



Cambourne to Cambridge Better Public Transport

Outline Business Case
Management Case

17 January 2020

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Executive summary

Analysis of Monetised Cost and Benefits (AMCB) table: Summarises the monetised impacts of a scheme that are included in the scheme's Net Present Value and Benefit-Cost Ratio.

Appraisal Summary Table (AST): Provides a complete summary of the scheme impacts, including the scheme's monetised impacts, and non-monetised impacts (both quantitative and qualitative).

Benefit Cost Ratio (BCR): Benefit Cost Ratio, is an indicator of the overall value for money of a project or proposal.

Cambridgeshire Autonomous Metro (CAM): CAM is the proposed metro style system for Greater Cambridge.

Committed Schemes: Where a scheme has been deemed likely to proceed and is therefore included within the option appraisals.

Conservation Area: An area designated under Section 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990 as being of special architectural or historic interest and with a character or appearance which is desirable to preserve or enhance.

Context: The setting of a site or area, including factors such as traffic, activities and land uses as well as landscape and built form.

Countryside: The rural environment and its associated communities.

Cumulative Impact: The summation of effects that result from changes caused by a development in conjunction with other past, present or reasonably foreseeable actions.

Early Assessment Sifting Tool (EAST): Early Assessment Sifting Tool is used by DfT, to quickly summarise and present evidence on options. INSET is an enhancement of EAST and follows the same broad principles and approach.

Effect: The consequence of the scale of any change to the baseline environment, i.e. impact, on the environmental receptor, taking account of its particular value or sensitivity.

Element: A component part of the landscape (for example, roads, hedges, woods).

Enhancement: Landscape improvement through restoration, reconstruction or creation.

Environment: Our physical surroundings including air, water and land.

Environmental Impact Assessment (EIA): A formal, structured process of evaluating the likely environmental impacts of a proposed scheme, considering inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.

Full Business Case (FBC): The culmination of the final phase is the Full Business Case. An investment committee will consider the Full Business Case then make a recommendation to ministers. Ministers will decide whether a proposal should proceed to implementation.

Form: The layout (structure and urban grain), density, scale (height and massing), appearance (materials and details) and landscape of development.

Gross Domestic Product (GDP): A measure of the total value of goods produced and services provided in an area.

Gross Value Added (GVA): A measure of the economic productivity of an area.

High Quality Public Transport (HQPT): High Quality Public Transport, is a transport system that includes a range of features such as high levels of segregation, junction priority, high quality infrastructure (shelters, CCTV, real time, lighting, seating, help points etc), and high quality vehicles to name but a few.

Heritage Asset: A building, monument, site, place, area or landscape of historic value.

Investment Sifting and Evaluation Tool (INSET): INSET is Mott MacDonald's evaluation tool used in the optioneering process. INSET is an enhancement and expansion of EAST.

Landform: Combination of slope and elevation that produce the shape and form of the land.

Landscape: The character and appearance of land, including its shape, form, ecology, natural features, colours and elements and the way these components combine. Landscape character can be expressed through landscape appraisal, and maps or plans. In towns 'townscape' describes the same concept.

Landscape Character: The distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape.

Landscape Feature: A prominent eye-catching element, for example, wooded hilltop or church spire.

Landscape Quality: Based on judgements about the physical state of the landscape, and about its intactness, from visual, functional, and ecological perspectives. It also reflects the state of repair of individual features and elements which make up the character in any one place.

Landscape Sensitivity: The extent to which a landscape can accept change of a particular type and scale without unacceptable adverse effects on its character.

Land Use: The primary use of the land, including both rural and urban activities.

Local Liaison Forum (LLF): The LFF provide a link between a project team and the local community.

Multi Criteria Assessment Framework (MCAF): Multi-Criteria Assessment Frameworks are used in the optioneering assessment process and allow options to be assessed against a range of criteria linked to the scheme objectives as well as wider policy and strategy objectives.

Methodology: The specific approach and techniques used for a given study.

Mitigation: Measures, including any process, activity or design to avoid, reduce, remedy or compensate for adverse landscape and visual effects of a development project.

Modal Shift: A shift from one transport type to another e.g. road travel to rail travel.

Movement: People and vehicles going to and passing through buildings, places and spaces. The movement network can be shown on plans, by space syntax analysis, by highway designations, by figure and ground diagrams, through data on origins and destinations or

pedestrian flows, by desire lines, by details of public transport services, by walk bands or by details of cycle routes.

Option Assessment Report (OAR): The Options Assessment Report sets out the process undertaken to identify and assesses options, leading to the selection of the preferred option.

Outline Business Case (OBC): Is the second phase of the process which reconfirms the conclusions of set out in the Strategic Outline Business Case (SOBC). The OBC focuses on the detailed assessment of the options to find the best solution.

Public Accounts (PA) table: Records the investment and operating costs incurred by a public sector in delivering the scheme.

Receptor: Something that makes up the environmental baseline e.g. humans or other biological species, elements of the physical environment including water, air, soil, assets that make up the cultural heritage of an area.

SATURN: Simulation and Assignment of Traffic in Urban Road Networks, is a computer program that calculates route choices between origin and destination.

Strategic Outline Business Case (SOBC): This sets out the need for intervention (the case for change) and how this will meet strategic aims and objectives (the strategic fit). It provides suggested or preferred ways forward and presents the evidence for a decision.

Strategic View: The line of sight from a particular point to an important landmark or skyline.

Sustainability: The principle that the environment should be protected in such a condition and to such a degree that ensures new development meets the needs of the present without compromising the ability of future generations to meet their own needs.

Transparent Economic Assessment Model (TEAM): TEAM is a tool designed to calculate the economic impacts and benefits of proposed infrastructure interventions and policy measures.

Topography: A description or representation of artificial or natural features on or off the ground.

Townscape: Physical and social characteristics of the built and unbuilt urban environment and the way in which those characteristics are perceived. The physical characteristics are expressed by the development form of buildings, structures and space, whilst the social characteristics are determined by how the physical characteristics are used and managed.

Tranquillity: A state of calm or quiet.

Transport Appraisal Guidance (TAG): The DfT's Transport Appraisal Guidance (often referred to as TAG)

Transport Economic Efficiency (TEE) table: Summarises the monetised impacts against different user groups.

Transport User Benefit Appraisal (TUBA): TUBA is an economic appraisal computer programme developed for the Department for Transport (DfT) for appraising multi modal transport studies.

Visual Impact: Change in the appearance of the landscape as a result of development. This can be positive (i.e. beneficial or an improvement) or negative (i.e. adverse or a detraction).

Wider Economic Impacts (WEI): improvements in economic benefits that are acknowledged, but which are not typically captured in traditional cost-benefit analysis.

1 Introduction

This is the Management Case for the Camborne to Cambridge Better Public Transport project (C2C) and forms one of the 5 cases for the Outline Business Case.

The Management Case assesses whether a proposal is deliverable. It looks at the project planning, governance structure, risk management, communications and stakeholder management to establish if adequate resources are in place to ensure delivery on time, on budget and in accordance with specifications.

1.1 Approach

The DfT guidance document, '*The Transport Business Case: Management Case*¹', outlines the areas that should be covered in the Management Case and these have been used as a broad guide to structure the development of the Management Case for the Camborne to Cambridge Better Public Transport (C2C) project. Table 1 shows where the relevant information, in accordance with DfT requirements can be found in the subsequent sections that make up the Management Case.

Table 1: Compliance with DfT requirements for the Management Case

Content	DfT Requirements	Management Case Section
Introduction	Outline the approach taken to assess if the proposal is deliverable.	1.1 – Approach
Evidence of similar projects	Provide evidence of similar projects that have been successful, to support the recommended project approach.	2 – Evidence of Similar Projects
Project dependencies	Set out deliverables and decisions that are provided/received, including from other projects.	3 – Project Dependencies
Governance, organisational structures & roles	Describe key roles, lines of accountability and how they are resourced.	4 – Project Governance 5 – Project Management
Assurance & approvals plan	Plan with key assurance and approval milestones.	6 – Assurance and Approvals Plan
Project plan	Plan with key milestones and progress, including critical plan.	7 – Project Plan
Risk management strategy	Arrangements for risk management and its effectiveness so far.	8 – Risk Management
Communications and stakeholder management	Development communications strategy for the project.	9 – Communication and Stakeholder Management
Project reporting	Describe reporting arrangements.	5.5 – Project Manager Report
Implementation of workstreams	Summary of key workstreams for executing the work.	10 – Implementation of Workstreams
Key issues for implementation	Issues likely to affect delivery and implementation.	8.1 – Key issues for implementation

¹ DfT – The Transport Business Cases (January 2013)
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/85930/dft-transport-business-case.pdf

Content	DfT Requirements	Management Case Section
Contract management	Summarise outline arrangements. Confirm arrangements for continuity between those involved in developing the contract and those who will subsequently manage it.	11 – Contract Management
Benefits realisation plan	Set out approach to managing realisation of benefits.	12 – Benefits Realisation
Monitoring and evaluation	Summarise outline arrangements for monitoring and evaluating the intervention.	13 – Monitoring and Evaluation
Contingency Plan	Summarise outline arrangements for contingency management such as fallback plans if service implementation is delayed.	8.5 – Contingency plan

Source: DfT - The Transport Business Case: Management Case

2 Evidence of Similar Projects

Cambridgeshire County Council (CCC) has delivered a number of large-scale transport projects across the County in recent years which are described below in Table 2. The successful delivery of these projects demonstrates CCC's ability and experience in relation to major infrastructure projects.

This valuable experience has not been without challenges, but these have provided valuable learning in the planning and delivery of future projects including C2C. CCC has carried out Lessons Learnt workshops to capture these lessons and identify actions to put in place to help improve the development and delivery of future major schemes, including the C2C project. The most recent workshop was held in June 2019.

Table 2: Similar Projects to C2C

Project	Description	Cost
Milton Park & Ride	<p>This site was constructed to replace the Cowley Road Park & Ride Site which was closed by Cambridgeshire County Council. The opening of the new site at Milton was therefore an immediate success. This site has approximately 800 parking spaces and a heated waiting area building with toilet and baby changing facilities.</p> <p>The scheme was completed within just 2 years from the planning application being submitted in October 2006, to the construction period which began in Summer 2007 and ended in Spring 2008 when the site opened.</p> <p>The above timescale was for a 531-space car park and building. Due to the success of the scheme, the scale of the site has increased beyond its first built capacity and now provides 792 car parking spaces to cater for the high level of continued demand.</p>	£3.1m
Longstanton & St Ives Park and Ride	<p>A further two Park & Ride sites were constructed in 2011 alongside the Cambridgeshire Guided Busway providing connectivity to Cambridge and Huntingdon. These sites have been a success in intercepting traffic and have both also increased beyond their first built capacity.</p> <p>The Longstanton Park & Ride Site now provides 350 parking spaces. St Ives Park & Ride has capacity for 1000 vehicles. Both sites are also provided with covered cycle parking.</p> <p>In addition to the number of spaces being increased as a result of the scheme success, the number of bus services serving these sites has also been increased to ensure the service is efficient in catering for the increased demand; Buses now run into Cambridge from both sites every 7 minutes, or 8 per hour.</p>	Estimated at £9m for both sites ² .
The Cambridge Core Traffic Scheme	<p>This scheme delivered improve access for pedestrians, cyclists and public transport through traffic management and priority measures in the area bounded by the inner ring road.</p> <p>Delivery of this project demonstrates an ability of the promoters to think about the full impacts of a public transport scheme.</p> <p>The measures were implemented in phases from 1997, promoting sustainable travel modes to improve the city centre environment.</p>	£6.9m ³

² This is an estimate as the costs were part of a wider package of Busway costs.

³ This is an estimate as the scheme was implemented over a number of phases since 1996 and includes a range of supporting measures including streetscape works.

Project	Description	Cost
	<p>Between 1993 and 2003 the number of private vehicles in the city centre fell by 15%. Public transport patronage on routes into Cambridge also increased.</p>	
<p>The Addenbrooke's Access Road</p>	<p>This access road is a single carriageway route with a number of junctions and structures that connects Hauxton Road in Trumpington on the south side of the city, to Addenbrooke's Hospital.</p> <p>The route provides access to the expanding hospital and Bio Medical Campus, together with development on the Cambridge Southern Fringe, and reduces traffic in the Trumpington area, and on Long Road.</p> <p>The scheme was completed in October 2010.</p>	<p>£24m</p>
<p>The Cambridgeshire Guided Busway</p>	<p>This busway provides a high quality public transport connection between Huntingdon and St Ives, to the north west of Cambridge, and Addenbrooke's Hospital and Trumpington Park and Ride to the south of Cambridge.</p> <p>Access to Cambridge City Centre is provided via on-street running. The overall route is 42km long with 25km of that being guided busway and 17km of on-street provision including bus priority measures.</p> <p>Construction began in July 2006 with the busway opened in August 2011.</p> <p>Although there were challenges during the delivery of the scheme, learning from this can benefit the delivery of future significant transport measures in the County.</p>	<p>£150m⁴</p>
<p>The Ely Southern Bypass</p>	<p>This bypass is a single carriageway highway, currently under construction, connecting the A142 at Angel Drove to Stuntney Causeway.</p> <p>The scheme includes bridges over the railway line and the River Great Ouse and its floodplains and, when open to traffic will relieve heavy traffic around Ely station, remove the need for heavy goods vehicles to use the railway level crossing, and avoid an accident-prone low-bridge.</p> <p>The route is planned to open to traffic in late summer 2018.</p>	<p>£43m</p>

Source: Mott MacDonald

⁴ This is the total cost of the Cambridgeshire Guided Busway, and included a £109m contribution from CCC.

3 Project Dependencies

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 Table 3.

