

CPCA/Jacobs' Review of Cambourne to Cambridge

Introduction

This paper provides a response from the Greater Cambridge Partnership (GCP) to the paper produced by Jacobs on behalf of the Cambridgeshire and Peterborough Combined Authority (CPCA) in order to assess the compliance of the Cambourne to Cambridge scheme (C2C) with the Cambridgeshire Autonomous Metro (CAM).

GCP considers that all of the Jacobs' recommendations are already addressed or will be addressed appropriately at later stages of scheme development. There are no issues that justify a conclusion that the scheme is not compliant.

The basis of the assessment is to consider C2C against the objectives of draft "Cambridgeshire and Peterborough Local Transport Plan: Cambridgeshire Autonomous Metro (CAM) Sub-Strategy" namely, to promote economic growth and opportunity, support the acceleration of housing delivery, promote equity and promote sustainable growth and development.

These objectives align to the LTP objectives. The Sub-Strategy is a 'daughter document' to the LTP – it cannot alter the LTP – so in considering conformity it is important to consider both documents. It should be noted therefore, that the C2C scheme is clearly consistent with the Cambridgeshire & Peterborough Local Transport Plan which states:

"Delivery of the CAM in collaboration with the Greater Cambridge Partnership will provide a reliable, high frequency metro service between the employment hubs and high-tech clusters of Greater Cambridge, with the city centre and surrounding market towns and new settlements. Work is already underway on the first phase of the CAM through the Greater Cambridge Partnership's programme to provide high quality, segregated public transport routes along key corridors, including links to Cambourne, Granta Park, Cambridge East and Waterbeach.

CAM will provide a step-change in public transport connectivity across the region, with services being segregated from other motor traffic within Cambridge. It will enable residents and visitors to travel quickly and easily across Greater Cambridge, providing better access to employment and education, broadening labour markets, and thereby supporting our dynamic economy. The scheme, including segregated links to Cambourne, Granta Park and Waterbeach, will also significantly improve the accessibility of new settlements (such as Bourn Airfield and Waterbeach New Town), supporting the delivery of much-needed homes, and major employment clusters Each CAM route – outside of the tunnelled city centre section – will include segregated parallel infrastructure for pedestrians, cyclists and horse riders, opening up new commuting opportunities on foot or by bike, similar to that already achieved by the Cambridgeshire Guided Busway"

The purpose of the LTP Sub-Strategy for CAM was to provide further detail on CAM requirements. The fact that the LTP outlines the requirement for C2C and that GCP is the body taking it forward should be a material consideration, but not one mentioned in the Jacobs' report or the CPCA's covering report.

It also needs to be recognised that an LTP is a strategic document, and it is unlikely that any scheme would systematically achieve every objective fully – compliance is more a matter of

principles and Jacobs seem to have identified no fundamental principles that are not met by the C2C scheme.

A detailed response has been prepared and is attached, whilst this paper responds to the main recommendations of the Jacobs' paper. In particular, it should be noted that:

- The CPCA has previously reviewed the Cambourne to Cambridge route and the A428 corridor. This process was informed by a high level review of route options undertaken by ARUP which concluded in November 2018¹ that:
 - *“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;*
 - *Options for mitigating the impact of the scheme at West Fields and Coton will be incorporated into scheme design for the SOBC”.*
- The most frequently raised concern from Jacobs is about integration with East West Rail, yet these do not appear to be shared by East West Rail who raise no such concerns and state² of their preferred route option that *“It also connects the growing population of Cambourne with environmentally sustainable transport and could integrate with proposed improvements to the local transport network in south Cambridgeshire such as the busway extension and Cambridgeshire Autonomous Metro”.* GCP has previously committed to ensuring Interchange with EWR at Cambourne subject to EWR route confirmation and design development – until such confirmation C2C will run through Cambourne on existing routes rather than new segregated infrastructure whilst EWR finalises its choice of station location over the coming 24 months.
- The only Red flagged issues in the Jacobs assessment, which are deemed to indicate that C2C fails to meet a CAM objectives, relate to the commitment to electric/zero emissions vehicles. As well as being incorrect this is also irrelevant as the C2C scheme is an infrastructure development project – and that infrastructure can convey electric and clean diesel vehicles.
- As such, the Jacobs report clearly demonstrates that C2C is compliant with the Sub-Strategy.

