MOTT MACDONALD

# Cambridge South East Transport Phase 2

## Outline Business Case - Management Case

15 May 2020

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# Glossary of Terms

**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).

**Assumption:** A statement which is not yet known to be true. It can be a bridge in the planning process to answer an uncertainty, and to allow scope and plans to be developed

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

**CaCC**: Cambridge City Council

**CCC:** Cambridgeshire County Council

**Cambridge 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.

**Controls:** Risk response activities that are undertaken as business as usual. These are identified as an aide-memoire, to draw attention to the purpose and aim of standard procedures and drive appropriate focus. Typically, controls will not incur any additional cost to delivery.

**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.

**Department of Transport (DfT):** is a ministerial department, supported by 24 agencies and public bodies that plans and invests in transport infrastructure in the UK.

**Dependency:** An activity or activities which cannot be undertaken or completed until another scope of work has completed or reached a defined stage or point.

**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).

**Emerging Scheme:** The best performing route alignment option for CSET phase 2 based on assessment to date.

**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.

**Exclusion:** An activity or product that has been specifically removed or omitted from the scope of work for the defined project.

**Fall-backs:** Contingency actions taken in response to a risk impact. Generally, risks that are tolerated should have fall-back actions identified, as should significant risks that are being treated, where the treatment has a significant likelihood of not fully mitigating the risk.

**Full Business Case (FBC):** The culmination of the three-stage business case process is the Full Business Case. This follows on from initial exploratory work to establish the strategic need for intervention in the Strategic Outline Business Case and the optioneering and appraisal work undertaken in the Outline Business Case. Generally, 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, however as funding and powers for transport investment have been devolved to the Greater Cambridge Partnership (GCP) as part of the Greater Cambridge City Deal, the decision to implement the scheme resides with GCP.

**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.

**Issue:** A significant unanticipated event, or a risk which has impacted or has a >99% likelihood of occurrence, that affects the achievement of the project objectives.

**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 occur 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.

**Nomis:** A service provided by the Office for National Statistics, ONS, that provides free access to the most detailed and up-to-date UK labour market statistics from official sources.

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

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

**Prince 2: PR**ojects **IN C**ontrolled **E**nvironments is a process-based method for effective project management, used extensively by the UK Government. It adopts a product-based planning approach to project management with emphasis on dividing projects into manageable and controllable stages.

**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 and soil assets that make up the cultural heritage of an area.

**Risk (Threat):** An uncertain event or set of circumstances that, should it occur, will have an adverse effect on the achievement of the objectives of the project.

**Risk (Opportunity):** An uncertain event or set of circumstances that, should it be exploited, will have a positive effect on the achievement of the objectives of the project.

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

**Social and Distributional Impacts (SDI):** considers the variance of transport intervention impacts across different social groups.

**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.

**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.

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

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

**Tranquillity:** A state of calm or quiet.

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

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

**Uncertainty:** A condition where the outcome can only be estimated.

**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 Benefits (WEBs):** improvements in economic benefits that are acknowledged, but which are not typically captured in traditional transport cost-benefit analysis.

# 1 Introduction

The Management Case is one of the five cases that form the DfT's Transport Business Case process. The Management Case assesses whether a proposal is deliverable. It tests the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance (e.g. a Gateway Review).

The other four cases which make up the Transport Business Case Process are:

- The **Strategic Case** which determines whether an investment is needed, either now or in the future. It demonstrates the case for change – that is, a clear rationale for making the investment and its strategic fit – how an investment will further the aims and objectives of the organisation. The Strategic Case is presented in document 403394-MMD-BCA-00-RP-BC-0247.
- The **Economic Case** which assesses options to identify all their impacts, and the resulting value for money, to fulfil Treasury's requirements for appraisal and demonstrating value for the taxpayers' money. The Economic Case is presented in document 403394-MMD-BCA-00-RP-BC-0292.
- The **Financial Case** which outlines the affordability of the preferred option, its funding arrangements and technical accounting issues. The case also presents the financial profile of the preferred option and an overview of how the scheme will be funded. The Financial Case is presented in document 403394-MMD-BCA-00-RP-BC-0293.
- The **Commercial Case** which provides evidence on the commercial viability of a proposal and the procurement strategy that is used to engage the market. It presents evidence on risk allocation and transfer, contract timescales and implementation timescale as well as details of the capability and skills of the team delivering the project. The Commercial Case is presented in document 403394-MMD-BCA-00-RP-BC-0231.