Table 3: C2C project dependencies

Dependency	How it may impact the development of the scheme
Delivery of housing and employment sites allocated within the South Cambridgeshire Local Plan	The strategic case for C2C project is largely part built around the need to connect future housing sites to key employment locations within Cambridge. If key sites identified within the Local Plans are not delivered i.e. Bourn Airfield, then the need for C2C project is reduced.
Emerging CPCA Policy	C2C project must be cognisant of future emerging policy and therefore will need to be reviewed against the draft Local Transport Plan ⁵ and any future transport system proposals for Cambridge in order to ensure it continues to be aligned with current policy. In particular as the development of CAM progresses, the C2C project, which aims to deliver the first phase of infrastructure for the larger CAM network, may need to adapt. Although it should be noted though that whilst work to develop CAM progresses and may affect C2C to some extent, C2C is not dependant on CAM. Cambridgeshire has now produced a Transport Delivery Plan (TDP) which provides a forward look at all of planned highway and transport capital schemes on the local network to be delivered on a three year time frame. The C2C project features in the Transport Investment Plan (TIP) scheme list which has been developed alongside the TDP to identify schemes to support growth.
Cambridgeshire Autonomous Metro (CAM)	In relation to the need to be cognisant of emerging policy outlined above, there is a particular need to 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	In order to provide improved end to end connectivity between settlements along the A428/A1303 and employment sites within the city centre, the C2C project will depend on the City Access Strategy to tackle the issues of congestion within the city centre and enhance the ability for people to get into, out of and around the city. Schemes within this strategy aim 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. In addition, the removal of traffic from the city centre will help create additional demand for any additional Park & Ride facility.
Oxford-Cambridge Arc	Proposals for an Expressway and Railway for the Oxford-Cambridge Arc and associated development are emerging. Both the Expressway and Railway will impact on the C2C route and whilst the scheme is not dependent directly upon these proposals, they may have a significant influence.
Emerging Technologies	GCP is committed to the promotion of the use of new technologies to create a clean and efficient public transport system. The final specification of C2C will be driven by technology advances and the range of solutions available at the procurement stage.

Source: Mott MacDonald

⁵ The draft Local Transport Plan from the Combined Authority was published for consultation in June 2019.

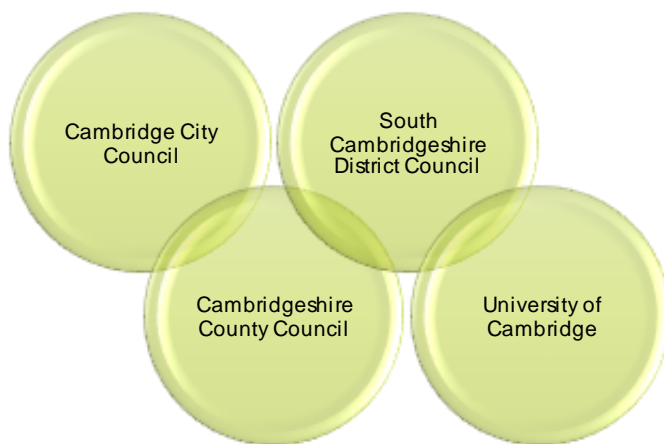
4 Project Governance

4.1 Project Governance

The delivery of C2C is overseen by the Greater Cambridge Partnership (GCP), who are the scheme promoters. The GCP is made up of representatives from four partner organisations and local business representatives as shown in Figure 11.

The partnership of councils, businesses and academia seek to work together to grow and share prosperity and improve quality of life for the people of Greater Cambridge.

Figure 1: The Greater Cambridge Partnership



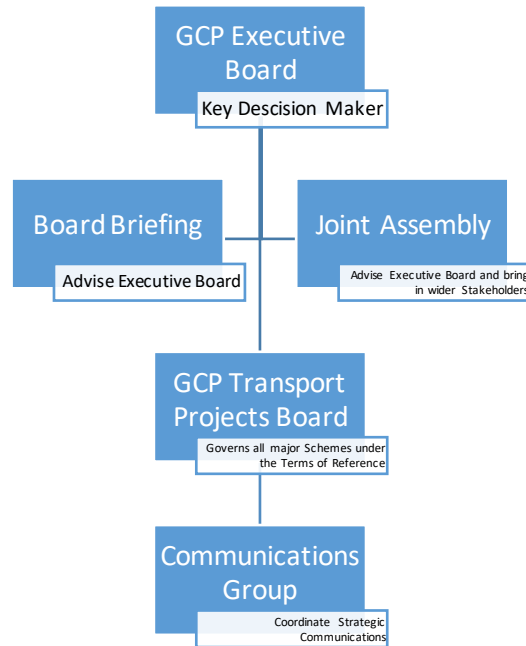
Source: <https://www.greatercambridge.org.uk/>

The GCP is the local delivery body for the City Deal with central Government and are responsible for overseeing the delivery of all schemes funded through the City Deal.

The GCP operates as a Joint committee, under powers delegated by its three local authority partners (CCC, CaCC and SCDC). It is led by a decision-making Executive Board which coordinates the overall strategic vision and drives forward the partnership's programme of work and is run in accordance with a clear governance structure, agreed by all partners.

Both the GCP Executive Board and the Joint Assembly meet at least four times a year. Papers relating to public meetings are published online and members of the public have the opportunity to participate in meetings of the GCP Executive Board by posing questions to be discussed in public.

Figure 2: C2C project governance structure



Source: Cambourne to Cambridge Better Public Transport Project Initiation Document (June 2019)

4.2 GCP Executive Board

The GCP Executive Board is made up of one representative from each of the City Deal partners. While the rules governing the Executive Board only allows the three local authority representatives voting rights, they consider the advice of the other representatives, to make sure decisions also represent the business and academic sectors.

4.3 GCP Joint Assembly

The GCP Executive Board is advised and informed by a Joint Assembly. The Joint Assembly scrutinises and provides advice to the Executive Board, drawing on the broad expertise of its 15 members. The Assembly’s membership is made up of three elected councillors from each of the three councils in the Greater Cambridge area, and reflects the political composition of their council. The other City Deal partners each nominate three representatives, as stakeholders from a range of organisations within the fields of business and academia.

4.4 Project Board

The GCP Transport Projects Board is responsible for governing all major schemes being delivered as part of the City Deal⁶.

The purpose of the project is to:

- Provide visible governance
- Advise on decisions before they go to the GCP Executive Board or on major but non-key decisions

⁶ Cambourne to Cambridge Better Public Transport Project, Cambridge South East Transport project, West of Cambridge Package, Ely to Cambridge A10 Transport Study and Eastern Access

- Guide the project manager in developing proposals to meet the agreed objectives
- Review the proposals and challenging solutions on impact, benefits and value for money
- Act as a sounding board for concepts and ideas

The membership of the Project Board is set out below:

Table 4: Project Board membership

Role	Named Member (as of October 2019)
Executive	Peter Blake (CCC)
Senior Supplier	Eddie Mellor (Mott MacDonald)
Senior User	Andy Preston (CCC)
Finance	Sarah Heywood (CCC)
Programme Manager	Debbie Bondi (CCC)
Project Managers	For projects in scope

Source: Cambourne to Cambridge Better Public Transport Project Initiation Document – V3 updated June 2019

4.5 Role of the Cambridgeshire and Peterborough Combined Authority

The Cambridgeshire and Peterborough Combined Authority (CPCA) was established to pursue a devolution deal with Central Government that included the devolution of both decision-making powers and funding to the Cambridgeshire and Peterborough sub-region. Following the signing of the devolution deal in November 2016, the CPCA was formally established in March 2017.

The CPCA is led by a Mayor, elected in May 2017, who gives the CPCA a focal point and is the contact for Central Government. The Mayor also exercises certain powers and functions that were devolved from Central Government as part of the devolution deal, these include:

- Responsibility for multi-year devolved transport budget;
- Responsibility for an identified key route network of local authority roads, and;
- Powers over strategic planning, the responsibility to create non-statutory spatial framework for Cambridge and Peterborough and to develop with Government a Land Commission.

The devolution deal agreed with Central Government also gives the Mayor and the CPCA power over certain transport functions, with the body taking the role of the Local Transport Authority, assuming strategic transport powers for the areas previously covered by CCC and Peterborough City Council. As part of the Mayor's devolved powers, the CPCA are responsible for producing the updated Local Transport Plan (LTP) and for the development of all future transport strategies for the CPCA area. The LTP includes a Transport Delivery Plan (TDP) and a Transport Investment Plan (TIP). The TDP which provides a forward look at all of planned highway and transport capital schemes on the local network to be delivered on a three year time frame. The C2C project features in the TIP scheme list which has been developed alongside the TDP to identify schemes to support growth.

Given the over-arching transport role of the CPCA, and with the C2C now intended to be able to form part of the initial phases of the Cambridgeshire Autonomous Metro (CAM) system, there is a need for GCP and CPCA to collaborate closely on transport priorities and delivery programmes to ensure successful coordination and integrated delivery.

5 Project Management

5.1 Project management

The project management and development of the C2C project uses the following methodologies:

- Good practice project governance, management principles and processes in line with PRINCE2 methodology; and
- DfT major scheme development methodology

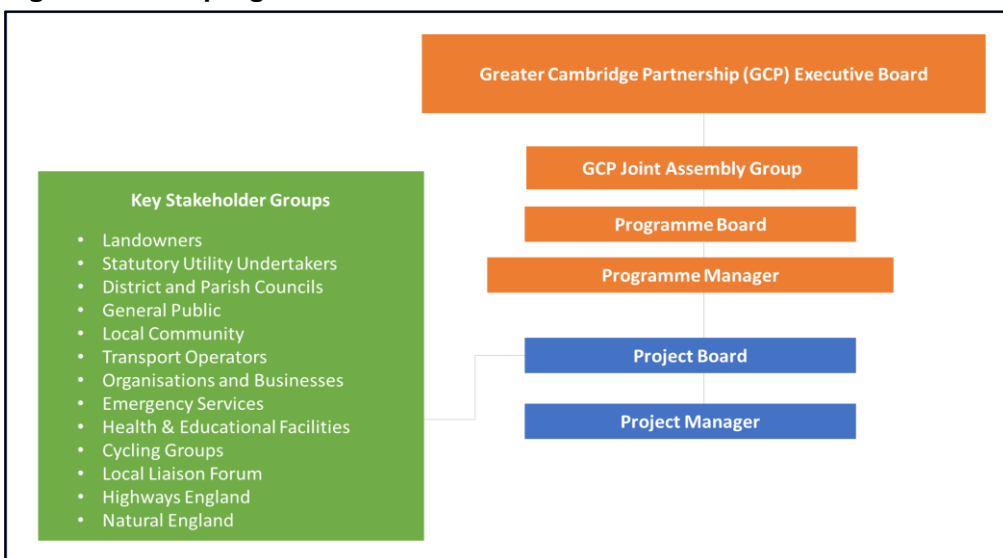
The project’s aims, management processes and resources have been set out in a separate Project Initiation Document (PID) (Appendix S) which has been agreed by the Project Board.

The key principles set out in the PID are as follows:

- The overall scope of the project is set by the GCP Executive Board;
- The project is governed by a Project Board that will receive reports on project activity including spend, quality and risks;
- The Project Board can request from the Project Manager all information required for it to perform its governing role;
- The Project Manager must present all information to the Project Board that he/she considers is required for the Board to perform their governing role; and
- The Project Manager has full day to day responsibility for delivery of technical work streams and is employed by CCC.

Scheme delivery will be managed in accordance with the structure outlined in Figure 3. The organogram outlines the structure and reporting relationships of the various groups. Their respective roles are then detailed in Table 5.

Figure 3: Principal governance structure



Source: GCP/Mott MacDonald

The upper management levels, highlighted in orange, focus on key strategic issues at a programme and project level, while issues of a more technical nature are addressed by the Project Board and appointed Project Manager, highlighted in blue. The roles and responsibilities of these management levels are outlined in further detail in the table below.

Table 5: Roles and responsibilities

Management Level	Function
Greater Cambridge Partnership (GCP) Executive Board	This is the key decision-making group and will ensure overall strategic direction of the City Deal programme and overall scope of projects aligned with GCP aims and local and national policy. Includes leaders from each partner organisation and members of the public can participate in meetings, posing questions to be discussed.
GCP Joint Assembly	Strategic, local advisory, and scrutiny body for GCP Executive Board. Elected members from the constituent local authorities and representatives from other constituent organisations – 15 members in total.
Programme Board	Key officers and stakeholders, prioritising schemes, managing programme level risks and capturing shared benefits.
Programme Manager	Technical and procedural oversight of projects and programme level benefit management. Reports to the Project Boards.
Transport Projects Board	Overall control of each GCP transport project. Senior representatives in line with PRINCE2 requirements.
Project Manager	Day to day management of the project and delivery of technical work streams on behalf of GCP.

Source: Mott MacDonald

The GCP Executive Board and Joint Assembly oversees issues of key risks and issues at both the programme and project level.

At the programme level an officer technical group (GCP Transport Programme Board) made up of key officers and stakeholders develops the overall scheme prioritisation and seeks to manage programme level risks and capture shared benefits.

At the project level a Project Team works up scheme details and reports to the Project Board which guides the overall development of the project at the technical level. At the project gateways, reports are made to the GCP Executive Board on progress and to seek decisions on key matters which are related to project delivery and funding.

5.2 Project management team

The project management team is accountable to the Project Board and ultimately the GCP Executive Board. It is the project management team who will manage the delivery of C2C. The Project Management Team will be responsible for the day to day delivery of the scheme and will ensure technical and financial control.

The project management team coordinates inputs from technical advisors responsible for the delivery of the key workstreams in pursuit of the agreed programme, including:

- Design development
- Transport modelling
- Environment assessment
- Procurement

- Business Case development
- Planning
- Communications
- Land and Compulsory Purchase Orders

The project management team structure is illustrated in Figure 4 below:

Figure 4: C2C delivery team structure



Source: GCP

5.3 Local Liaison Forum

To support the Project Board and project team in discharging their roles, a Local Liaison Forum (LLF) of locally elected Members and stakeholders has been formed. As part of wider stakeholder engagement, the LLF provides a means of capturing local views and for the project team to regularly update the local community on progress. While not able to work outside of the scope of the key decisions made by the GCP Executive Board, the LLF can consider project specific issues in more detail and provide suggestions, which form part of the project considerations.

The members, function and operation of the LLF are agreed through a term of reference and include the following:

- All Local County, District and Parish Members representing areas on the route to be invited
- The LLF does not make decisions on the scheme itself but can make suggestions directly and via the Joint Assembly

5.4 Decision making and change control

For the varying level of project decisions that are made in relation to the scheme, the Project Manager has authority to determine which category a decision falls under, of which there are 4 types:

1. **Key Decision:** these decisions are as defined in the GCP paper agreed in January 2015, and are the major 'gateway' decisions to allow the overall project to progress. These key decisions form the outer scope of the project and define the 'project parameters'. Key

decisions are the sole responsibility of the GCP Executive Board with advice from the GCP Joint Assembly and Chief Executives.

2. **Scope Change Decisions:** these decisions are those which will take the project out of scope of the project parameters agreed at the key decision-making stage. These decisions will impact cost/quality or time. As such these decisions are the sole responsibility of the GCP Executive Board with advice from the GCP Joint Assembly and Chief Executives' Group (subject to 1 and 2 above).
3. **Major Decisions Within Scope:** These decisions are within the agreed project parameters but are still considered 'major decisions' because they have an impact on cost/quality/time and/or will require a change of the PID. A major decision is the sole responsibility of the Project Board.
4. **Project Management Decisions:** These are decisions which do not impact cost/quality or time (an example may be technical decisions on detailed options). These decisions include moving budget between work streams. These are the responsibility of the Project Manager.