Response to the Jacobs assessment

A detailed response to Jacobs' assessment is appended.

The response to the recommendations of the Jacobs assessment is as follows:

- C2C be designed to connect to East West Rail Station at Cambourne and a segregated route around Cambourne be examined.

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https://cambridgeshire.cmis.uk.com/CCC_live/Document.ashx?czJKcaeAi5tUFL1DTL2UE4zNRBcoShgo=Hi4JkrJb8%2bAC%2bKJmBGUWINQVhEDcylQFmLnM3Bv7rDlis3M5P1E2w%3d%3d&rUzwRPf%2bZ3zd4E7lkn8Lyw%3d%3d=pwRE6AGJFLDNlh225F5QMaQWctPHwdhUfCZ%2fLUQzgA2uL5jNRG4jdQ%3d%3d&mCTIbCubSffXsDGW9IXnlG%3d%3d=hFflUdN3100%3d&kCx1AnS9%2fpWZQ40DXFvdEw%3d%3d=hFflUdN3100%3d&uJovDxwdjMPoYv%2bAJvYtyA%3d%3d=ctNJff55vVA%3d&FgPIIEJYlotS%2bYGoBi5oIA%3d%3d=NHdURQburHA%3d&d9Qji0ag1Pd993jsyOJgFvmyB7X0CSQK=ctNJff55vVA%3d&WGewmoAfeNR9xqBux0r1Q8Za60lavYmz=ctNJff55vVA%3d&WGewmoAfeNQ16B2MHuCPMRKZMwaG1PaO=ctNJff55vVA%3d

² Connecting Communities: The Preferred Route Option between Bedford and Cambridge Executive Summary, 2020

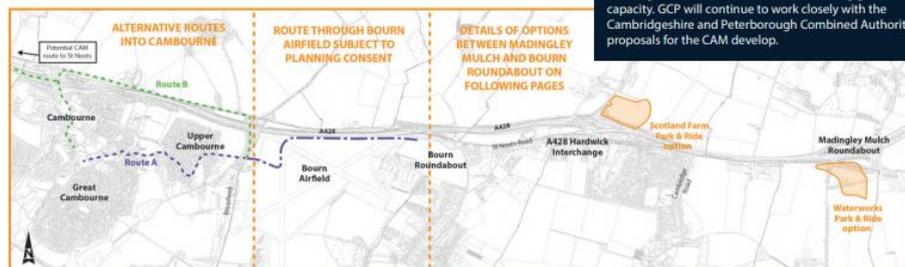
GCP agreed with ARUP in 2018 that CAM would ultimately require a segregated route around Cambourne. A consultation on options for a Phase 2 route running from Madingley Mulch roundabout and on to Cambourne was undertaken in February/March 2019. Phase 2 consultation materials³, which CPCA Officers contributed to, presented what a future, CAM-compliant, Phase 2 route continuing to Neots would look like (Route B) – see Figure 1.

Figure 1 - Phase 2 public consultation brochure page 3

PHASE 2 – MADINGLEY MULCH ROUNDABOUT TO BOURN AIRFIELD AND CAMBOURNE

The area presented for consultation runs west of Madingley Mulch roundabout to Cambourne. We are asking for your views on three options for the link between Madingley Mulch roundabout and Bourn roundabout, presented on pages 4, 5 and 6. Option 1 is entirely off-road, only interacting with other traffic at junctions. Option 2 is entirely on-road, with public transport mixing with general traffic and basic junction improvements. Option 3 is entirely on-road, but with dedicated public transport lanes.

The section from Bourn roundabout to Broadway forms part of a major planning application for approximately 3,500 homes at Bourn Airfield and is the same across all options. All options show two alternatives for entry to Cambourne: travelling with general traffic through the village (Route A), or going up Broadway and along St Neots Road (Route B) and entering Cambourne from the north.