The following is the Management Case for Phase 2 of the Cambridge South East Transport (CSET) project.

## 1.1 Approach to the Development of the Management Case

The DfT guidance document, 'The Transport Business Case: Management Case', outlines the areas that should be covered in the Management Case and these have been used to structure the development of this section of this Outline Business Case (OBC) for the preferred option package for Phase 2 of the CSET project. The DfT requirements are set out in Table 1.1 below together with the relevant sections of this document where they can be found.

**Table 1.1: DfT Requirements for the Management Case at OBC Stage**

| Content | DfT Requirements | Section Number and Title |
|---|---|---|
| Introduction | Outline the approach taken to assess if the proposal is deliverable. | 1. Approach to Development of the Management Case |
| Evidence of similar projects | If possible, provide evidence of similar projects that have been successful, to support the recommended project approach. If no similar project approach. If no similar projects are available for comparison, outline the basis of assumptions for delivery of this project e.g. comparison with industry averages for | 2. Evidence of Similar Projects |

| Content | DfT Requirements | Section Number and Title |
|---|---|---|
| | this kind of work | |
| Project dependencies | Set out deliverables and decisions that are provided/received from other projects. | 3. Project Dependencies |
| Governance, organisational structures & roles | Describe key roles, lines of accountability and how they are resourced. | 4. Governance |
| Assurance & approvals plan | Plan with key assurance and approval milestones. | 5. Project Management<br>7. Assurance and Approvals Plan |
| Project plan | Plan with key milestones and progress, including critical plan. | 6. Project Plan<br>8. Delivery Programme |
| Risk management strategy | Arrangements for risk management and its effectiveness so far. | 9. Risk Management Strategy |
| Communications and stakeholder management | Development communications strategy for the project. | 10. Communications and Stakeholder Management |
| Project reporting | Describe reporting arrangements. | 5.4 Project Status Report<br>9.4.4 Risk Reporting<br>12.1 Monitoring and Evaluation Reporting |
| Benefits realisation plan | Set out approach to managing realisation of benefits. | 11. Benefits Realisation |
| Monitoring and evaluation | Summarise outline arrangements for monitoring and evaluating the intervention. | 12. Monitoring and Evaluation |
| Options | Summarise overall approach for project management at this stage of the project. | 13. Summary |

Source: DfT

# 2 Evidence of Similar Projects

As a relatively new consortium, the GCP have delivered a limited number of schemes within the current City Deal. However, the constituent members of the GCP have a long history of successfully delivering schemes both large and small in scale, to time and budget.

Cambridgeshire County Council (CCC) in particular have delivered a number of large-scale transport projects across the County in recent years which are described below in Table 2.1. The successful delivery of these projects demonstrates CCC's ability and experience in relation to major infrastructure projects and ultimately GCP's capability to ensure successful scheme delivery. This valuable experience has not been without challenges, but these have provided valuable learning in the planning and delivery of future projects including CSET Phase 2.

**Table 2.1: Similar Projects to A1307 CSET Phase 2**

| Project | Description | Cost |
|---|---|---|
| **The Cambridge Core Traffic Scheme** | This scheme delivered improved access for pedestrians, cyclists and public transport through traffic management and priority measures in the area bounded by the inner ring road.<br>Delivery of this project demonstrates an ability of the promoters to think about the full impacts of a public transport scheme.<br>The measures were implemented in phases from 1997, promoting sustainable travel modes to improve the city centre environment. 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. | £6.9m[1] |
| **Milton Park & Ride** | 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.<br>The scheme was completed within just two years from the planning application being submitted in October 2006, with construction commencing in Summer 2007 and the site opening in Spring 2008.<br>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. | £3.1m |
| **The Addenbrooke's Access Road** | 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.<br>The route provides access to the expanding hospital and Biomedical Campus, together with development on the Cambridge Southern Fringe, and reduces traffic in the Trumpington area, and on Long Road. The scheme was completed in October 2010. | £24m |