5.5 Project Status Report

The fundamental process of capturing change in the project is through the Project Status Report. The Status Report is presented at the regular meetings of the Project Board and if necessary, can be submitted separately between Project Boards at the Project Manager's discretion. The Project Status Report is the main input to the Project Board and summarises progress and change on the project.

The following is the format of the Project Status Report:

- Key activities and achievements in report period;
- Serious issues and actions required by governance body;
- Key activities in the forthcoming period;
- Key milestones update – including RAG rating;
- Key issues;
- Key risks; and,
- Budget update.

6 Assurance and Approval

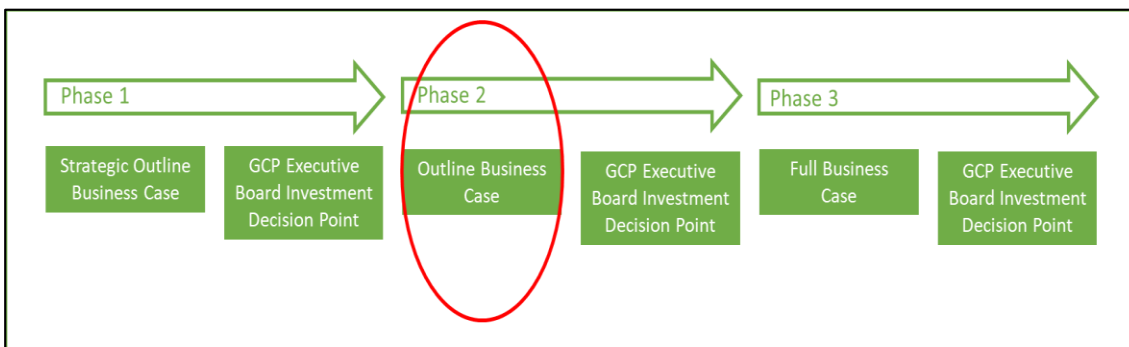
6.1 Assurance and Approvals

The scheme will be progressed through the GCP's standard approval processes, with all decisions made by management with the appropriate level of authority depending on the type of decision being made (see section 5.4).

The scheme will pass through three business case stages as part of the overall approval process. The three-stage process which is being undertaken for this scheme is aligned to the DfT's 'The Transport Business Cases' (January 2013) approach:

- **Strategic Outline Business Case (SOBC)**, consisting of high-level analyses which establishes the need for the project and identifies the options to be short listed.
- **Outline Business Case (OBC)**, containing more detailed analysis of short list options to identify a preferred option, and setting out the financial, commercial, and management strategies.
- **Full Business Case (FBC)**, updating the preferred option analysis and confirming the final financial, commercial, and management strategies.
- The first stage of the business case process has been approved by the GCP Executive Board, progressing the scheme to OBC stage. The outstanding two stages will require approval by the GCP Executive Board to release funding for this scheme.

Figure 5: Business case approval process



Source: Mott Macdonald

6.2 Approvals to date

Table 6 sets out all approvals made to date in relation to the C2C project.

Table 6: Key decisions for the C2C project

Date	Governance Group	Title of Report	Key Decisions Made
2014	CCC ⁷	Options Assessment Report	<ul style="list-style-type: none"> The process and rationale used to assess if the options served key trip attractors, and the options were discussed at a workshop
June 2015	GCP Executive Board	Corridor Study Interim Report GCP Executive Board Meeting held 18 th June 2015	<ul style="list-style-type: none"> Acknowledgement of the delivery being split into phases to reflect City Deal funding tranches. Approval for: <ul style="list-style-type: none"> Public consultation on the route options set out in report, including Park & Ride locations at Madingley Mulch roundabout and the closure of the existing Madingley Mulch roundabout Park & Ride. Agreement in principle, that UoC should be encouraged to discuss with the City Council's Planning Department how the Madingley Mulch roundabout Park & Ride site might be developed for residential development if the site was to be closed. Agreement to instruct officers to submit a report to the October 2015 cycle of Joint Assembly and Executive Board meetings containing an initial and high-level appraisal of the technical implications and costs of creating bus-only slip-roads.
January 2016	GCP Executive Board	GCP Executive Board Meeting held 15 th January 2016	<ul style="list-style-type: none"> Agreement to the production of an Environmental Design Guide, of which principles should be applied to City Deal transport infrastructure schemes. Where proposals relate to additional infrastructure that would be better considered as part of either an existing or future corridor study (i.e. one of the tranche 1 or prospective future City Deal schemes), it was agreed that those proposals be taken forward through those routes rather than through the Cambridge Access Study.
March 2016	GCP Executive Board	GCP Executive Board Meeting held 3 rd March 2016	<ul style="list-style-type: none"> Agreement to include the responses to the public consultation on the A428/A1303 public transport infrastructure improvement scheme, including the alternative and hybrid options suggested and other comments received in the ongoing options development and assessment to allow selection of options in September 2016 to progress to further stages of development.
October 2016	GCP Executive Board	GCP Executive Board Meeting held 13 th October 2016	<ul style="list-style-type: none"> Agreement, in principle, to a segregated route between Cambourne and Cambridge, with a Park & Ride near the Madingley Mulch roundabout. Agreement that a segregated cross country super cycleway supporting key villages between Bourn Airfield and the M11 should be explored. Agreement to undertake a preliminary design to assess whether or not it is feasible to provide a two-way busway, a cycleway and a road within the existing highway boundary. Officers instructed to undertake further appraisal on the following: <ul style="list-style-type: none"> Specific route alignments within catchment area 3a, with catchment area 3 as an alternative if option 3a proves unviable A new Park & Ride at either Scotland Farm or a new location 4. Delegated to CCC's Executive Director of Economy, Transport and Environment a number of responsibilities to ensure continuation of the scheme development.

⁷ Prior to the establishment of the GCP Executive Board, CCC oversaw the early development and approvals for the C2C project

Date	Governance Group	Title of Report	Key Decisions Made
July 2017	GCP Executive Board	GCP Executive Board Meeting held 26 th July 2017	<ul style="list-style-type: none"> Approval to undertake further detailed appraisal work on 4 Park & Ride Sites and the existing Park & Ride site at Madingley Road, and further development of the on-line Option 6 alignment to the same level as that for Option 1 and the off-line Option 3A.
September 2017	GCP Executive Board	GCP Executive Board Meeting held 20 th September 2017	<ul style="list-style-type: none"> Approval to undertake further public consultation on the Park & Ride options and route alignments - this was subject to a further meeting with the LLF's Technical Group to further refine option 6. Public consultation to include further detail on the connectivity to key employment sites and on the connection to the M11 subject to work with Highways England.
December 2018	GCP Executive Board	GCP Executive Board Meeting held 6 th December 2018	<ul style="list-style-type: none"> Recommendation of Phase 1 route alignment noted subject to completion of the OBC Approval to undertake public consultation on the short-listed options for Phase 2 route alignment.

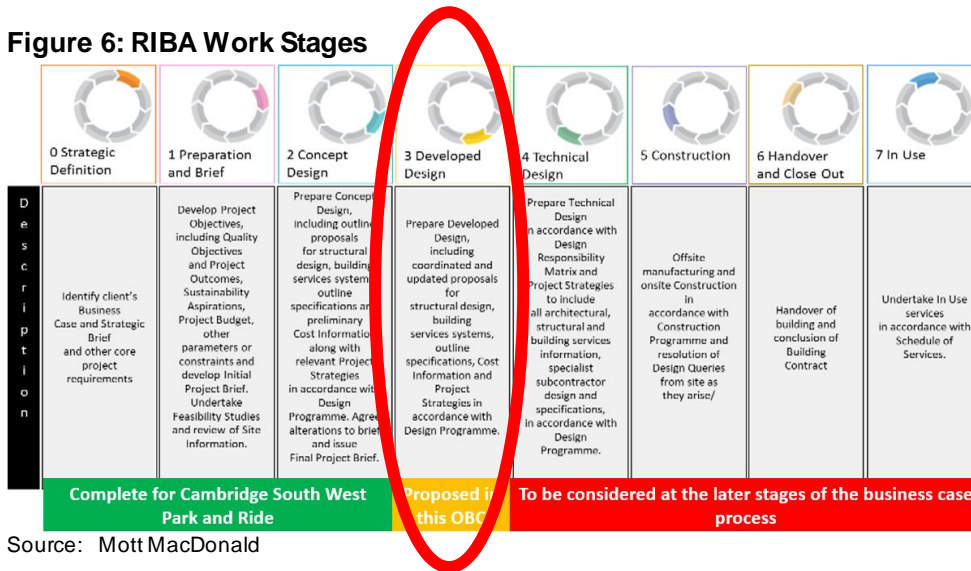
Source: Mott MacDonald

7 Project Plan

7.1 Project Plan

The project and actions required for delivery are well understood. They have been assessed in consultation with the full project team and have the support of key stakeholders. Figure 6 illustrates the RIBA work stages covered to date and those that will be covered as well as those that are described in this OBC, namely RIBA stage 3. GCP have however developed their own work and reporting stages which are based on key decision points aligned with the DfT business case process, but is also closely related to the RIBA work stages; this is the plan that will be followed and is illustrated in Figure 7.

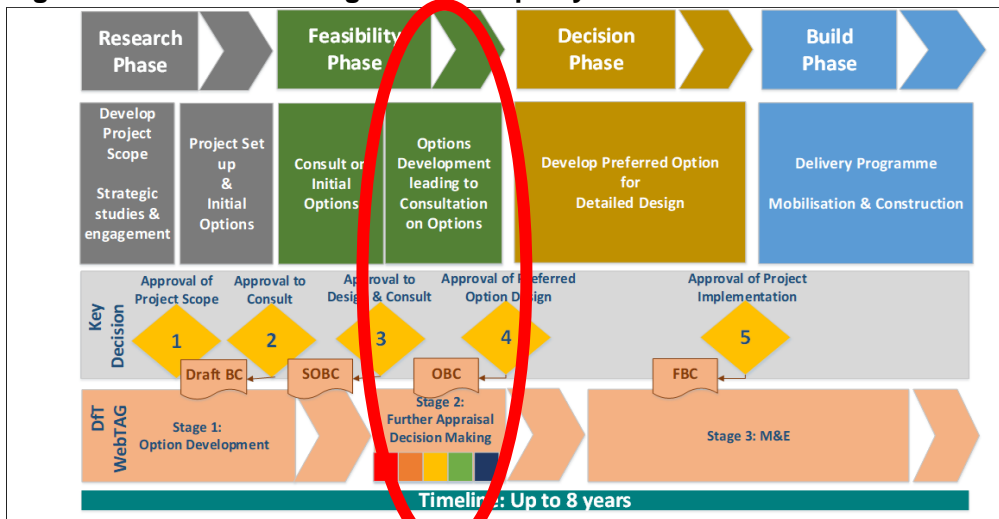
Figure 6: RIBA Work Stages



Source: Mott MacDonald

From Figure 7, it can be seen that development of the OBC, Stage 2 in the DfT, process aligns with GCP Key Decisions Points 3 and 4 and RIBA Stage 3.

Figure 7: Greater Cambridge Partnership Key Decision Points



Source: GCP

7.2 Project programme

The detailed programme, approved by the Project Board, is set out in Appendix Q. If the programme is at risk of changing, this would be reported to the Project Board through the Project Status Report. If the programme were then required to formally change, this would be reported to the GCP Executive Board for approval with a recommendation as a key decision.

Table 7 provides the key milestones and associated delivery dates.

Table 7: C2C delivery programme – key milestones

Key Milestone	Target Completion Date
Phase 1: Work needed to establish project	
Agree the scope of project	2014
GCP Executive Board approval	2014
Phase 2: Work needed to identify outline concepts	
Options generation and initial sifting	Q2 2014
Further options assessments	Q2 2015
Stakeholder consultation on options	Q1 2016
Strategic Outline Business Case	Q3 2016
GCP Executive Board approval	Q3 2016
Phase 3: Work needed to identify a preferred option	
Further options assessment	Q3 2017
Further stakeholder consultation	Q1 2018
Business Case Update – preferred option	Q2 2018
GCP Executive Board approval	Q4 2018
Develop Design	Q1 2019
Stakeholder consultation	Q1 2019
Outline Business Case	Q4 2019
GCP Executive Board approval	Q4 2019
Phase 4: Work needed to achieve FBC and Statutory Approvals	
TWAO application	Q3 2020
Objection management	Q1 2021
Public Inquiry (if required)	Q1 2021
Secretary of State Decision	Q4 2021
GCP Executive Board approval	Q4 2021
Procurement	Q1 2022
Full Business Case	Q1 2022
GCP Executive Board approval	Q2 2022
Phase 5: Work needed to achieve final design scheme for approval	
Final designs	Q1 2022
GCP Executive Board approval	Q2 2022
Phase 6: Work needed to construct the scheme and hand over to a final operator	
Scheme construction	Q2 2022
Hand over	Q2 2024
Scheme opening	Q2 2024

Source: GCP

8 Risk Management

8.1 Risk management

The management of risk and uncertainty will be key to the successful delivery of the scheme, as it will identify threats to project delivery and enable effective risk management actions to be assigned. A risk management strategy has been developed and reviewed at key stages of project development. An effective risk management strategy should include:

- A continuous approach;
- Thorough identifications of risks;
- Active risk avoidance and mitigation;
- Effective communication of the risks to the project team; and,
- The delivery of scheme objectives to cost, quality and time indicators.

8.2 Risk management strategy

The GCP has adopted a robust Risk Management Framework to ensure effective management of risks in order to enable the successful delivery of all City Deal funded projects, including C2C.

As such, the risk management strategy for this project, though not specifically PRINCE2, is based on the core principles for risk management contained within the Office of Government Commerce (OGC) PRINCE2 guidance and applied proportionally to the value of the scheme. The procedure for identifying key risks follows this process:

- **Identify:** Complete the risk register (as appropriate to the area of the project and/or the producing organisation) and identify risks, opportunities and threats.
- **Assess:** Assess the risks in terms of their probability and impact on the project objectives.
- **Plan:** Prepare the specific response to the threats (e.g. to help reduce or avoid the threat), and/or plan to maximise opportunity in the case that these threats do occur.
- **Implement:** Carry out the above in response to an identified threat if one occurs.
- **Communicate:** Report and communicate the above to relevant project team members and stakeholders.

Risk management must be an ongoing process, as illustrated by the GCP process to risk management in Figure 8

Figure 8: GCP Risk Management Process



Source: GCP Risk Management Framework

To facilitate the effective management of risks associated with the scheme’s delivery, risks have been organised into two overarching categories:

- **Strategic Risks** – these are presented in the Project Managers report and are those risks which impact the overall delivery of the project scope; and
- **Technical Risks** – these are associated with specific work streams and are managed by the Project Manager.