Cambridgeshire Autonomous Metro (CAM)

Plans for the wider, regional Cambridgeshire Autonomous Metro (CAM) are at an early stage and action is needed now to tackle worsening congestion and accommodate growing communities west of Cambridge. A future CAM network proposes electric, rubber-tyred vehicles that can run on existing roads and, for best performance, use dedicated, off-road routes to bypass congestion.

A Metro network running on-road or off-road needs enough space to provide the best service. Options 1 and 3 offer more road capacity due to greater separation from general traffic. Option 2 offers less capacity, as the route is shared with general traffic.

To facilitate the future CAM network, these proposals demonstrate alternatives for entry to Cambourne: sharing road space with general traffic through the village; or entering Cambourne from the north, offering greater capacity. GCP will continue to work closely with the Cambridgeshire and Peterborough Combined Authority as proposals for the CAM develop.

C2C is, however, developed as a free-standing scheme and no detailed off-line alignment around Cambourne has been proposed as yet because:

- 1 There is no agreed location for the East West Rail Station at Cambourne
- 2 There is no clarity as to the likely onward CAM alignment to St Neots

As and when the above issues are resolved GCP can agree an alignment around Cambourne. In the meantime the proposed alignment does not impede eventual delivery of CAM.

The recurrent reference to the need to connect to EWR in the Jacobs report is incorrect as it implies that there is a proposed station location that C2C could connect to. Specifically, Jacobs states “the route does not currently connect into the planned East West Rail Station south west of Cambourne” whereas East West Rail simply show an area where such a station might lie – potentially this could even be to the west of the A1198 in which case connectivity would presumably be provided via the extension of C2C to St Neots.

The current C2C proposals follow an on-line alignment into Cambourne but the scheme would be readily adapted to link to EWR and onto the CAM alignment to St Neots once there is clarity as to the requirements of EWR and CAM.

- A commitment to use of electric / zero emission vehicles, with appropriate infrastructure included within the scheme.

³ https://www.greatercambridge.org.uk/asset-library/imported-assets/Phase%2020leaflet_Finalv2_Optimized.pdf

This point is fundamentally incorrect because C2C is an infrastructure project and not an operational project. Vehicles would be operated by private operators subject to any operating requirements. GCP is committed to the use of electric / zero emission vehicles.

The current proposals for C2C do not specify specific charging infrastructure because this level of detail of design of the Travelhub and other potential charging locations was planned for the next stage of work, and because operational requirements will need to reflect the level of development of battery and charging technology closer to scheme opening. Battery range continues to improve and so the likely requirement for charging cannot at this stage be stated for certain.

This issue is a particular concern because of the need to adopt CAM vehicles. Operators may prove reluctant to invest in a bespoke vehicle fleet when a further technology refresh might be imminent to ensure CAM compliance. Similarly, the design of charging facilities will also need to reflect the needs of CAM. Without confirmation of CAM vehicle type, the GCP cannot provide further detail of vehicles or required charging facilities. There is, however, no aspect of the proposed C2C scheme which in any way impedes the deployment of electric vehicles.

- Route and vehicle stops future proofed to cater for CAM City Tunnels vehicles within the constraints imposed through the TWAO process.

Route and vehicle stops are future proofed to cater for CAM City Tunnels vehicles within the constraints imposed through the TWAO process. As there is at this stage no clarity as to the detailed requirements for CAM it is recognised that further modification may be required as part of a CAM “overlay” but it is unclear what CPCA expect at this stage given the lack of certainty as to their eventual requirements.

- Alternative or amended routes around Coton continue to be reviewed, along with potential routes north of the A1303.

The concerns expressed by Coton residents are well understood. GCP is committed to further refinement of the route around Coton in dialogue with CPPF, National Trust and landowners. However, the various alternatives have all been considered, assessed, and discounted over the last 6 years. Full evidence of assessment of alternatives in line with DfT Transport Analysis Guidance has been detailed throughout Option Appraisal Reports 1, 2 and 3.