[1] 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 |
|---|---|---|
| **The Cambridgeshire Guided Busway** | 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 & Ride to the south of Cambridge.<br>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.<br>Construction began in July 2006 with the busway opened in August 2011.<br>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. | £150m[2] |
| **Longstanton and St Ives Park & Ride** | Two Park & Ride sites were constructed in 2011 alongside the Cambridgeshire Guided Busway, providing connectivity to Cambridge and Huntington. These sites have been a success in intercepting traffic and have both also increased beyond their first built capacity.<br>The Longstanton Park and Ride Site now provides 350 parking spaces. St Ives Park and Ride has capacity for 1,000 vehicles. Covered cycle parking is also provided at both sites.<br>In addition to the number of spaces being increased as a result of the scheme's 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 7-8 minutes (eight services per hour). | Estimated at £9m for both sites[3]. |
| **The Ely Southern Bypass** | This bypass is a single carriageway highway, connecting the A142 at Angel Drove to Stuntney Causeway. Recently constructed, the Bypass was opened to traffic on 31 October 2018 and the bridge walkway opened three months later in January 2019.<br>The scheme includes bridges over the railway line and the River Great Ouse and its floodplains. It will relieve heavy traffic around Ely station, remove the need for heavy goods vehicles to use the railway level crossing, and avoid a low bridge with a history of vehicle strikes. | £43m |

Source: DfT

When considering the experience outlined in Table 2.1, CCC has shown its ability to deal with a variety of major issues and has demonstrated experience in key areas important to the delivery of Phase 2 of the CSET project. The key issues relevant to CSET include:

- Dealing with statutory permissions and legal procedures, especially the Transport and Works Act Order (TWAO) process, which Cambridgeshire County Council followed to secure delivery of the Cambridgeshire Guided Busway;
- Establishing and maintaining relationships with the relevant statutory agencies involved in the delivery of major infrastructure schemes;
- Delivering schemes that are shown to generate economic growth and then putting in place programmes of work to maximise that economic opportunity;
- Engaging extensively with the public and relevant stakeholders, ensuring wide dissemination and understanding of information;
- Experience of running a procurement exercise and selecting a suitably qualified contractor;
- Negotiating, acquiring and assembling land required for scheme delivery through a variety of different mechanisms; and
- Designing and delivering major civil engineering projects.

[2] This is the total cost of the Cambridgeshire Guided Busway and include £109m contribution from CCC.

[3] This is an estimate as the costs were part of a wider package of Busway costs

# 3 Project Dependencies

CSET forms part of the GCP's wider strategy working with partners to create better and greener transport networks. To realise Phase 2 of CSET, a set of project dependencies have been produced in Table 3.1 below, these relate to items outside of the Phase 2 project team's control and upon which progression or completion of the scheme depends:

**Table 3.1: CSET Phase 2 Project Dependencies**

| Dependency | Possible Scheme Impacts |
|---|---|
| **Delivery of expanded/new employment sites** | The strategic case for the CSET project is largely part built around the need to improve connectivity to key employment locations within Greater Cambridge in line with their planned growth. If planned growth and expansion at these sites does not materialise then the need for CSET Phase 2 is reduced. |
| **Emerging CPCA Policy and Cambridgeshire Autonomous Metro (CAM)** | CSET Phase 2 must be cognisant of future emerging policy and therefore will need to be reviewed against the adopted version of the new Local Transport Plan[4] and any future transport system proposals for Cambridge in order to ensure it continues to be aligned with both current and emerging policy. In developing CSET Phase 2 the project will seek to agree design requirements with the CAM project that will enable the CSET Phase 2 project to be developed in a way that, as far as practically possible, provides futureproofing for CAM. This is particularly pertinent as the CSET Phase 2 scheme, alongside the Cambourne to Cambridge project, make up the first phase of infrastructure for the larger CAM network.<br>Cambridgeshire has now produced a Transport Delivery Plan (TDP) which provides a forward look at all planned highway and transport capital schemes on the local network to be delivered on a three-year time frame. CSET Phase 2 features in the Transport Investment Plan (TIP) scheme list which has been developed alongside the TDP to identify schemes to support growth. |
| **City Access Strategy** | In order to provide improved end to end connectivity between settlements along the A1307 and employment sites along the corridor and within the city centre, CSET Phase 2 will to some degree rely 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.<br>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, therefore making the Travel Hub attractive and successful. In addition, the removal of traffic from the city centre will help create additional demand for the facility. |
| **Whittlesford Rural Travel Hub** | Rural Travel Hubs are small, flexible transport interchanges at key locations in South Cambridgeshire, allowing more people to access sustainable transport networks. The Whittlesford Rural Travel Hub would include a larger car park at Whittlesford Parkway station.<br>Improvements to connectivity along the A1307 corridor as a result of Phase 2 could encourage demand at Whittlesford Rural Hub as well as at the new CSET Travel Hub as individuals travelling to Cambridge from the south east could utilise parking facilities at either location. It is possible that the Whittlesford site may attract some of the potential users of the CSET Travel Hub and route and negatively impact utilisation. |
| **Cambridge South Station** | The proposed new rail station at Cambridge South aims to improve connectivity between the growing Biomedical Campus and international gateways, to reduce reliance on Cambridge station for travel to the southern fringe, and to improve sustainable transport access into the Southern Fringe.<br>The proposed Cambridge South Station will further improve the public transport offer of south Cambridge but may attract some of the potential users of the CSET Travel Hub and negatively impact scheme utilisation. |