All risk registers will be reviewed regularly throughout the detailed design, procurement, construction and post-construction phase. Risk management processes will be employed and recorded throughout the project lifecycle. The risk register will be monitored and updated at regular workshops and meetings. The Project Manager has responsibility for overseeing the Risk Management process. Roles, responsibilities and reporting lines for risk management should be clearly defined within the project team.

8.3 Risk register

A risk register has been developed and updated throughout the development of the OBC, in order to continually manage risks and mitigate impacts on the scheme delivery. Risks have been grouped into categories and scored based on their likelihood of occurring and expected impact on the scheme.

Scores for each of the identified risks have been broken down into Inherent Risks and Residual Risks. Inherent risk represents the amount of risk that exists in the absence of controls or mitigation measures. Residual risk is the amount of risk that remains after the measures are considered.

Risks were given a number on a scale of 1 to 5 for both likelihood and impact which has been multiplied together to give an overall score for both inherent risk and residual risk. The likelihood and impact ratings and descriptions are summarised in Table 8 and Table 9.

Table 8: Risk likelihood ratings

Description	Descriptor	Scale
May only occur in exceptional circumstances, highly unlikely	Very Low	1
Is unlikely to occur in normal circumstances, but could occur at some point	Low	2
Likely to occur in some circumstances or at some time	Moderate	3
Is likely to occur at some time in normal circumstances	High	4
Is highly likely to occur at some time in normal circumstances	Very High	5

Source: GCP Risk Management Framework

Table 9: Risk impact rating

Description	Descriptor	Scale
<ul style="list-style-type: none"> • Insignificant disruption to internal business or corporate objectives • Little or no loss of front-line service • No environmental impact • No reputational impact • Low financial loss (proportionate to budget involved) 	Negligible	1
<ul style="list-style-type: none"> • Minor disruption to internal business or corporate objectives • Minor disruption to front line service • Minor environmental impact • Minor reputational impact • Moderate financial loss (proportionate to budget involved) 	Marginal	2
<ul style="list-style-type: none"> • Noticeable disruption to internal business and corporate objectives • Moderate direct effect on front line services • Moderate damage to environment • Extensive reputational impact due to press coverage • Regulatory criticism • High financial impact (proportionate to budget involved) 	Significant	3
<ul style="list-style-type: none"> • Major disruption to corporate objectives or front-line services • High reputational impact – national press and TV coverage • Major detriment to environment • Minor regulatory enforcement • Major financial impact (proportionate to budget involved) 	Critical	4
<ul style="list-style-type: none"> • Critical long-term disruption to corporate objectives and front-line services • Critical reputational impact • Regulatory intervention by Central Government. • Significant damage to environment • Huge financial impact (proportionate to budget involved) 	Catastrophic	5

Source: GCP Risk Management Framework

Based on the scoring of each risk, a RAG rating has been calculated for each inherent and residual risk and the average of these two risk elements was taken so that they could be categorised as High, Medium or Low as specified in Table 10. This provides a robust way to easily identify the risks which may need to be considered in more detail.

Table 10: RAG appraisal ratings

RAG Appraisal Rating	Description
Red	High Risk (Average score >10)
Amber	Medium Risk (Average score 6-10)
Green	Low Risk (Average score 0-5)

The top 10 Project Risks are listed in **Table 11** and Table 12 for Strategic Risks and Technical Risks respectively.

Table 11: Strategic RAG Risk Register

Risk	Description	Rating	Mitigation Measure	Post Mitigation
Transport Assessment and EIA scoping exercise delayed due to: <ul style="list-style-type: none"> • CAM • Board Approval • Planning • West Cambridge/ Bourn Airfield • Liaison 	If the scoping exercise is delayed than this will impact on compiling Environmental Statement and Transport Assessment, delaying TWA Order submission	R	Prepare scoping opinion and parts of the EIA in advance where possible to ensure scoping is submitted as soon after board approval as possible	R
Preferred technology cannot deliver operational performance in line with OBC	Cannot procure suitable technological guidance solution that enable the scheme to meet its objectives	R	Work with technology supplier to ensure available technology meets performance requirements	G
Scheme does not obtain planning powers	Current preferred planning route is a TWA. Scheme fails to demonstrate its case and that it is within the public interest.	R	Prepare TWA with input from legal and planning advisors	A
Recommended route option not accepted by GCP Executive Board	Need to revise OBC with consequent impact on programme	R	Provide necessary evidence to GCP to enable decision on mode by mid-2018 with stakeholder buy in	A
Lack of stakeholder support for project	Objections at public enquiry, further public engagement required	R	Ensure decisions are informed by business case and demonstration of public benefits.	A
Development of processes and procedures related to GCP funding introduces new decision points and reporting requirements	Delay to programme and increased costs	A	Align business case development work with existing key decisions to ensure decision making is clear and understood	A
Proposed developments for West of Cambridge not approved	OBC undermined/ benefits reduced	A	Low risk but could lower BCR as fewer users for P&R / public transport route. Liaise with planning/ DC officers.	A
Recommended route not underpinned by adequate stakeholder/ landowner engagement.	Programme extension	A	Ensure sufficient stakeholder engagement. Landowner engagement has been stepped up and nearly all owners have now been found and met.	A
Changed timings for GCP key decision points.	Programme may not fit requirements	A	Communicate effectively to agree programme. Regular review and update of programme.	G
Uncertainty regarding lead authority for scheme.	Uncertainty regarding lead authority for scheme	A	Ensure legal and procedural process for delivery outlined in business Case and communicated to Elected Members.	G

Source: Mott MacDonald

Table 12: Technical RAG risk register

Risk	Description	Rating	Mitigation Measure	Post Mitigation
Park and Ride / M11	Need HE approval	R	Regular HE engagement	A
EIA surveys commence in spring 2019 to meet current programme.	If surveys undertaken in 2019 season then data may be time expired and may need to be redone if programme experiences delay.	R	May need agreement to proceed at risk without GCP board approval on route. Abortive surveys may be required to cover several options.	A
Significant Statutory Undertakers diversions required	Increased construction costs and delays to programme.	R	Undertake C3 diversion requests on recommended option.	A
Unfavourable ground conditions along the route.	Increased construction costs and delays to programme.	R	Early desktop ground investigation (GI) to identify potential issues. Further GI if required	A
Interpretation of Green Belt.	Interpretation of appropriate development on Green Belt is ambiguous.	R	Work with LPA to ensure strategic planning policy compliance.	A
Proposed solution cannot operate at adequate speed.	Reduced speed of optical guidance technology leads to impact on business case and leads to objections/ questioning at Public Inquiry.	R	Legal Advice being sought on consents route. Attempt to word order to allow any allowable guidance technology under the rules. Keep up to date on technology developments to assess risk heading toward TWA submission.	A
Inability to meet policy objectives in local plans relating to nett biodiversity gain.	Challenge at planning application stage.	A	Early engagement with Local Planning Authority ecologist, willingness to look for opportunities - could lead to increase cost of scheme.	A
A428/St Neots Road Dumbbell roundabout overloaded by Bourn Airfield development - no proposal in Bourn development scheme to improve roundabout.	Requirement to improve borne by A428.	A	Liaise with Local Planning Authority and development control	G
Change in guidance approach.	Decision to change guidance approach raises uncertainty regarding pavement finish and required width, leading to unauthorised vehicle incursion and design changes.	A	Consider variation in design to suit local circumstances and address incursions by unauthorised vehicles. Worst case assumptions to be made through TWA Order preparation.	G
City Centre Congestion/uncertainty regarding complementary access measures.	Still uncertainty regarding bus routes and city centre strategy. Interdependent project.	A	Liaise with City Centre Access to identify work being undertaken.	G

Source: Mott MacDonald

8.4 Key issues for implementation

Key issues for implementation usually arise when identified risks to the project materialise and therefore become issues rather than risks. In order to prevent delays to the project, where key issues are identified, it is assumed that project work will progress while they are being considered by the Project Board and that the issues will be resolved promptly or escalated to the Joint Assembly and Executive Board, as deemed necessary. All issues are recorded in the Project's Issues Log, which is regularly reviewed and updated. Each issue is assigned an impact level, a corresponding mitigation measure and ownership. The subsequent sections outline a detailed strategy for managing and identifying risks to prevent these issues arising.

8.5 Contingency plan

When reviewing risk, as outlined here, it is also important to consider what might happen to the project should there be a threat to delivery. Given that delivery of the C2C project will primarily be funded through City Deal funding, which has already been successfully secured in principle by GCP, a Contingency Plan has not been deemed necessary at this stage in the scheme's development. GCP have advocated their support for the scheme in advance of this OBC. There is also an expectation that developer contributions will be secured through Section 106 agreements to support delivery of the scheme.

9 Communication and Stakeholder Management

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 scheme.

This section outlines the key stakeholders who are involved in the C2C project and is supported by the Stakeholder Engagement and Communication Plan (Appendix H) that has been prepared by the GCP.

9.1 Stakeholder Engagement and Communication Plan

The Stakeholder Engagement and Communication Plan (Appendix H) is guided by the principles of the City Deal wide communication strategy. The strategy outlines how the project will ensure that all internal and external stakeholders are informed of relevant project information. The purpose of the strategy is to ensure that accurate and timely messages about the project are disseminated to a range of identified stakeholder groups.

Project communication is governed through the Stakeholder Engagement and Communication Plan as set out in Table 13.

Table 13: C2C project communication

Audience	Type of communication	frequency	Process / Responsibility
General public	<ul style="list-style-type: none"> Formal public consultation Informal public consultation Regular website updates on project progress 	<ul style="list-style-type: none"> Formal public consultations when required by the adopted approvals process Informal public consultation during each stage of scheme development 	<ul style="list-style-type: none"> Communication Team
Statutory consultees	<ul style="list-style-type: none"> Formal consultation Informal consultation 	<ul style="list-style-type: none"> Formal consultations when required by the adopted approvals process Informal consultation during each stage of scheme development 	<ul style="list-style-type: none"> Project Manager / Communications Team
Other key stakeholders	<ul style="list-style-type: none"> Ad hoc meetings 	<ul style="list-style-type: none"> Quarterly 	<ul style="list-style-type: none"> Project Manager
Contractors	<ul style="list-style-type: none"> Meetings/ briefings Procurement frameworks and contracts Website Collateral 	<ul style="list-style-type: none"> As required 	<ul style="list-style-type: none"> Project Manager / Communications Team
Members	<ul style="list-style-type: none"> Reports Briefing sessions Single issue workshops Community events and public consultations Internal manager/staff/member meetings and briefings 	<ul style="list-style-type: none"> As required 	<ul style="list-style-type: none"> Project Manager

Audience	Type of communication	frequency	Process / Responsibility
	<ul style="list-style-type: none"> • Networking events • Intranet, email and staff newsletter 		
UK Government	<ul style="list-style-type: none"> • Meetings and presentations civil servants and MPs • Independent Economic Assessment Panel • Conferences and events • Independent research • Telephone/ email briefings • Media • E-newsletter 	<ul style="list-style-type: none"> • As required on key milestones 	<ul style="list-style-type: none"> • Project Manager
General correspondence	<ul style="list-style-type: none"> • Letter, email in standard format 	<ul style="list-style-type: none"> • As required 	<ul style="list-style-type: none"> • Project Manager

Source: GCP

The Project Manager maintains a Communications Log for the lifetime of the project. The Communications Log includes the following headings:

- Date
- Attendees
- Subject matter/Title of meeting, and
- Organisations represented

9.2 Key stakeholders

Key stakeholders will be identified and involved in the delivery of the project in a number of ways. Public and stakeholder engagement is an important means of solving problems and making decisions that directly impact upon living, working, using services and doing business in the local area. Such engagement may include informing, consulting with, involving, collaborating with and empowering stakeholders to understand the issues to enable them to make informed choices.

The key objectives of the scheme's stakeholder management are to:

- Keep stakeholders aware of the schemes progression and give an opportunity for feedback to refine scheme development and help gain approval;
- Give an opportunity for stakeholders to provide views and suggestions for improvements so that the scheme meets stakeholder requirements as far as is practical;
- Meet statutory requirements;
- Increase public and stakeholder awareness of the scheme;
- Provide consistent, clear and regular information to those affected by the scheme, including the nature of any scheme-related impacts and when and how it will affect people of groups both during delivery and once operational; and
- Address perceptions of the scheme where these are inconsistent with the scheme objectives and forecast outcomes.

A summary of stakeholders and our approach to engagement is presented in Table 14.