The conclusions drawn by ARUP on behalf of the CPCA in November 2018 are notable, namely:

The process undertaken to date to determine the route is robust and the optimal solution for the corridor is confirmed.

- Whilst maintaining an acceptable alignment the route through Westfields is amended to minimise environmental impacts and mitigations are developed.

GCP has already modified the route to minimise environmental impact. This is at the expense of some operational performance. Any further modification would significantly impact performance.

This is a specific example of where the Jacobs report does not appear to reflect the reality of the work undertaken.

- It is also recommended that a review be provided on the current Bus Strategy service patterns to understand whether it provides an adequate Metro service.

The Bus Strategy has been developed to be a robust indication of service levels to address potential demand within the strategic context of C2C and as a supplement to the OBC. As such this recommendation is irrelevant to the choice of a preferred route for C2C as it deals with the subsequent service levels which are not constrained by the proposed alignment.

As the CAM LTP Sub-Strategy provides no specific service level requirements C2C cannot confirm whether the Bus Strategy complies with the proposed Metro service. However, as indicated in the Strategy and in the Jacobs review of Policy CAM-E20 there is recognition that there is, in reality, ample scope within the infrastructure to increase service frequency to meet increased demand.

Conclusion

GCP officers' views are that all of these recommendations were already addressed or will be addressed at later, appropriate, stages of scheme development. There are no fundamental issues that justify a conclusion that the C2C scheme is not compliant with the LTP or CAM.

Appendix A – Comparison Table of C2C against CAM objectives - with GCP response

CAM Objective	CAM sub-objective	Degree C2C meets objective (Jacobs' assessment)	Jacobs' Sub-Objective RAG rating *	Amendments proposed by Jacobs	GCP Response
<p>CAM 1: Promote economic growth and opportunity CAM 2: Support the acceleration of housing delivery</p>	CAM-E1: Promote agglomeration	Provides stops /transport hubs at key development sites and new developments in Cambourne. Does not currently connect to East West Rail (EWR) station proposal in West Cambourne. Connection to central Cambridge and Biomedical Centre via existing road network and journeys to the Railway Station and other destinations requires changes at Grange Road onto other bus services, until CAM City Tunnels Section is constructed.		Link to EWR to be developed and review of demand to provide additional services to central Cambridge and Biomedical Centre and direct services to the destinations across Cambridge including the Railway Station.	Currently there is no EWR station proposal.GCP have been in ongoing dialogue with EWR and reviewed options for short term delivery of the C2C scheme. C2C will follow an on-line alignment to avoid abortive investment. Technical discussions continue with EWR and a segregated solution to the station will be developed once there is an EWR proposal. Routes to City Centre and CBC are also on-line to avoid investing in infrastructure rendered redundant by CAM tunnels.
	CAM-E2: Support new employment by enhancing access to and attractiveness of key designated employment areas by specifically enabling, serving and supporting: <ul style="list-style-type: none"> New settlements and enterprise zones already included in existing adopted Local Plans New Garden Village settlements Existing settlements with anticipated employment growth Supporting the development of <ul style="list-style-type: none"> New settlements being brought forward by any future development corporations created in the Oxford-Cambridge corridor. 	Direct link to employment at Cambridge West Campus and Cambourne. Connection to employment in central Cambridge and Biomedical Centre via existing road network and to Northern Cambridge via interchange with other services. Links provided to A428 corridor which is the road highlighted for the Oxford-Cambridge Expressway in this area. Currently no connection to EWR station or proposed development of new settlements in West Cambourne.		Segregated link to EWR and West Cambourne to be developed. Suggested a north or south segregated route around Cambourne with transport hubs serving developments, EWR station and the town via local bus services, and improved cycling and walking routes is reviewed.	As above, C2C will be adapted to follow a segregated route around Cambourne but only when the location of the EWR station and the alignment of the onward CAM route have been confirmed. Technical discussions with EWR continue.
	CAM-E3: Increase labour market catchment	Increased catchment for West Cambridge Campus from Cambourne and planned developments Scotland Farm P&R, Bourn Airport and Upper Cambourne. May provide increased wider catchment for UoC Campus from Oxford-Cambridge Expressway but currently would not provide increased catchment from EWR. It is expected that workers within central Cambridge using EWR would change at Cambridge South then use Guided Busway services.		Link to EWR and West Cambourne to be developed and connections across Cambridge reviewed / improved.	As above, link to EWR can only be defined once the station location is known. Technical discussions with EWR continue. Scheme offers strong access to West Cambridge. Access across Cambridge would be provided by CAM tunnels.
	CAM-E4: Serve and support new areas for sustainable housing development	Serves new housing developments at Scotland Farm P&R, Bourn Airport and in Upper Cambourne, but not currently West Cambridge.			
	CAM-E5: Provide overall transport capacity to enable and accommodate future growth	Scheme designed for 263% increase in capacity and to link into CAM City Tunnels network.			
	CAM-E6: Improve transport connectivity	Improved connectivity between Cambourne, proposed developments and West Cambridge UoC Campus and West Cambridge, and city centre and Biomedical Campus via existing road network. Currently no direct link to EWR and reliant on existing road network in Cambridge.		Link to EWR to be developed and connections across Cambridge reviewed / improved.	As above, link to EWR will be developed but can only be defined once the station location is known. Technical discussions with EWR continue. Scheme offers strong access to West Cambridge. Access across Cambridge would be provided by CAM tunnels.

