Hardwick PC explained the lack of space to the GCP consultants at the LLF meeting June 2019 and were reassured there was even room to put a busway behind our tree line. There isn’t.</p>		
G.7	<p>Mitigation measures will be firmed up following the Environmental Impact Statement and in consultation with local landowners and the communities affected.</p>	<p>There are specific concerns about the impact on the Green Belt, West Fields, the Orchards near Coton as well as the alignment close to Coton conservation area, and the busway section between St. Neots Road and the A428 at Hardwick.</p> <ul style="list-style-type: none"> • Coton Conservation Area including Grade 1 listed Church. 	<p><i>C2C: Report to GCP Executive Board, 10 December 2020</i></p>

		<ul style="list-style-type: none"> • Land parcels owned by Cambridge Past, Present and Future, which are protected by National Trust Covenants. • Fitting within available space in areas where the alignment passes relatively close to properties. For example, along some parts of the St Neots Road. Where necessary noise barriers will need to be explored as an option to ensure that traffic noise experienced by residents reduces. • Minimising the impact on the Coton Orchard and a City Wildlife Site, to the west and east of the M11 respectively which are bisected by the alignment for the preferred option 	
<p>Hardwick Response Document Submitted 12th March 2021 Points 2 and 6</p>	<p>Point 2. Destructive for Hardwick 2.1 We don't cause the delay Hardwick does not cause any delays to the journeys between Cambourne and Cambridge but we seem to be getting the major share of the desecration. We have provided over 1000 signatures against removal of our tree line. Our Village petition to Save our Trees has reached over 730 verifiable signatures on Change.org Petition · Protect Hardwick's environment and ecological diversity by stopping the destruction · Change.org and 319 signatures for the less internet savvy residents. Hardwick is a village of around 1200 homes and growing – the petitions are not just the views of those who live on St Neots Road. Desecrating our village road to improve journey times for residents to the west of Hardwick would appear to be like throwing your rubbish over your neighbour's fence.</p> <p>Point 6. Peace of Mind Hardwick residents do not want to be looking out over 8 lanes of tarmac, even more traffic and wooden fences. A line of trees gives a more tranquil outlook and we would not want to see peace of mind trivialised in any audit of the potential C2C Off Road busway.</p> <p>Update: Hardwick is not just concerned about noise as G7 suggests. The removal of our Tree Line to be replaced by a wooden fence gives residents a bleak outlook. Residents can see the wheels of the lorries on the A428 in some places above the existing fence.</p>		

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G.8	<p>Social Impact: Overall the scheme is assumed to benefit a range of social areas. Reduced accidents due to lower private vehicle use. Providing access to services, which are affordable is also assumed. Creating a more secure and easy to use bus service will attract a broader cohort of users.</p>	<p>Cost and accessibility is an issue for people on low incomes. High fares will reduce demand. The transport scheme needs to be financially sustainable and too many services with low patronage will drive costs up threatening service levels which in turn could reduce demand.</p>	<p><i>'C2C Outline Business Case, Economic Case GCP January 2020.</i></p>
<p>Hardwick Response Document Submitted 12th March 2021 Point 2</p>	<p>2.2. Retention and Improvement of existing Services. Whereas with appropriate “congestion busting” measures we see no need for C2C Off road busway, we need reassurance that the local bus service or equivalent will be retained and improved.</p> <p>“Currently Hardwick local bus service on Neots Road serves 4 stops. We believe with appropriate measures to remove congestion on Madingley Hill and at the M11, we shall see an increase in popularity in bus travel versus car use. See points 8 and 9 page 7 and 8.”</p> <p>Update: In order to improve journey time, C2C expect to provide a single stop on the St Neots Road Hardwick. This stretch of our village road has residents over a distance of nearly 2 miles.</p>		

Table H: Financial Case

	Assumptions	Constraints	Reference
	H. Financial Case		
H.1	The current estimated capital cost of the off-road option is £160.5m, of which £37.7m is anticipated from Section 106 contributions from other third parties such as the developers of the Bourn Airfield site and West Cambridge.	The estimated developer contributions are dependent upon ongoing assessments and negotiations and so are indicative at this stage. However, it is currently anticipated that between 20% and 25% of the scheme costs can be attributed to development and contributions secured accordingly. Any lower contributions would increase the financial risk of the scheme to the GCP.	<i>C2C Outline Business Case, Financial Case GCP January 2020.</i>
H.2	The estimated high-level scheme costs at this stage of the project's development are based on a range of assumptions and exclusions, which are detailed within OBC Appendix Q. These will be revisited and updated in the Full Business Case stage.	The financial case does not include Optimism Bias (currently 44%), which is used within the economic appraisal, but does include a risk allowance of 25%.	<i>C2C Outline Business Case, Financial Case GCP January 2020.</i>