Table 14: Stakeholder Engagement Plan

Stakeholder	Interest / Involvement	Management Strategy	Statutory Consultee	Local Interest Group / Organisation	Wider Interest Group / Organisation	The Public
Members of the general public & highway users	Potential users and sensitive to disruption during construction.	Regular communication in the lead up to and during construction.				✓
Local Councillors	Represents constituent interests and forms a communication channel.	Regular updates and involvement where appropriate as the scheme progresses.		✓		
Statutory Undertakers	Sensitive to disruption during construction.	Close engagement on traffic management of scheme construction.	✓			
Landowners	Required to allow the scheme to progress. Interest in the impacts of the proposed scheme on environment and proposed mitigation/enhancement.	Close engagement on scheme development, proposals and construction prior to statutory consultation. For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable.	✓			
Designated Neighbourhood Forum	Interest of the proposed scheme on the local neighbourhood.	Close engagement on scheme development, proposals and construction prior to statutory consultation. For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable.	✓			
Town and Parish Councils	Interest of the proposed scheme on the adjacent Town and Parish Council areas. Represents local residents' interests and forms a communication channel.	Close engagement on scheme development, proposals and construction prior to statutory consultation. For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable.	✓			
Community Partnerships and Local Resident Groups	Represents local residents' interests and forms a communication channel.	Close engagement on scheme development, proposals and construction.		✓		

Stakeholder	Interest / Involvement	Management Strategy	Statutory Consultee	Local Interest Group / Organisation	Wider Interest Group / Organisation	The Public
Transport Operators	Interest in potential impact on local bus services.	Close engagement on traffic management of scheme construction.			✓	
Emergency Services	Interest in potential impact on local bus services.	Close engagement on traffic management of scheme construction.	✓			
Highways England	Interest in linkages with the trunk road network and impact during construction.	Close engagement on scheme development, proposals and construction. Also a landowner. For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable.	✓			
Developers	Interest in improvements to infrastructure which make development sites more attractive to potential businesses, residents and the public	As and when information is made public via email, verbal and through the planning process			✓	
Local Businesses and Chambers of Commerce	Sustainable travel will offer the opportunity for a wider employee base plus reduced congestion, reduced capital fleet and mileage costs.	As and when information is made public via email, verbal and through the planning process.		✓		
DfT	Ensuring compliance with TAG and the ability for the scheme to deliver its objectives.	Regular meetings with regional representatives. Business Case Update to be forwarded to DfT for comment.			✓	
The Cambridgeshire and Peterborough Combined Authority	Requires the scheme to deliver its objectives.	Regular meetings with the CPCA representatives		✓		

Stakeholder	Interest / Involvement	Management Strategy	Statutory Consultee	Local Interest Group / Organisation	Wider Interest Group / Organisation	The Public
The District and County Councils	Requires the scheme to deliver its objectives.	Regular meetings with key representatives. For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable.	✓			
Environment Agency	Interest in the impact of proposed scheme on the natural environment and proposed mitigation/enhancement.	Engagement on scheme development, proposals and construction prior to statutory consultation. For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable. Participation in Landscape, Heritage and Ecology Working Group	✓			
MPs	Represents constituent interests and forms a communication channel.	Regular updates and involvement where appropriate as the scheme progresses		✓		
Road Safety Management Groups	To maximise road safety relating to the proposed scheme and during construction.	Meetings with key representatives to comment on scheme proposals.		✓		
Local Cycle and Walking Groups	To represent the views and interests of active travel users.	Meetings with key representatives to comment on scheme proposals. Engagement through Non Motorised User Group		✓		
Equality and access groups	To represent the views and interests of equality and access groups.	Meetings with key representatives to comment on scheme proposals Engagement through Non Motorised User Group		✓		
Equestrian Groups	To represent the views and interests of equestrians.	Meetings with key representatives to comment on scheme proposals.		✓		

Stakeholder	Interest / Involvement	Management Strategy	Statutory Consultee	Local Interest Group / Organisation	Wider Interest Group / Organisation	The Public
		Engagement through Non Motorised User Group				
Education and Skills Sector	Sustainable travel will offer the opportunity for students to access employment and education opportunities.	Regular updates and involvement where appropriate as the scheme progresses.			✓	
Health Sector	The scheme will offer the opportunity for staff and patients to access employment and health care sustainably.	Regular updates and involvement where appropriate as the scheme progresses.			✓	
Local Residents	Potential users, interest in the impact of scheme on the local community and sensitive to disruption during construction	Public consultation and regular communication in the lead up to and during construction.				✓
Sport England	Interest in the impacts of proposed scheme on the rugby club land and proposed mitigation/enhancement.	Regular updates and involvement where appropriate as the scheme progresses. For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable. Engaged through Non Motorised User Working Group	✓			
The Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire	Impacts of proposed scheme and proposed mitigation/enhancement	Regular updates and involvement where appropriate as the scheme progresses Participation in Landscape, Heritage and Ecology Working Group		✓		
Cambridge Bat Group	Impacts of proposed scheme on bats and proposed mitigation/enhancement	Regular updates and involvement where appropriate as the scheme progresses		✓		
Cambridge Past Present and Future	Impacts of proposed scheme and proposed	Regular updates and involvement where appropriate as the scheme progresses		✓		

Stakeholder	Interest / Involvement	Management Strategy	Statutory Consultee	Local Interest Group / Organisation	Wider Interest Group / Organisation	The Public
	mitigation/enhancement in relation to green open spaces and our historic environment.	Participation in Landscape, Heritage and Ecology Working Group Engagement through Non Motorised User Group				
Cambridge American Cemetery and Memorial	Impact of the proposed scheme on the American Cemetery and Memorial and the proposed mitigation.	Regular updates and involvement where appropriate as the scheme progresses. Engaged through Non Motorised User Working Group		✓		
Local Access Forum	Interest in the impact of proposed scheme on people with reduced or limited mobility.	Regular updates and involvement where appropriate as the scheme progresses Engaged through Non Motorised User Working Group		✓		
Sustrans	Impacts of the proposed scheme on cyclists.	Regular updates and involvement where appropriate as the scheme progresses Engaged through Non Motorised User Working Group (non participating)			✓	
Coal Authority	Scheme could be affected by coal mining.	If determined in scope, updates and involvement where appropriate as the scheme progresses. For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable.	✓			
The Garden Trust (was Garden History Society)	Interest in the impact of the proposed scheme on the American Cemetery Memorial and the proposed mitigation	Updates and involvement where appropriate as the scheme progresses. For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable. Engaged through Non Motorised User Working Group	✓			
Historic England	Interest in the impact of the proposed scheme on the	Updates and involvement where appropriate as the scheme progresses.	✓			

Stakeholder	Interest / Involvement	Management Strategy	Statutory Consultee	Local Interest Group / Organisation	Wider Interest Group / Organisation	The Public
	historic environment and the proposed mitigation.	For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable. Participation in Landscape, Heritage and Ecology Working Group				
Royal Society for the Protection of Birds	Interest in the impact of the proposed scheme on birds and the proposed mitigation	Updates and involvement where appropriate as the scheme progresses			✓	
Natural England	Interest in the impact of the proposed scheme on the natural environment and the proposed mitigation.	Updates and involvement where appropriate as the scheme progresses. For statutory consultation, a formal request to respond will be issued from the TWA Orders Unit, if applicable. Participation in Landscape, Heritage and Ecology Working Group	✓			
National Trust	Holds Covenant on some land owned by third parties (eg. Cambridge Past, Present and Future)	Regular dialogue. Participation in Landscape, Heritage and Ecology Working Group			✓	
Cambridge University	Multiple land holdings and access requirements towards the Eastern End of the scheme. Notably Cambridge West campus	Regular dialogue with the University Estates Team and Bursars of constituent colleges.	✓			

Source: Stakeholder Engagement and Communication Plan (Appendix H)

9.3 Stakeholder engagement programme

Whilst engagement with stakeholders is an on-going process, the development of the C2C project has been through three stages of public consultation in 2015, 2017 and 2019.

Feedback on the project proposals for each public consultation period was obtained through several mechanisms:

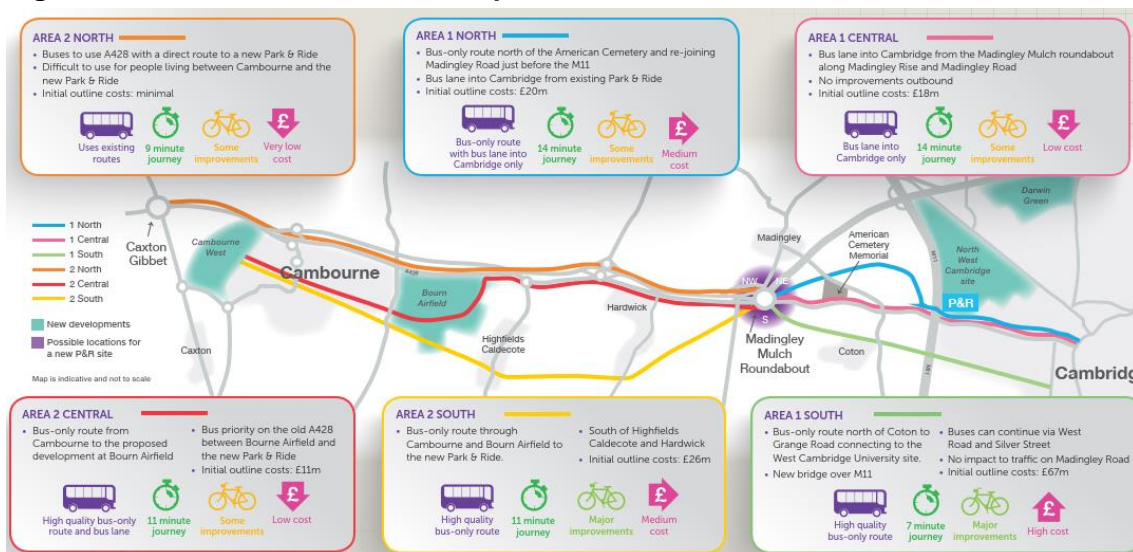
- Online feedback forms available on the project website
- Paper feedback forms available at each exhibition or on request
- Comments and enquiries via the project mail box or via other Council mailboxes
- Face to face conversations with members of the project team at the public exhibitions
- Comments from one-to-one meetings with stakeholders
- Comments following presentations

9.3.1 2015 Public Consultation

The first public consultation for the C2C project was held Autumn 2015, as part of the early options development and assessment process. The consultation was consistent with the DfT's major scheme development methodology.

The consultation sought public feedback on six potential route options for the scheme, broken down between two scheme areas – later to be taken forward as scheme phases 1 and 2. The information on each of the routes as shown in the consultation material is shown in Figure 9.

Figure 9: 2015 Consultation scheme options



Source: Greater Cambridge City Deal consultation leaflet

The consultation aimed to allow the public to provide feedback on the issues experienced in using the transport corridor today, and their preferred approximate route alignment for the proposed improvements. The consultation material provided basic detail on each of the route alignments – a description of the type of bus provision, approximate journey time, the level of improvement, and an indicative cost – allowing easy comparison between the options.

The consultation was aimed at members of the public living, working and travelling along the route, and was promoted through the delivery of over 8,000 consultation leaflets and 20,000 promotional postcards to homes along the A428/A1307. Leaflets and postcards were also made available through local community hubs and libraries and at consultation events, as well as being provided to all 27 Parish Councils along the scheme route. The leaflets were provided with a paper survey, allowing people to respond by post. The survey was also available online.

The consultation was supported by a series of 11 informal public exhibitions held between 27th October and 19th November 2015. Events were held in villages along the route, as well as in Cambridge itself, and further afield in St Neots and Papworth Everard. These exhibitions reached over 300 members of the public.

The consultation was advertised in local media, including the South Cambridgeshire and City Council magazines, as well as via email and social media.

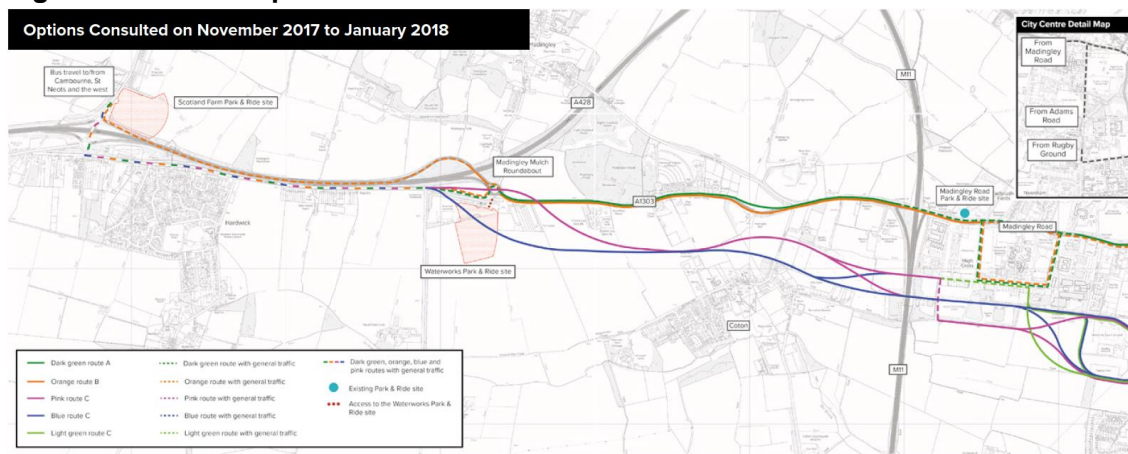
The consultation received a total of 2,193 responses, of which 1,486 were received online. Further detail on the consultation, including analysis of the results is contained in the Consultation Report⁸.

9.3.2 2017 Public Consultation

Further public consultation took place between 13th November 2017 and 29th January 2018, supporting the development of the shortlisted options. The consultation sought public feedback on more detailed route alignments for the eastern part of the scheme (Phase 1):

- **Option A:** An on-road option which includes the introduction of an inbound bus lane on Madingley Road between Madingley Mulch roundabout and Lady Margaret Road;
- **Option B:** An on-road tidal bus lane on Madingley Road running between Madingley Mulch roundabout and the new entrance to Eddington (High Cross); and
- **Option C:** An off-road public transport route running between Madingley Mulch roundabout and Grange Road, Cambridge.

Figure 10: Phase 1 options



Source: Consultation leaflet, 2017-2018, (© Crown Copyright. All Rights Reserved. OS License Number 100023205.2018)

Source: November 2017 to January 2018 consultation leaflet

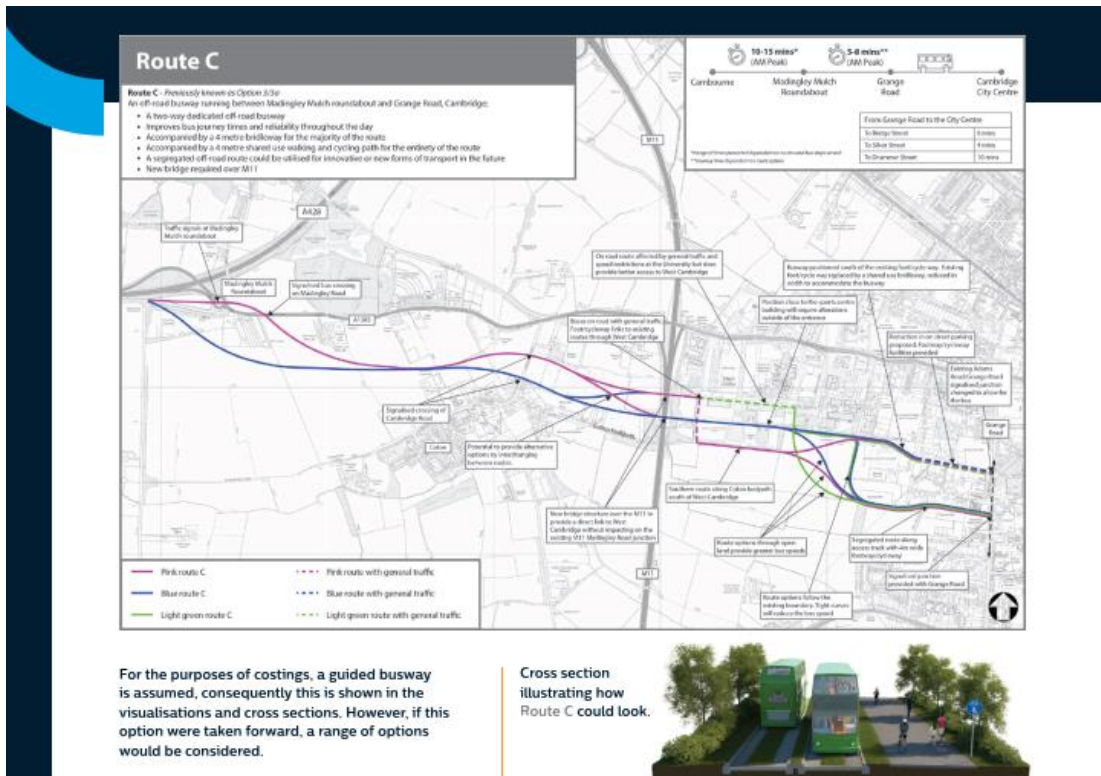
⁸ C2C Consultation Summary Report 2015 - https://citydeal-liv.e.storage.googleapis.com/upload/www.greatercambridge.org.uk/transport/transport-projects/C2C_Consultation_Report_01.02.2016.pdf

As well as the route alignment options, two potential Park & Ride sites were also consulted on:

- Waterworks
- Scotland Farm

The consultation material provided a greater level of detail on the proposed route options, including indicative cross-sections of how the routes might look. An overview of the key features of the Park & Ride locations were included alongside photomontages of each location. Examples of the information provided on each alignment and the Park & Ride sites are shown in Figure 11 and Figure 12.