CAM-E7: Improve journey time reliability	Improved and more reliable journey times along A1303 although concern on Journey Times within Cambourne and Cambridge Road Network.		Review route through / around Cambourne to EWR and connections across Cambridge	As above, link to EWR can only be defined once the station location is known. Technical discussions with EWR continue. Scheme offers strong access to West Cambridge. Access across Cambridge would be provided by CAM tunnels.
CAM-E8: Direct high-quality public transport access to key housing sites (existing designations)	Direct high-quality transport provided for new housing developments at Scotland Farm P&R, Bourn Airport and Cambourne including Upper Cambourne developments.			
CAM-E9: Directly serve and link into transport hubs including existing and planned rail stations	Serves Scotland Farm Park and Ride and existing stops on bus networks. But due to National government's commitment to an EWR route C2C should aim to serve proposed station development at West of Cambourne		Link to EWR to be developed	As above, link to EWR will be developed but can only be defined once the station location is known. Technical discussions with EWR continue.
CAM-E10: At transport hubs, support easy and rapid mode changes and transfers	It is assumed the detail of specific hubs is under development but C2C appears to be integrated into Scotland Farm P&R and easy transfer at West Cambridge Campus and existing bus stops.			
CAM-E11: At transport hubs facilitate first and last mile connectivity to the local area	There are links to existing buses but generally C2C seems to be provide direct connectivity rather than using hubs. It is assumed hubs and stops will be high quality and include ticketing and provide passenger information.			
CAM-E12: Support the development of demand responsive modes	Service provides up to 10 buses an hour (6 to the city centre and 4 to the Biomedical Campus) with capacity to increase services to meet demand.		Review this service to understand whether it provides an adequate Metro service.	The OBC provides infrastructure capable of carrying a more intensive service if demand is there. The proposed bus strategy is a conservative estimate to enable development of business case. Full Metro type provision will be developed as part of the CAM proposal
CAM-E13: Integration with other modes, including bus.	Integration with P&R and bus services on route but not EWR and no direct services to Cambridge Railway Station		Link to EWR be developed with segregated route around Cambourne using transport hubs for developments, town via local bus services, and improved cycling and walking routes. Connections across Cambridge including to the Railway station to be reviewed / improved	EWR issue addressed above. Fully segregated pedestrian and cycling solutions form part of the C2C proposals. Services following the U route would serve Cambridge station and connectivity would be further improved through CAM tunnels.
CAM-E14: Integrated with main arterial corridors, including the projected East West Rail route and the upgraded A428, and key LTP infrastructure projects	Not currently integrated with EWR but runs along and aims to integrate with A428		Link to EWR to be developed.	As above, link to EWR will be developed but can only be defined once the station location is known. Technical discussions with EWR continue.
CAM-E15: Dedicated segregated routes as default assumption.	Provided except through Cambourne, on Charles Babbage Way through UoC and reliant on road network through Cambridge and to Biomedical Campus.		Review route through / around Cambourne to EWR.	As above, link to EWR will be developed but can only be defined once the station location is known. Technical discussions with EWR continue.
CAM-E16: CAM will use technology, infrastructure and concepts of operations that deliver safe, reliable, regular, resilient and inclusive transport	It is understood C2C will use modern reliable, safe and inclusive vehicles and route			
CAM-E17: CAM must be deliverable within the current decade	Scheme involves standard highway construction and can operate with existing technology so is deliverable in this timeframe.			