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

| Dependency | Possible Scheme Impacts |
|---|---|
| **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 CSET Phase 2 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 CSET Phase 2 will be driven by technological advances and the range of solutions available at the procurement stage. |
| **CPCA Strategic Bus Review** | The outcome of this review, which can be sourced at https://cambridgeshirepeterborough-ca.gov.uk/assets/Uploads/Strategic-Bus-Review2.pdf, and recommends development of a business case comparison of alternative delivery models, including both Enhanced Partnership and Franchising of the bus network, will influence selection of the preferred model for the procurement and operation of the HQPT services to be delivered as part of the CSET Phase 2 project. |

Source: Mott MacDonald/GCP

# 4 Project Governance

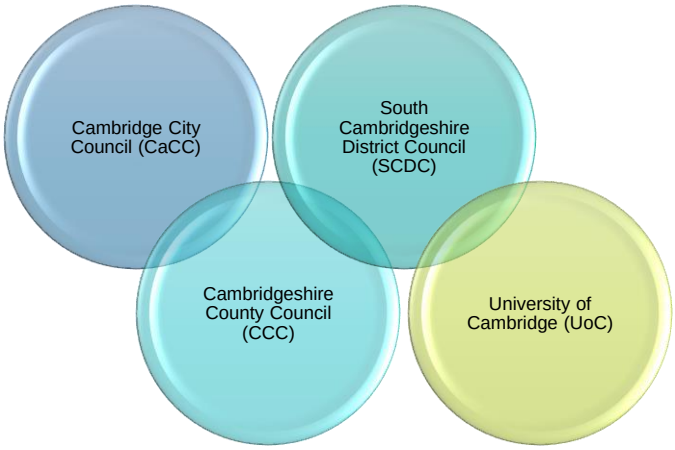
This section outlines the organisational structure and roles and responsibilities for project governance.

## 4.1 Strategic Management

CSET Phase 2 is being promoted and managed by the GCP, the delivery body for the Cambridge City Deal with central Government. With specific reference to transport, the GCP seek to deliver better, greener transport which will connect people to homes, jobs, study and opportunity.

The GCP is made up of representatives of several organisations as shown in Figure 4.1 plus a Business Representative. The partnership of councils, business and academia seeks to work together to grow and share prosperity and improve quality of life for the people of Greater Cambridge.

**Figure 4.1: GCP Representative Organisations**




Source: Mott MacDonald

The GCP operates as a Joint Assembly, 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 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 Executive Board by submitting questions to be discussed in public during these meetings.

It should also be noted that the Greater Cambridge and Greater Peterborough Local Enterprise Partnership (LEP), which were previously represented independently on the GCP Executive Board, joined the Combined Authority in September 2018. Now known as the Business Board, the LEP committee advise on strategy development and decision making relating to the

Combined Authority area[5]. The GCP Executive Board includes a nominated business representative.