Figure 11: 2017 Consultation route option example



Source: GCP consultation leaflet

Figure 12: 2017 Consultation Park & Ride site key features

SCOTLAND FARM PARK AND RIDE OPTION	THE WATERWORKS PARK AND RIDE OPTION
<ul style="list-style-type: none"> • Less potential visual impact on the wider countryside when compared to the Waterworks site • Connects to all routes • Currently no existing visible structures on the proposed site • Adjacent to a small number of existing houses north of the site on Scotland Road • Higher bus operating costs than Waterworks as it is further away from the city e.g. higher fuel costs • Less attractive for Park & Cycle as 17 miles further from Cambridge • Located within the green belt • Construction works to provide access to the site will affect rural road (Scotland Road) • Predicted usage lower than Waterworks at 67.5% by 2031 (1350 vehicles) 	<ul style="list-style-type: none"> • More potential visual impact on the wider countryside when compared to Scotland Farm • Connects to all routes • Existing visible structures on the proposed site e.g. radio mast • No immediately adjacent housing although near to a small number of existing houses • Lower bus operating costs than Scotland Farm as it is closer to the city e.g. lower fuel costs • More attractive for Park & Cycle as 17 miles closer to Cambridge • Located within the green belt • Construction works to provide access to the site will affect Madingley Marsh roundabout and the main road (A1303) • Predicted higher usage than Scotland Farm at 100% by 2031 (2000 vehicles)

Further information about Park & Ride sites is available online at www.greatercambridge.org.uk/C2C and at events

Source: GCP Consultation Leaflet

To promote the consultation over 14,000 brochures were produced and distributed, accompanied by a paper survey. Promotion of the consultation took place through online and traditional media channels including targeted advertising on Facebook and Twitter. Paid advertisements were displayed on outdoor poster sites in the city centre, and on Park & Ride bus screens, and information on the consultation was included in local newsletters.

In support of the consultation 21 drop in events were held across the area, including at Madingley Road Park & Ride, and villages along the route. Events were also held at sites in the wider area; in St Neots, Trumpington Park & Ride, Papworth Hospital and the Cambridge Biomedical Campus. A total of 2,049 consultation responses were recorded. The outcomes of the consultation are recorded in the Consultation Report⁹.

A series of focus groups were held in January 2018 with a representative sample of residents from the affected area to gain an in-depth understanding of:

- Residents' awareness of the consultation and understanding of the consultation material;
- Residents' views on a new Park & Ride site and preferences between the two sites; and,
- Residents' views on the options for a new bus route, and preferences between the proposed routes.

Five focus groups were established, with 42 people involved in total. The outcomes of the focus groups are recorded in the Qualitative Research Report¹⁰.

An LLF Workshop was held on 25th January 2018 with representatives from South Cambridgeshire District Council, Newnham City Council, local Residents Associations, Parish Councils and Cambridge Past, Present and Future. The workshop was arranged differently to the conventional focus groups; reflecting the familiarity of the LLF members with the consultation material. The session aimed to provide LLF members with the opportunity to feed into the qualitative research and gather views on the potential Park & Ride sites and the proposed route options. Outcomes of the LLF workshop are recorded in the Qualitative Research Report¹¹.

9.3.3 2019 Public Consultation

Consultation on Phase 2 of the scheme – the western end of the route – took place between 4th February and 31st March 2019. The consultation sought public feedback on detailed route alignments for three potential routes between Madingley Mulch Roundabout and Cambourne, including more details on the potential costs and benefits of the options. The consultation covered:

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

⁹ C2C Consultation Summary Report 2017/18 - <https://www.greatercambridge.org.uk/transport/transport-projects/cambourne-to-cambridge/cambourne-to-cambridge-consultation-2017/18/>

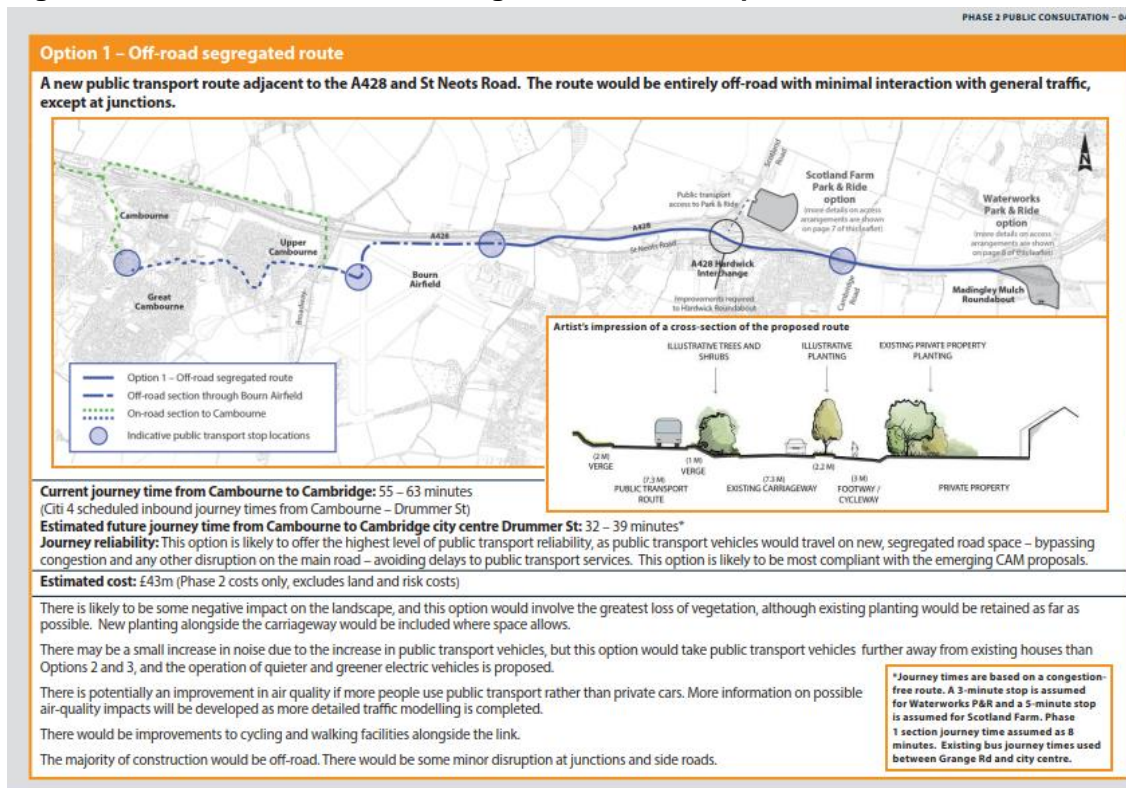
¹⁰ C2C Focus Group Report 2018 - <https://citydeal-live.storage.googleapis.com/upload/www.greatercambridge.org.uk/transport/transport-projects/C2C%20Focus%20Groups%20Report%202017.pdf>

¹¹ LLF workshop 25th January 2018 - <https://citydeal-live.storage.googleapis.com/upbad/www.greatercambridge.org.uk/transport/transport-projects/C2C%20Focus%20Groups%20Report%202017.pdf>

The consultation also provided more information on the Park & Ride location options, including more details on the access proposals for each site, with the public asked to state a preference for either site, based on the additional information. Two alternate routes into Cambourne were shown, with respondents asked to feed back on the proposed routes.

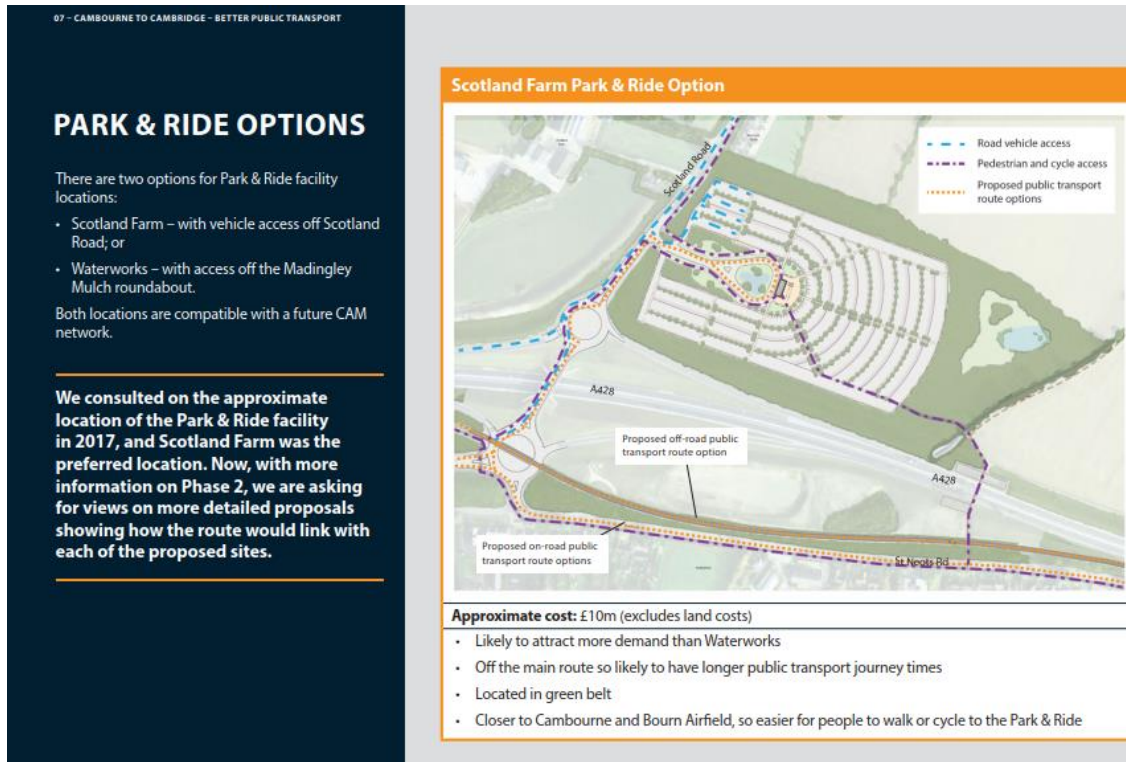
The consultation materials provided route alignment maps and indicative cross-sections of the routes, as well as indicative layouts and access arrangements of the proposed Park & Ride sites. Examples of the information provided are shown in Figure and Figure 14.

Figure 13: 2019 Consultation route alignment detail example



Source: GCP Consultation Leaflet

Figure 14: 2019 Consultation Park & Ride site detail example



Source: GCP Consultation Leaflet

To promote the consultation, 15,000 leaflets were distributed around the area. Promotion of the consultation took place through online and traditional media channels. The consultation was supported by 15 drop-in events allowing the public to speak directly to the project team, held in villages along the proposed route and in the wider area. The consultation received 968 responses, and 103 additional written responses.

Full details of the 2019 consultation, including the outcomes are contained in the Consultation Report 2019¹².

¹² C2C Consultation Summary Report 2019 - <https://www.greatercambridge.org.uk/transport/transport-projects/cambourne-to-cambridge/cambourne-to-cambridge-phase-2/>

10 Implementation of Workstreams

Table 15 sets out the high-level summary of all project workstreams, known as the work breakdown structure. No activities or spend of project resources will take place outside the defined workstreams as together they define the entirety of the scope of the project. Under some workstreams there are likely to be further sub workstreams. Each workstream has a name to define it and a reference which assists in the organisation of project files etc.

Table 15: Workstream breakdown descriptions

Workstream Name	Workstream ID	Description
Project Management	1.1	All activities related to the management of technical workstreams throughout the project and general day to day communication and engagement.
Early Option Identification	1.2	The identification of all concepts which could meet the objectives of the schemes.
Shortlisting Options	2.1	Reducing concepts to a limited number of feasible options
Public Consultation	3.1	The formal public consultation processes on high level options during Phase 3, emerging scheme during Phase 4 and public consultation linked to statutory processes
Outline Business Case	3.2	The processes of identifying a Preferred Option using technical assessment methods.
Legal Compliance	3.3	All necessary legal activities necessary for supporting delivery of the scheme.
Modelling	3.4	All necessary strategic and traffic modelling necessary for supporting delivery of the scheme.
Preferred Option Assessment	4.1	The identification of a Preferred Option FBC
Emerging Scheme	4.2	All necessary bus planning and operational considerations to support the planning of bus priority infrastructure.
Procurement	4.3	All necessary procurement activities to support the delivery of the scheme.
Statutory Processes	5.1	All activities related to securing the necessary statutory processes.
Traffic Management Planning	5.2	The planning of temporary traffic management throughout the course of the Project.
Construction Design	5.3	The design of the scheme suitable for construction purposes
Property	5.4	All property related activities and purchases.
Mitigation Planning	5.5	Design of measures necessary to mitigate the environmental impact of the scheme.
Main Works	6.1	Construction of the scheme.
Snagging	6.2	Rectifications of defects prior to completions.
Demobilisation	6.3	All activities related to clearing the site and mothballing as required.
Handover	6.4	All activities related to handing over infrastructure to operators.
Rectifications	6.5	Rectification of defects after completion under warranty or otherwise.
Legacy	6.6	All activities associated with managing information from the project for future reference e.g. as built drawings, lessons learned, discharge of outstanding issues.

Source: GCP

11 Contract Management

The existing contracts in place for the C2C project have been established through existing frameworks and specific commercial arrangements and are all managed by CCC. These include contacts with the following advisors for technical services:

- Mott MacDonald – scheme coordination, design management, transport modelling, environmental advisors, business case development, communications and procurement advisors
- Strutt & Parker – Planning advisors
- Pinsent Mason – Legal advisors
- Bruton Knowles – Land agents

The future contracts for the scheme are yet to be determined. The options being considered for possible future contract arrangements for the design and build of the scheme as well as the operation and maintenance are set out in the Commercial Case.