	CAM-E18: CAM must be future proofed and flexible in terms of capacity and technology.	Designed for future capacity but may require minor modifications to route and platform extensions at stops, and may require CAM City Tunnel section to install charging facilities for electric vehicles to run on the longer routes.		Route and vehicle stops to be future proofed to cater for CAM central tunnels vehicles.	Until recently there has been regular between CPCA and GCP team on design details. Unclear why there is any concern as surface level sections are unconstrained and design details have been incorporated. No design details of CAM vehicle currently available. GCP designs will be updated when they become available.
	CAM-E19: CAM will utilise sustainable, highly flexible, zero emission vehicles	No commitment to zero emission vehicles can be found and there is no evidence of charging facilities for electric vehicles being provided. The C2C Paper presented at the GCP joint assemble 4th June 2020 says the scheme will need to deliver <i>'environmentally friendly low emission vehicles such as electric/hybrids or similar.'</i> From this and other information it is expected that C2C vehicles could be Euro 6 diesel, which are low but not zero emission.		Commit to use zero emission vehicles.	OBC is for physical infrastructure which can serve electric or diesel vehicles. The project is committed to the use of clean, green vehicles. Without a CAM vehicle specification, the GCP cannot provide further detail but there is no aspect of the proposed C2C scheme which in any way impedes the deployment of electric vehicles.
	CAM-E20: CAM will be designed to maximise passenger trips in both directions and across the whole day.	Use of segregated route for majority of route will enable trips to be maximised. It is questioned whether 6 bus services to the city centre and 4 to the Biomedical Campus is sufficient for potential demand, although it is recognised there is flexibility within the busway design to increase this.		Review this service to understand whether it provides an adequate Metro service.	As above, this is a Bus Strategy developed to enable the production of the OBC. The scheme is capable of carrying a greater frequency if demand is there. Full Metro type provision will be delivered when the CAM network is completed.
CAM 3: Promote Equity	CAM-S1: Provision of safe and secure CAM network – safe by design, safe in construction and safe in operation – to meet all standards and global best practice	Understood to be safely designed to all applicable design and security standards			
CAM Objective	CAM sub-objective	Degree C2C meets objective (Jacobs' assessment)	Jacobs' Sub-Objective RAG rating *	Amendments proposed by Jacobs	GCP Response
	CAM-S2: CAM will meet all planning and environmental requirements	Scheme designed to do meet these and requirements for TWAO application			
	CAM-S3: Affordable and fair fare structure.	Fair Structure to be confirmed but understood this aims to be affordable	N/A		
	CAM-S4: Compatible with county wide future integrated ticketing	Not highlighted within the documents	N/A		
	CAM-S5: Promotes seamless connectivity between regional settlements, major city fringe employment sites and key satellite growth areas across Cambridgeshire and Peterborough	C2C link to new developments and new park and ride and link to Cambridge West Campus and local employment in Cambourne, and through existing networks the City centre and Biomedical Campus.			
	CAM-S6: Facilitates seamless cross country and city journeys to outlying regional settlements, urban fringe employment sites and key satellite growth areas	Linked to fringe employment sites but not to east west rail for Oxford- Cambridge corridor.		Link to EWR to be developed.	As above, link to EWR will be developed but can only be defined once the station location is known.
	CAM-S7: Improve opportunities for all residents and communities	Improved opportunities through links to Cambridge West Campus and local employment in Cambourne, City centre and Biomedical Campus.			
	CAM-S8: Promotes high quality public realm at stations	Provides high quality urban realm at stops.			