Table I: Commercial Case

	Assumptions	Constraints	Reference
	I. Commercial Case		
I.1	In the SOBC it was concluded that the commercial factors related to the delivery did not significantly differentiate between the options.	As part of the current stage of scheme development and the OBC, a design and build procurement has been selected as the preferred procurement strategy. However, this is subject to further review as part of the next stage of work in developing the scheme and informing the Full Business Case	<i>C2C Outline Business Case, Commercial Case GCP January 2020.</i>
I.2	The design and build model will provide GCP with more opportunity to drive value for money and more opportunity to transfer delay risk and interface risks to the contractor.	Adopting a design and build approach puts the responsibility for design, including integration, with the contractor and it would be the responsibility of GCP to define its requirements.	<i>C2C Outline Business Case, Commercial Case GCP January 2020.</i>
I.3	The operation of the current bus services along the C2C corridor is largely on a commercial basis. With regard to the new HQPT services which are expected to operate along the C2C infrastructure, it is not the intention of GCP to be directly involved in their procurement and control as that is not within GCP’s powers.	The potential public transport operating models currently available for the C2C project have been identified and the following issues and key questions considered: <ul style="list-style-type: none"> ● Available operating models for providing services; ● Appetite in the market to engage with those models; ● Impact and influence on fares and patronage; ● Risks; and, ● Commercial implications of objectives for clean high-quality transport such as high frequency services operated by high quality electric vehicles. 	<i>C2C Outline Business Case, Commercial Case GCP January 2020.</i>

	<p>The proposed Bus Network Strategy is based around three direct express services as follows:</p> <ul style="list-style-type: none"> ● Cambourne to Cambridge City Centre at 10- minute interval service (6 buses per hour) ● Cambourne to Biomedical Campus at 30- minute interval service (2 buses per hour) ● A428 Park and Ride site to Biomedical Campus at 30-minute interval service (2 buses per hour during peak periods) <p>In addition, passengers from Cambourne to Cambridge corridor services would also be able to interchange with the Universal service at West Cambridge which would serve Cambridge North Station and the Cambridge Science Park.</p> <ul style="list-style-type: none"> ● Biomedical Campus to Eddington at 15- minute interval service (4 buses per hour) ● Biomedical Campus to Cambridge North Station & Cambridge Science Park 30-minute interval service (2 buses per hour) 	<p>The routes and schedule are based on anticipated demand and are proposed routes only and have not been agreed with the existing route operators.</p> <ul style="list-style-type: none"> ● Any new Park & Ride service will need to be to a standard similar to that currently operating for Cambridge’s Park & Ride services in accordance with the established minimum requirements. ● Communities along the corridor are served by the Citi 4 Bus Service, amongst others. This is a stopping service which could provide a feeder for the busway. Whilst the decision as to future Bus Services lies with bus operators, the provision of the Busway should not prevent the provision of existing services. ● All buses are now required to be accessible for all including wheelchair users. ● The scheme must be capable of eventual upgrade to form part of the CAM network. 		
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<p>Hardwick Response Document Submitted 12th March 2021 Points 5 and 9.2</p>	<p>Point 5. The C2C Off Road Busway is unnecessary The Off Road Busway is independent from the Bus service provider. We know nothing about the Service providers plans or the ambitions should there be a Scotland Road P&R as the consultation so far has concentrated completely on tarmac e.g. What route (would proposed) P&R buses take into Cambridge?</p> <p>The Combined Authority Mayor responsible for Transport Strategy in our Region has shown by facilitating the direct, non-stop, reliable, fast Service 905 from Cambourne to Cambridge via the Science Park into Cambridge - a reworking of the X5 bus from Bedford.</p> <p>Scaling this up to other locations would provide Cambourne and Bourn residents the fast transport required in the very short term until a better solution using EWR and CAM are available.</p> <p>Update: Implementation of the 905 non-stop service has been complemented by the X2 – a new non-stop service from Cambourne to Addenbrookes/Bio Medical centre. These services use the A428 and M11 respectively and are already in service.</p> <p>Point 9.2 The CAM The CAM operation however should be available medium term. It is designed to provide fast, reliable, urban transport with underground connectivity that solves the current congestion problems of cars and buses congestion problems. The CAM operation has repeatedly claimed that it will replace the C2C Off Road and run on C2C tarmac and although the CAM plans seem insufficiently developed, this would represent Cambridge’s answer to a modern “MRT”.</p> <p>However, route selection for any proposed bus way will be paramount as the CAM has been promoted as a 24/7 service and would therefore be entirely inappropriate to run close to village homes in Hardwick or Coton unless it was tunnelled.</p> <p><i>We envisage the CAM as a “Metropolitan Line” or “District Line” in terms of the London Underground Network which might get more support if we knew more about it, especially in respect of how it will replace the C2C or require C2C tarmac for its operation. How is this short-term usefulness of C2C factored into the C2C Business case?</i></p>	
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1.4	The Local Transport Authority (LTA) that has the relevant powers is the Cambridgeshire & Peterborough Combined Authority (CPCA).	The CPCA Mayor’s recently commissioned Strategic Bus Review concluded that further work was required including procurement and completion of a business case to assess different delivery model options. Following completion of this latter piece of work, the CPCA Mayor is expected to make a decision on the future preferred option for delivering bus services in early 2021.		<i>Strategic Bus R 2020</i>
1.5	There are several options for the Busway maintenance which will be reviewed further at FBC.	The busway maintenance option decided upon will depend to an extent on the arrangement used for the Operation of the bus service, which is yet to be determined, as noted above.		<i>C2C Outline Bu Commercial Ca 2020.</i>