12 Benefits Realisation

The justification for intervention is based on the benefits that will be achieved. Therefore, identification of the benefits of the C2C project and how they will be delivered and measured is required.

The benefits realisation plan provides a framework to ensure that the forecasted benefits can be realised and ensures they achieve the scheme objectives. The benefits have to be planned for, tracked and realised through scheme implementation.

As such the Benefits Realisation Plan must:

- Define the benefits;
- Outline the beneficiaries;
- Name responsible parties;
- Requirements to achieving benefits; and,
- Timescales of the benefit realisation.

A detailed benefits realisation plan has been produced to define how the benefits of the C2C project will be identified and measured. Table 16 provides an overview of the key benefits.

Table 16 The C2C project Benefits Realisation Plan

ID	Benefit	Objective alignment	Who benefits	Benefit owner	Key outputs/deliverables required to realise the benefit	Expected level of benefit
001	Improved accessibility to key employment and education sites within and around Cambridge City Centre	SO1 /SO2	<ul style="list-style-type: none"> Stakeholder Education establishments i.e. UoC Businesses i.e. Biomedical Campus 	<ul style="list-style-type: none"> GCP - scheme promoter 	<ul style="list-style-type: none"> Completion of C2C. Bus operators providing additional bus services using C2C. Marketing and education plan for use of C2C and best routing when travelling into and across Cambridge. 	An increase in the number of key employment centres within 30 minutes of settlements along the A428/A1303 using the core public transport network.
002	Greater access to a wider employment pool for Cambridge	SO1 /SO2	<ul style="list-style-type: none"> Businesses Stakeholder - including those living further away from Cambridge's key employment locations and those on lower incomes. 	<ul style="list-style-type: none"> GCP - scheme promoter 	<ul style="list-style-type: none"> Completion of C2C. Delivery of GCP wider transport improvements programme i.e. Western Orbital, City Centre Access, Comberton cycleway. Bus operators providing additional bus services using C2C. Marketing and education plan for use of C2C and best routing when travelling across Cambridge from the west. 	An increase in the number of the working population able to access key employment centres (City Centre, Biomedical Campus, University etc) within 30 minutes using the core public transport network.
003	Improved business to business connections	SO1 /SO2	<ul style="list-style-type: none"> Businesses UoC 	<ul style="list-style-type: none"> GCP - scheme promoter Local businesses UoC 	<ul style="list-style-type: none"> Completion of C2C. Delivery of GCP wider transport improvements programme i.e. Western Orbital, City Centre Access, Comberton cycleway. Aligned business marketing programmes to promote development of scheme and the economic benefits to businesses. <p>Marketing for future investment and development opportunities.</p>	An increase in business productivity - Increase in GVA pa within Cambridge
004	Improved business and workforce productivity	SO1	<ul style="list-style-type: none"> Businesses Stakeholder CCC / CaCC / SCDC 	<ul style="list-style-type: none"> Local businesses 	<ul style="list-style-type: none"> Completion of C2C. Marketing of C2C to potential users. 	An increase in the average level of GVA output per employee.
005	Growth of Cambridge's key employment sectors	SO1	<ul style="list-style-type: none"> Businesses Stakeholder CCC / CaCC / SCDC 	<ul style="list-style-type: none"> Local businesses UoC 	<ul style="list-style-type: none"> Completion of C2C. Aligned business marketing programmes to promote development of scheme and the economic benefits to businesses. <p>Marketing for future investment and development opportunities.</p>	An increase in employment levels within Cambridge's professional services, manufacturing and education sectors.
006	Increase in economic activity within Cambridge's retail and leisure industries.	SO1 / SO3	<ul style="list-style-type: none"> Businesses Tourist attractions Visitors Local stakeholders 	<ul style="list-style-type: none"> Retail and leisure businesses CCC / CaCC / SCDC - tourism/visitor 	<ul style="list-style-type: none"> Completion of C2C. Marketing of Cambridge retail and leisure opportunities. 	An increase in productivity of retail and leisure businesses within Cambridge

ID	Benefit	Objective alignment	Who benefits	Benefit owner	Key outputs/deliverables required to realise the benefit	Expected level of benefit
				support department		
007	Increase in the labour pool that can access employment using buses	SO1 /SO2	<ul style="list-style-type: none"> Businesses Local stakeholders - lower income 	<ul style="list-style-type: none"> GCP - scheme promoter Bus Operators 	<ul style="list-style-type: none"> Completion of C2C. Bus operators providing additional bus services using C2C. 	Increase in public transport patronage along the A428/A1303
008	Increase in the labour pool that can access employment using non-motorised transport.	SO1 /SO2	<ul style="list-style-type: none"> Businesses Local stakeholders - lower income Health organisation 	<ul style="list-style-type: none"> GCP - scheme promoter 	<ul style="list-style-type: none"> Completion of C2C. 	Increase in active modes along the A428/A1303
009	Increase in business and retail occupancy rates	SO1	<ul style="list-style-type: none"> Businesses CCC / CaCC / SCDC 	<ul style="list-style-type: none"> CCC / CaCC / SCDC - business support department 	<ul style="list-style-type: none"> Completion of C2C. Marketing for future investment and development opportunities. Aligned business marketing programme to promote development of scheme and economic benefits. 	Reduction in the number of unoccupied retail business and retail units within and around Cambridge City Centre
010	Greater network efficiency, including more efficient freight operations.	SO1	<ul style="list-style-type: none"> Businesses Freight companies Support services Emergency services 	<ul style="list-style-type: none"> CCC Highways department Freight operators 	<ul style="list-style-type: none"> Completion of C2C. Effective Integration of C2C with existing highways network - modifications to signage strategy, road markings, footpaths and to road layout. Complementary education and travel demand management programme with local businesses. 	Increase in the number of freight and support services using the A428/A1303
011	Increased attractiveness of new and future housing settlements along the A428/A1303 scheme	SO1 /SO2	<ul style="list-style-type: none"> Local stakeholders Housing developers 	<ul style="list-style-type: none"> GCP - scheme promoter Housing developers 	<ul style="list-style-type: none"> Completion of C2C. Accepted proposals for new developments. Completion of new housing. 	Land values along the A428/A1303 to appreciate at a greater rate than along other scheme within Cambridge.
012	Increased housing development opportunities along the A428/A1303 scheme enabling Local Plan housing allocations to be achieved	SO1	<ul style="list-style-type: none"> Housing developers Spatial planning 	<ul style="list-style-type: none"> CaCC / SCDC - Planning department Housing developers 	<ul style="list-style-type: none"> Accepted proposals for new developments. Reduction in congestion on A428 Engagement with housing developers. 	Increase in number of new housing units built within developments along the A428/A1303.
013	Reduction in traffic on the Strategic Road Network (M11)	SO1 / SO3	<ul style="list-style-type: none"> Local stakeholders Businesses Freight companies 	<ul style="list-style-type: none"> Highways England CCC Highways department 	<ul style="list-style-type: none"> Completion of C2C. Effective Integration of C2C with existing highways network - modifications to signage strategy, road markings, footpaths and to road layout. Complementary education and travel demand management programme with local businesses. 	Reduction in congestion on the SRN indicated by an increase in average speeds and a reduction in journey time variability

ID	Benefit	Objective alignment	Who benefits	Benefit owner	Key outputs/deliverables required to realise the benefit	Expected level of benefit
014	More reliable commuter times using buses for employment in the city centre.	SO2 / SO3	<ul style="list-style-type: none"> Local stakeholders Businesses 	<ul style="list-style-type: none"> GCP - scheme promoter 	<ul style="list-style-type: none"> Completion of C2C. 	Increase in public transport service reliability along the A428/A1303 during the peak period
015	More reliable journey times for leisure and other trips into the city centre.	SO2 / SO3	<ul style="list-style-type: none"> Local stakeholders Businesses Visitors 	<ul style="list-style-type: none"> GCP - scheme promoter 	<ul style="list-style-type: none"> Completion of C2C. 	Increase in public transport service reliability along the A428/A1303 during the off-peak period
016	Improved user experience of those travelling along the A428/A1303.	SO1 / SO2 / SO3	<ul style="list-style-type: none"> Local stakeholders Commuters Visitors 	<ul style="list-style-type: none"> GCP - scheme promoter Bus Operators 	<ul style="list-style-type: none"> Completion of C2C. Bus operator investment in new buses. 	Improvement in commuters' journey satisfaction along the A428/A1303
017	Reduction in NOx and PM10 pollution along the A428/A1303 and within Cambridge city centre.	SO3	<ul style="list-style-type: none"> Local stakeholders Visitors 	<ul style="list-style-type: none"> Bus Operators 	<ul style="list-style-type: none"> Completion of C2C. Bus operator investment in new buses. 	Reduction in measurable levels of NOx and PM10 pollution
018	Improved health and wellbeing of those living and travelling along A428/A1303.	SO3	<ul style="list-style-type: none"> Local stakeholders Visitors 	<ul style="list-style-type: none"> GCP - scheme promoter Bus Operators 	<ul style="list-style-type: none"> Completion of C2C. Bus operator investment in new buses. Supporting public realm improvements. 	Reduction in cases of reported health problems associated with traffic congestion - including respiratory and heart related illnesses
019	Enhanced connectivity to green space amenity and recreational opportunities.	SO3	<ul style="list-style-type: none"> Local stakeholders Visitors 	<ul style="list-style-type: none"> GCP - scheme promoter Bus Operators 	<ul style="list-style-type: none"> Completion of C2C. Marketing of the benefits of C2C to access green space and recreational activities. 	Increase in recreational/leisure trips along the A428/A1303
020	Reduction in accident rates along the A428/A1303.	SO3	<ul style="list-style-type: none"> Local stakeholders Visitors 	<ul style="list-style-type: none"> GCP - scheme promoter CCC Highways department 	<ul style="list-style-type: none"> Completion of C2C. Effective Integration of C2C with existing highways network 	Reduction in KSI along the A428/A1303
021	Reduction in congestion along the A428/A1303.	SO1 / SO3	<ul style="list-style-type: none"> Local stakeholders Commuters Visitors Businesses 	<ul style="list-style-type: none"> GCP - scheme promoter 	<ul style="list-style-type: none"> Completion of C2C. Effective marketing campaigns to encourage use of buses and active travel amongst local stakeholders and businesses. 	Increase in free-flowing traffic during peak periods
022	Mode shift from private car to public transport along the A428/A1303.	SO1 / SO3	<ul style="list-style-type: none"> Local stakeholders Commuters Visitors Businesses 	<ul style="list-style-type: none"> GCP - scheme promoter 	<ul style="list-style-type: none"> Completion of C2C. Effective marketing campaigns to encourage use of buses and active travel amongst local stakeholders and businesses. 	

13 Monitoring and Evaluation

Monitoring and evaluation are essential parts of any infrastructure project. It provides an opportunity to improve performance by reviewing past and current activities, with the aim of replicating good practice in the future and eliminating mistakes in future work. This section outlines the monitoring and evaluation plan for the C2C Project.

13.1 Monitoring and evaluation

The GCP has a responsibility to report on how funding is being utilised for C2C project and how its expenditure represents value for money to the taxpayer and how spending aligns with the GCP's main objectives.

The Department for Transport's (DfT) guidance 'Monitoring and Evaluation Framework for Local Authority Major Schemes'¹³ forms the basis of the monitoring strategy alongside the GCP's Assurance Framework.

The DfT guidance has been produced to provide a consistent approach to reporting a scheme's value for money and conducting review in a proportionate and targeted approach. The document sets out the requirements for the monitoring of schemes and outlines three tiers of monitoring and evaluation, these are:

- Standard monitoring
- Enhanced monitoring
- Fuller evaluation

The C2C project follows the enhanced monitoring practice as the scheme is greater than £50m in value. The project will be monitored against a set of standard measures, these can be found in Table 17. The various monitoring measures are considered in terms of the key stages of the scheme, these are:

- Inputs (i.e. what is being invested in terms of resources, equipment, skills and activities undertaken to deliver the scheme).
- Outputs (i.e. what has been delivered and how it is being used, such as roads built, bus services delivered).
- Outcomes (i.e. intermediate effects, such as changes in traffic flows, modal shifts).
- Impacts (i.e. longer-term effects on wider social and economic outcomes, such as supporting economic growth).

¹³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/9154/a-major-schemes-monitoring-evaluation.pdf

Table 17: Components of enhanced monitoring

Item	Stage	Type of Information Provided	Data Collection Timing	Rationale
Scheme build	Input	<ul style="list-style-type: none"> • Programme / project plan assessment • Stakeholder management approaches • A review of the risk register and assessment of the impacts • Assessment to determine whether the scheme is on track to deliver anticipated benefits 	During delivery	Knowledge
Delivered scheme	Output	<ul style="list-style-type: none"> • Full description of scheme outputs • Identification of any changes to the scheme since funding approval • Identification of any changes to assumptions • Assessment of whether the scheme has reached the intended beneficiaries • Identification of changes to mitigation measures 	During delivery / post opening	Accountability
Costs	Input	<ul style="list-style-type: none"> • Outturn investment costs • Analysis of risk in the elements of investment costs • Identification of cost elements with savings • Analysis for cost elements with overruns • Outturn operating costs • Outturn maintenance or other capital costs 	During delivery / post opening	Accountability
Scheme Objectives	Output/ Outcome/ Impact	<ul style="list-style-type: none"> • Identification of the main objectives 	Pre or during delivery / post opening (up to 5 years)	Accountability
Travel demand	Outcome	<ul style="list-style-type: none"> • Road traffic flows on corridors of interest • Patronage of the public transport system in the area • Counts of pedestrians and cyclists 	Pre or during delivery / post opening (up to 5 years)	Knowledge/ Accountability
Travel times and reliability	Outcome	<ul style="list-style-type: none"> • Travel times in the corridors of interest • Variability in travel times in the corridors of interest 	Pre or during delivery / post opening (up to 5 years)	Knowledge/ Accountability
Impact on the economy	Impact	<ul style="list-style-type: none"> • Travel times/ accountability changes to businesses • Employment levels and • Rental values 	Pre or during delivery / post opening (up to 5 years)	Knowledge/ Accountability
Carbon	Impact	<ul style="list-style-type: none"> • Effect of the scheme on carbon in the area of interest 	Pre or during delivery / post opening (up to 5 years)	Knowledge/ Accountability
Noise	Impact	<ul style="list-style-type: none"> • Effect of the scheme on noise levels at important receptor locations 	Pre or during delivery / post opening (up to 5 years)	Knowledge/ Accountability
Local air quality	Impact	<ul style="list-style-type: none"> • Effect of the scheme on local air quality in the area of interest 	Pre or during delivery / post opening (up to 5 years)	Knowledge/ Accountability
Accidents	Impact	<ul style="list-style-type: none"> • Effect of the scheme on traffic accidents in the area of interest 	Pre or during delivery / post opening (up to 5 years)	Knowledge/ Accountability