## 4.2 GCP Executive Board

The Executive Board is made up of five partners; one representative from each of the four City Deal partners plus the Business Representative.

While the law governing Joint Committees only allows the three local authority representatives voting rights, they consider the advice of the Combined Authority's Business Board and University of Cambridge representatives, to make sure decisions take account of the views of the business and academic sectors.

## 4.3 GCP Joint Assembly

The Board is advised and informed by a Joint Assembly (which is an example of a Joint Committee of multiple Local Authorities). The Joint Assembly 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 Combined Authority's Business Board and University of Cambridge also each nominate three representatives, as stakeholders from a range of organisations within the business and academic sectors.

## 4.4 Transport Projects Board and Programme Manager

The GCP Transport Projects Board is responsible for governing all major transport schemes being delivered as part of the City Deal[6].

The purpose of the Board is to:

- Provide visible governance;
- Advise on decisions before they go to the GCP Executive Board or on major but non-key decisions;
- Guide the Project Manager in developing proposals to meet the agreed objectives;
- Review the proposals and challenge solutions on impact, benefits and value for money; and
- Act as a sounding board for concepts and ideas.

The membership of the Transport Projects Board is set out in Table 4.1 below.

**Table 4.1: Transport Projects Board Membership**

| Role | Named Member (as of October 2019) |
|---|---|
| **Executive** | Peter Blake (CCC) |
| **Senior Supplier** | Eddie Mellor (Mott MacDonald) |
| **Senior User** | Andrew Preston (CCC) |
| **Finance** | Sarah Hayward (CCC) |
| **Programme Manager** | Debbie Bondi/Andrew Munro |
| **Project Managers** | For projects in scope |

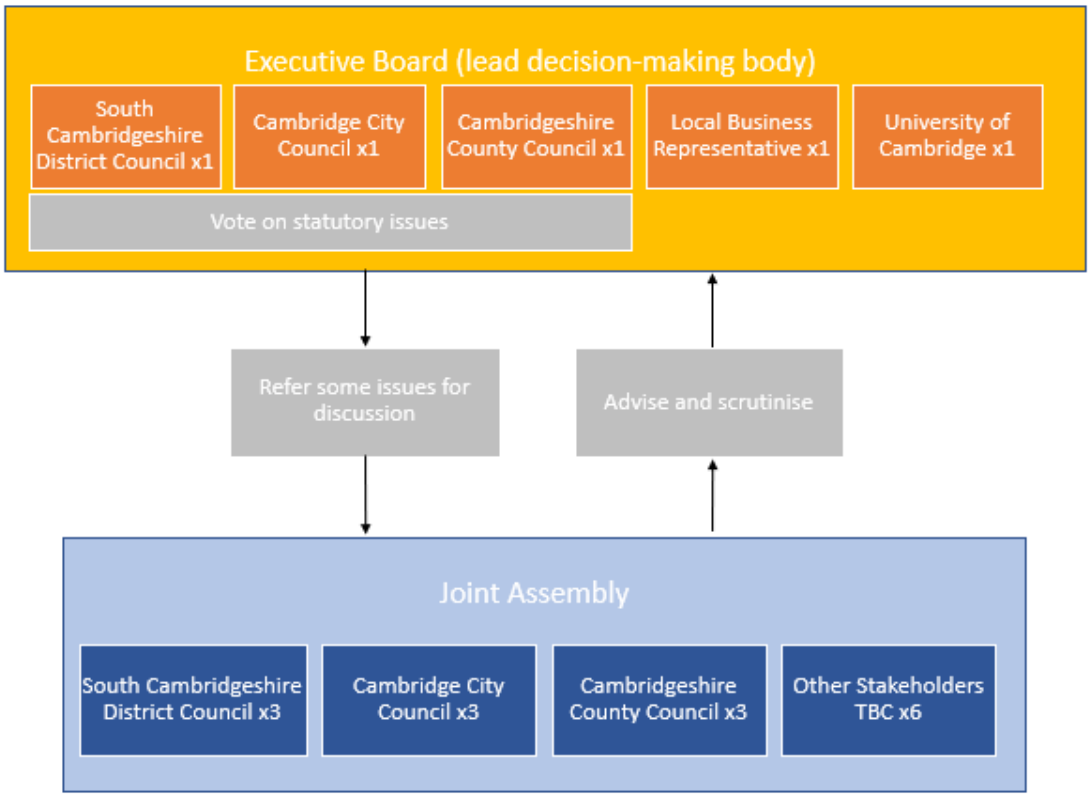
Source: Mott MacDonald/GCP

[5] http://cambridgeshirepeterborough-ca.gov.uk/business-board [Accessed 10/06/19]