Table J: Management Case

	Assumptions	Constraints	Reference
	J. Management Case		
J.1	The management case also identifies the key risks and mitigations for the project. The management case does not differentiate in terms of the options under consideration.	<p>The success and financial viability of the C2C project will be dependent on several factors. Scheme design and delivery will therefore need to consider the following dependencies outlined in the OBC:</p> <ul style="list-style-type: none"> • Delivery of housing and employment sites allocated within the South Cambridgeshire Local Plan • Emerging CPCA Policy specified in the Local Transport Plan. Also need to consider Cambridgeshire Transport Delivery Plan (TDP) for transport capital schemes on the local network to be delivered on a three year time frame and the Transport Investment Plan (TIP) that includes the C2C scheme, developed alongside the TDP to identify schemes to support growth • Monitor how development of CAM progresses as the C2C project aims to deliver the first phase of infrastructure for the larger CAM network • City Access Strategy which aims to improve congestion on routes into the City Centre which will be key to reducing the journey times for buses and therefore making the Park & Ride attractive and successful • Oxford-Cambridge Arc. Both the Expressway and EW Railway will impact on the C2C route and whilst the scheme is not dependent directly upon these proposals, they may have a significant influence 	<i>C2C Outline Business Case, Management Case GCP January 2020.</i>

		<ul style="list-style-type: none"> Emerging Technologies. The final specification of C2C will be driven by technology advances and the range of solutions available at the procurement stage. 	
<p>Hardwick Response Document Submitted 12th March 2021 Points 1, 9.2</p>	<p>Point 1. Not just expensive but poor value for money</p> <p>The Busway would be a £200m plus spend and by GCP own figures represents a very poor business case. The stated objective of C2C from the outset in 2014 is to address the congestion on Madingley Hill and M11 junction and shorten journey time from Cambourne to Cambridge. Hardwick supports the view that shorter journey times are best achieved by</p> <ul style="list-style-type: none"> tackling the Madingley Hill and M11 junction congestion - which can be achieved with Bus Lane and traffic management between Madingley Mulch and M11 – LLF proposition A Girton/M11 connection which will avoid Madingley Hill and M11 junction being used as a slip road to M11 – good to hear Highways England are to reconsider this again Trains which move more people faster than buses – EWR route to Cambourne The CAM when the route has been verified. <p>“If the authorities had been doing their job properly years ago, we would have a multi-access junction at Girton”</p> <p>Implementation of all or a combination of these measures, will ease the congestion on Madingley Hill and M11 junction and ensure the local bus service through Hardwick will not be held up by commuters. It will provide a “rapid, regular, reliable and safe public bus” into Cambridge and beyond especially with buses through Hardwick having direct access to any Bus Lane provision and management on Madingley Hill and M11 junction.</p> <p>9.2 The CAM</p> <p>The CAM operation however should be available medium term. It is designed to provide fast, reliable, urban transport with underground connectivity that solves the current congestion problems of cars and buses congestion problems. The CAM operation has repeatedly claimed that it will replace the C2C Off Road and run on C2C tarmac and although the CAM plans seem insufficiently developed, this would represent Cambridge’s answer to a modern “MRT”.</p> <p>However, route selection for any proposed bus way will be paramount as the CAM has been promoted as a 24/7 service and would therefore be entirely inappropriate to run close to village homes in Hardwick or Coton unless it was tunnelled.</p>		