Source: DfT

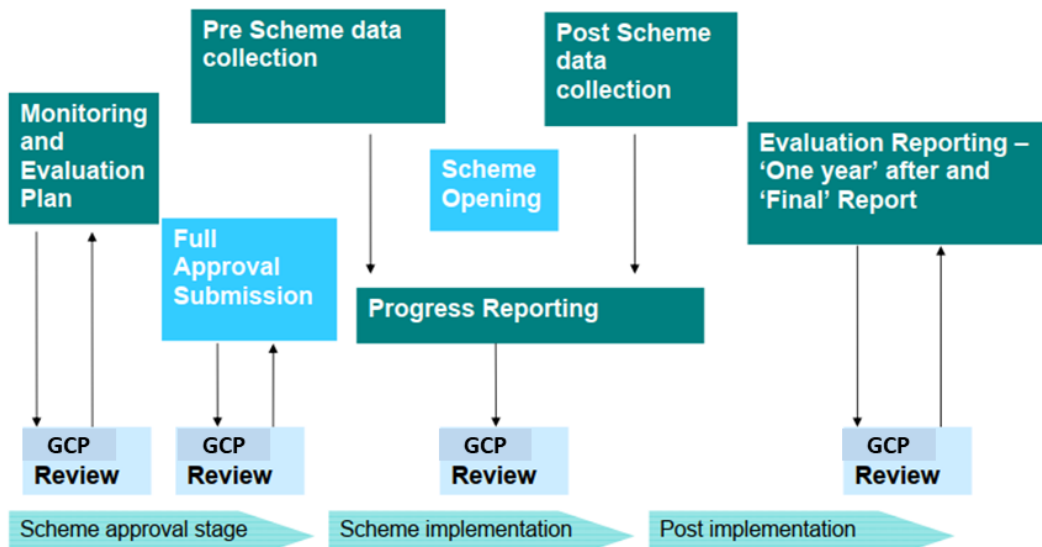
13.2 Reporting

Aligned with DfT monitoring guidance, the GCP will also follow the guidance for the engagement process. Therefore, the project will:

- Submit a detailed monitoring and evaluation plan within 3-6 months prior to full approval submission.
- Monitoring and evaluation plans will be published on the GCP website and will be available to the public.
- Provide progress reports on the evaluation process to the GCP Executive Board.
- Provide an initial report based on data collection at least one year following C2C project opening.
- Provide a final report based on 'one year after' data and data collected approximately after five years of C2C project opening and publish within six years of opening.

This process between the project and the GCP Executive Board is illustrated below in Figure 15.

Figure 15: Monitoring and evaluation engagement process



Source: Mott MacDonald – adapted based on DfT monitoring and evaluation engagement process

13.3 Resourcing

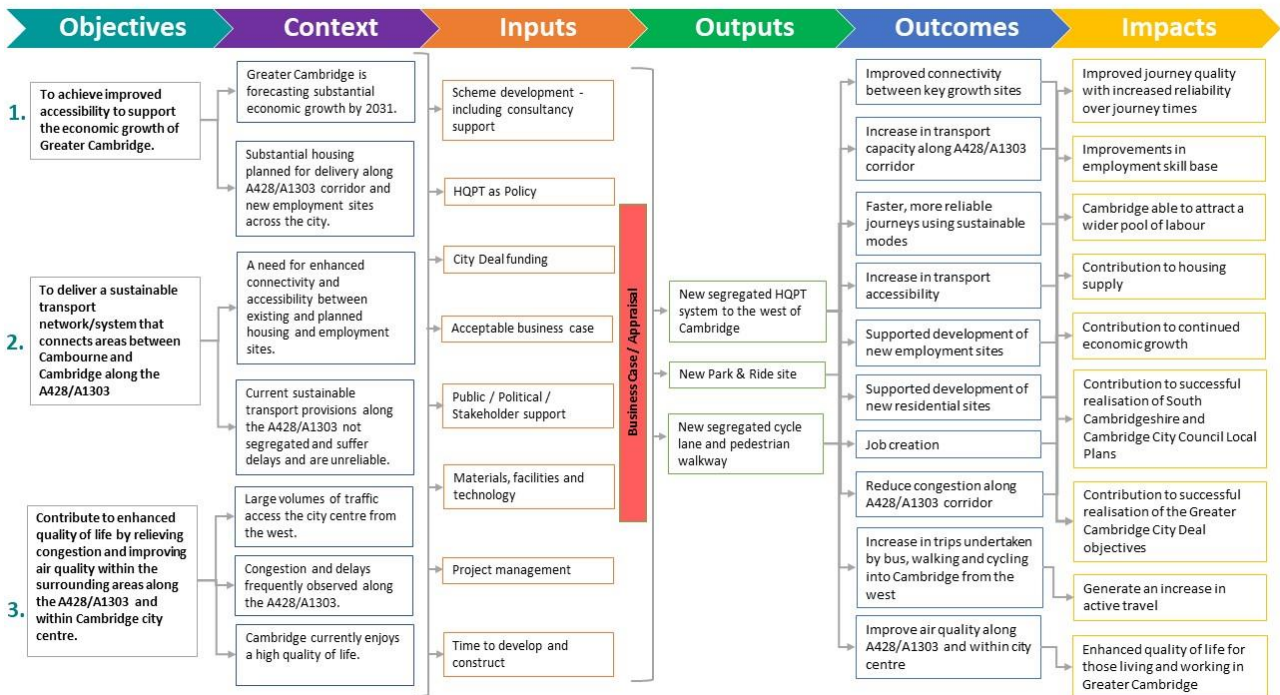
The GCP will arrange to collect and publish relevant data, comparing the conditions before and after scheme opening. A project assurance team has been included within the project structure to ensure that independent officers/consultants are available to provide scrutiny on project activities. They will provide expert advice and questioning on key decisions and undertake project auditing activities on behalf of the Project Board. The assurance team will be responsible for ensuring monitoring and auditing occurs at key project management stages.

The budget outlined for the monitoring and evaluation activities at the OBC stage for the C2C project is included in the capital cost estimations in the Financial Case, and forms part of the £9.7m project management costs. A detailed breakdown of the budget for monitoring and evaluation activity will be prepared in advance of the project's FBC submission.

13.4 Evaluation

The delivery and likely benefits of the C2C project are demonstrated below in a logic map which shows causal pathway between the objectives of the scheme to the outcomes and impacts which will address the objectives. It also shows what inputs are required to deliver the outputs that are needed to realise those outcomes and impacts.

Figure 16: C2C logic map



Source: Mott MacDonald

To evaluate the success of the scheme, and whether the objectives defined for the C2C project have been met, a comprehensive structured monitoring and evaluation plan will be developed in advance of the project progressing to FBC stage. For this OBC submission, an outline monitoring and evaluation plan has been prepared, as presented in Table 18 and Table 19

Monitoring and evaluation has been divided into two parts:

1. Monitoring of project delivery, which focuses on scheme inputs and outputs; and
2. Monitoring of the achievement of the scheme objectives, which focuses on impacts and outcomes.

The monitoring and evaluation of the project’s construction and delivery is set out in Table 18.

Table 18: Monitoring of project delivery (inputs and outputs)

Aspect of project delivery	Method of monitoring	Timeframe	Responsibility
Delivery of C2C to timeframe	<ul style="list-style-type: none"> • Programme/project plan assessment • Review of risk register and assessment of impacts • Project review during scheme design and build. • Site inspections 	Ongoing throughout delivery and construction	Greater Cambridge Partnership
Delivery of C2C to budget	<ul style="list-style-type: none"> • Programme/project plan assessment • Identification of any changes to assumptions • Analysis of risk in the elements of costs. • Project review during scheme design and build • Site inspections 	Ongoing throughout delivery and construction	Greater Cambridge Partnership
Delivery of C2C to specification	<ul style="list-style-type: none"> • Programme/project plan assessment • Review of risk register and assessment of impacts • Project review during scheme design and build • Site inspections 	Ongoing throughout delivery and construction	Greater Cambridge Partnership

Source: Mott MacDonald

Table 19 shows how the scheme objectives and related enabling objectives, (which are effectively non-target based outcomes) will be measured. Each enabling objective has a performance indicator which acts as a proxy for the success of the scheme. The methodology for the associated data collection is also listed.

Table 19: C2C outline monitoring and evaluation plan: achieving objectives

Objective	Enabling objective / outcome	Performance indicator	Methodology	Timing	Responsibility
To achieve improved accessibility to support the economic growth of Greater Cambridge.	Support the delivery of new housing and job creation through the provision of High Quality Public Transport (HQPT) that serves current and future housing sites along the A428/A1303, including Cambourne and Bourn, and employment sites within and around Cambridge city centre.	<ul style="list-style-type: none"> Number of new homes built at Cambourne West and Bourn Airfield development sites Number of jobs created 	<ul style="list-style-type: none"> New homes count using Local Authority Annual Monitoring Reports Business surveys Ex-post economic impacts study of impact of scheme, including for example land use surveys and land value change assessments 	Post opening (up to 5 years)	Greater Cambridge Partnership
	Provide additional capacity during the peak periods to meet forecasted growth in demand along the A428/A1303.	<ul style="list-style-type: none"> A percentage increase in capacity between Cambourne and Cambridge along the A428 / A1303 during the AM and PM peak 	<ul style="list-style-type: none"> Trafficmaster data analysis Traffic counts HQPT patronage data from relevant operator(s) 	Pre or during delivery / post opening (up to 5 years)	Greater Cambridge Partnership
	Does not impede existing road traffic, resulting in a growth in delays for highway trips along the A428/A1303.	<ul style="list-style-type: none"> Maintain or reduction in traffic delay along A428/A1303 Maintain or reduction in queue lengths at pinch points 	<ul style="list-style-type: none"> Trafficmaster data analysis Pre & post implementation queue lengths 	Pre or during delivery / post opening (up to 5 years)	Greater Cambridge Partnership
	Improve connectivity on part of the Oxford-Cambridge Arc.	<ul style="list-style-type: none"> A percentage reduction in travel times when travelling between the Cambourne to Cambridge section of the Oxford-Cambridge Arc 	<ul style="list-style-type: none"> Trafficmaster data analysis 	Pre or during delivery / post opening (up to 5 years)	Greater Cambridge Partnership
To deliver a sustainable transport network/system that connects areas between Cambourne and Cambridge along the A428 / A1303.	Improve connectivity into Cambridge using sustainable modes of transport such as walking, cycling, and HQPT.	<ul style="list-style-type: none"> Increase in rates of active travel between Cambourne and Cambridge Increase in frequency of HQPT services between Cambourne and Cambridge A percentage increase in HQPT capacity between Cambourne and Cambridge along the A428 / A1303 	<ul style="list-style-type: none"> Active travel surveys Non-motorised user counts Count of HQPT services during AM and PM peak HQPT patronage data from relevant operator(s) 	Pre or during delivery / post opening (up to 5 years)	Greater Cambridge Partnership
	HQPT that offers peak journey times that are equal to or less than the equivalent journey by car.	<ul style="list-style-type: none"> HQPT peak AM and PM journey times equal to or less than peak AM and PM journey times by car 	<ul style="list-style-type: none"> Trafficmaster data analysis - analysis of HQPT journey times between Cambourne and Cambridge 	Pre or during delivery / post opening (up to 5 years)	Greater Cambridge Partnership

Objective	Enabling objective / outcome	Performance indicator	Methodology	Timing	Responsibility
	HQPT frequency during the peak periods of six Public Transport Vehicles or more an hour.	<ul style="list-style-type: none"> HQPT frequency during the AM and PM peak periods of six Public Transport Vehicles or more an hour 	<ul style="list-style-type: none"> Count of HQPT services during AM and PM peak Analysis of HQPT arrival and departure times 	Pre or during delivery / post opening (up to 5 years)	Greater Cambridge Partnership
	End to end journey time reliability better than the car alternative journeys.	<ul style="list-style-type: none"> Higher levels of HQPT journey time reliability between Cambourne and Cambridge than journey time reliability by car 	<ul style="list-style-type: none"> Trafficmaster data analysis Analysis of HQPT arrival and departure times using automatic vehicle location data 	Pre or during delivery / post	Greater Cambridge Partnership
	HQPT offering improved waiting and in-vehicle environments that are comparable to Cambridge's existing Guided Busway.	<ul style="list-style-type: none"> Higher levels of passenger satisfaction for public transport services between Cambourne and Cambridge than on Cambridge's existing Guided Busway 	<ul style="list-style-type: none"> Passenger satisfaction surveys 	Pre or during delivery / post opening (up to 5 years)	Greater Cambridge Partnership
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.	Improve the attractiveness of sustainable modes of travel as an alternative to using cars, leading to an increase in their mode share.	<ul style="list-style-type: none"> Percentage increase in proportion of journeys undertaken by active travel and on public transport services between Cambourne and Cambridge versus proportion of journeys undertaken in private vehicles 	<ul style="list-style-type: none"> Active travel surveys Non-motorised user counts HQPT patronage data for relevant operator Pre & post implementation ATC counter Passenger satisfaction surveys 	Pre or during delivery / post opening (up to 5 years)	Greater Cambridge Partnership
	Supports Cambridge in achieving continued economic growth whilst retaining the high quality of life and place associated with the city.	<ul style="list-style-type: none"> Increase in business occupancy rates and business start-ups in West Cambridge and Cambourne Increase in number of jobs created Reduction in vehicular emissions along A428/A1303 between Cambourne and Cambridge Reduction in traffic delay and queue lengths at pinch points along A428/A1303 between Cambourne and Cambridge 	<ul style="list-style-type: none"> Business counts Business surveys Ex-post economic impacts study of impact of scheme, including for example land use surveys and land value change assessments Pre & post air quality monitoring using air quality measurement facilities Trafficmaster data analysis Pre & post implementation queue lengths 	Pre or during delivery / post opening (up to 5 years)	Greater Cambridge Partnership
	Introducing improvements which enhance levels of safety for cyclists and pedestrians and promote a healthier life style.	<ul style="list-style-type: none"> Percentage increase in active travel between Cambourne and Cambridge Reduction in highways accidents involving cyclists and pedestrians 	<ul style="list-style-type: none"> Active travel surveys Non-motorised user counts Assessment of road traffic collisions 	Pre or during delivery / post opening (up to 5 years)	Greater Cambridge Partnership

Objective	Enabling objective / outcome	Performance indicator	Methodology	Timing	Responsibility
		between Cambourne and Cambridge			