	CAM-S9: Reduces adverse impacts of public transport provision on city, urban and village centre mobility for pedestrians and cyclists	Reduces impacts on congested A1303 and provides cycle / walking routes/network			
	CAM-S10: Support and be complimentary to walking and cycling.	Secure cycle parking provided at stops and provides cycle / walking routes/network.			
	CAM-S11: Improve air quality	Slight improvement through moving people onto public transport and reducing congestion but no commitment to zero emission vehicles.		Commit to use of zero emission vehicles	As above GCP is committed to use of zero emission vehicles but OBC is for physical infrastructure which can serve electric or diesel vehicles. Without a CAM vehicle specification, the GCP cannot provide further detail but there is no aspect of the proposed C2C scheme which in any way impedes the deployment of electric vehicles.
	CAM-S12: Promote low carbon economy	Supported through use of low emission public transport vehicles and encouragement for cycling and walking but use of diesel vehicles would not support this objective.		Commit to use of zero emission vehicles.	As above GCP is committed to use of zero emission vehicles but OBC is for physical infrastructure which can serve electric or diesel vehicles. Without a CAM vehicle specification, the GCP cannot provide further detail but there is no aspect of the proposed C2C scheme which in any way impedes the deployment of electric vehicles.
CAM 4: Promote sustainable growth and development	CAM-EV1: Support environmental sustainability Minimises adverse impacts on conservation areas, heritage and natural community assets, including protecting the character of villages and avoiding encouraging unsustainable village fringe development. Meets net gain requirements and where possible offers additional visual and environmental enhancements.	Environmental impacts on West Fields and Coton highlighted.		Review of Alternative or amended routes around Coton and Westfields to minimise impacts and develop mitigations.	Alignment is consistent with that endorsed in 2018 by ARUP on behalf of CPCA. This was agreed by the CPCA Board. Alternatives north of A428/A1303 and on-line have been considered, assessed, and discounted over the last 6 years. Full evidence of assessment of alternatives in line with DfT Transport Analysis Guidance has been detailed throughout Option Appraisal Reports 1, 2 and 3. The challenges are as follows: <ul style="list-style-type: none"> • On-line routes could not be segregated and would not be CAM sub-strategy compliant. • Routes via the A428/M11 on the basis that Girton Interchange will become all-movements are speculative and would be unsegregated and not CAM compliant. • A route to the north of Madingley Hall would divert completely off the line of the scheme and create an entirely new corridor of disturbance. • The LLF has proposed a route that follows the north side of the A428. Land-take along the A428 would be likely to create concerns in Madingley. The section through Girton Interchange and Eddington would either be unsegregated and non-compliant or segregated and high-cost. Either would be significantly longer than the proposed route, undermining the business case. • Potential routes between the A428 and the A1303 have also been previously reviewed, but these routes directly impact on the most sensitive environmental and heritage constraints in the corridor: namely the Madingley Wood SSSI and the American Cemetery.

	CAM-EV2: CAM infrastructure will utilise zero emission vehicles; other public transport zero emissions vehicles should be able to use sections of the CAM infrastructure if they are CAM compatible	No committed to zero emission vehicles has been found and there is no evidence of charging facilities being provided.		Commit to use of zero emission vehicles.	As above, there is a commitment to zero emission vehicles. Without a CAM vehicle specification, the GCP cannot provide further detail but there is no aspect of the proposed C2C scheme which in any way impedes the deployment of electric vehicles. There is no specific provision of charging facilities at this stage as it is not clear what vehicles CAM may specify. Facilities will be specified as design develops.
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Table 1: Summary of C2C Comparison against CAM Objectives and Sub-Objectives

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Meets CAM Objective

Could be strengthened to better meet CAM sub-objectives

Does not fully meet CAM Sub-Objective

Fails to meet CAM Sub-Objective