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	<p><i>We envisage the CAM as a “Metropolitan Line” or “District Line” in terms of the London Underground Network which might get more support if we knew more about it, especially in respect of how it will replace the C2C or require C2C tarmac for its operation. How is this short-term usefulness of C2C factored into the C2C Business case?</i></p>		
J.2	<p>The Management Case reviews the process of public consultation and engagement. A communication plan sets out how this process is managed, identifying key stakeholders and how engagement is managed including the facilitation of a project specific Local Liaison Forum.</p>	<p>Public and stakeholder consultation is essential to ensure that the various aspirations of the general public and key stakeholders are taken into account throughout development and delivery of the project and to manage the communication and flow of information relating to the project.</p>	<p><i>C2C Outline Business Case, Management Case GCP January 2020.</i></p>

Table K: Full Business Case

	Assumptions	Constraints	Reference
	K. Full Business Case		
K.1	The Full Business Case will develop the detailed design for the preferred scheme and update the appraisal for the economic case. Consultation and engagement with stakeholders and partners will continue through this stage. The risk register will identify outstanding issues that need remedial actions or mitigation measures.	Additional information for the financial, commercial and management cases will be provided together with recommendations on the necessary actions to proceed with the scheme.	<i>The Green Book: appraisal and evaluation in Central Government. HM Treasury 2020.</i>
K.2	Prepare an application for statutory consent anticipated in 2021 with a determination period estimated of around 18 months – completed in 2023.	Authority to construct the scheme is likely to come from a Transport and Works Act Order which would be determined by the Secretary of State for Transport. This process is likely to include a Public Inquiry directed by an independent Inspector	<i>C2C: Report to GCP Executive Board, 10 December 2020</i>
K.3	Prepare Environmental Impact Assessment and Environmental Statement	Work to be undertaken will include Environmental Impact Assessment as well as Transport Assessment, Road Safety Audit etc. This will draw on further work to be done on scheme design including mitigation measures and further stakeholder engagement.	<i>Report to GCP Executive Board, 10 December 2020</i>
K.4	Seek authority to construct project in 2023 depending on statutory powers process	Following the completion of the statutory permissions stage, the GCP Board will be presented with the Final Business Case for approval. This will trigger the construction of the project.	<i>Report to GCP Executive Board, 10 December 2020</i>
K.5	Opening of the scheme to operational services in 2025	Bus services schedule and routes will be determined in discussion with operators. Phasing in of services in response to planned growth and ridership demand	<i>Report to GCP Executive Board, 10 December 2020</i>

Table L: Covid-19 Impacts

	Assumptions	Constraints	Reference
	L. Covid-19 Impacts		
L.1	The implications of the global pandemic remain unknown. While there has been a short-term impact on the use of public transport, the longer- term impact is uncertain. The C2C scheme is consistent with the government’s agenda for innovative public transport solutions and mode switching from private car use in support of climate change goals and net-zero carbon by 2050. So, the prospects for the scheme are considered good in the long-term.	This matter will remain under review. Scheme appraisal will be revisited at Full Business Case stage with sensitivity tests of varying levels of demand and wider economic impacts.	<i>Transport use during the covid pandemic. Transport use by mode: Great Britain, since 1st March 2020. Department for Transport. https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic</i>
Hardwick Response Document Submitted 12th March 2021 Points 1	<p>Update: This is now an essential element prior to initiating the spend? “Whether the C2C is actually required.” It is essential to share the nature of the tests envisaged and the data extracted. For this very reason, the implementation needs to be PAUSED until the effects of post Covid 19 work patterns, the Girton 4 ways, CAM and EWR impacts are clarified.</p> <p>Introduction We believe the correct decision is to pause C2C plans while reconsidering the facts and progress of the EWR, CAM, Cambridge PPF and Girton 4ways.</p> <p>Point 1 Hardwick supports the view that shorter journey times are best achieved by</p> <ul style="list-style-type: none"> • Tackling the Madingley Hill and M11 junction congestion - which can be achieved with Bus Lane and traffic management between Madingley Mulch and M11 – LLF proposition • A Girton/M11 connection which will avoid Madingley Hill and M11 junction being used as a slip road to M11 – good to hear Highways England are to reconsider this again • Trains which move more people faster than buses – EWR route to Cambourne • The CAM when the route has been verified. <p>Implementation of all or a combination of these measures, will ease the congestion on Madingley Hill and M11 junction and ensure the local bus service through Hardwick will not be held up by commuters. It will provide a “rapid, regular, reliable and safe public bus” into Cambridge and</p>		

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	beyond especially with buses through Hardwick having direct access to any Bus Lane provision and management on Madingley Hill and M11 junction.		