[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

Figure 4.2 illustrates the strategic governance arrangements for the project within GCP. The Executive Board consists of the Leader, or equivalent, of each of the partner organisations as the key decision-making group. There will also be a 15-person Assembly with appropriate representation from the Local Authorities and other stakeholders, which will play an advisory and scrutiny role.

**Figure 4.2: GCP Strategic Governance Structure**




Source: Mott MacDonald

## 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 Combined Authority (CA) 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 a multi-year devolved transport budget;
- Responsibility for an identified key route network of local authority roads, and
- Responsibility for the development and delivery of the Local Transport Plan.

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 is therefore responsible for producing the updated Local Transport Plan and for the development of all future transport strategies for the CPCA area. The CPCA published a first draft Cambridgeshire and Peterborough Local Transport Plan (CPLTP) in June 2019. Following consultation, a final version was adopted in February 2020.

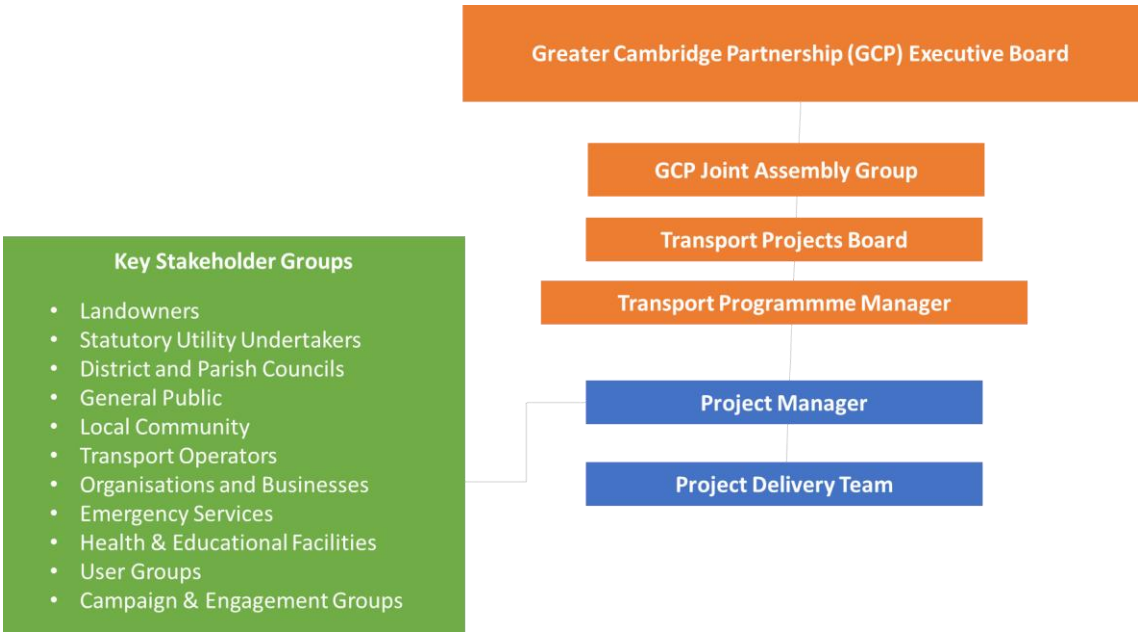
Given the over-arching transport role of the CPCA, there is a need for GCP and CPCA to collaborate closely on transport priorities and delivery programmes to ensure successful coordination and integrated delivery.

# 5 Project Management

## 5.1 Project Level Management

Delivery of the CSET Phase 2 project will be managed in accordance with the structure outlined in Figure 5.1. The organogram outlines the structure and reporting relationships of the various groups at both strategic and project management levels.

**Figure 5.1: Project Level Governance Structure**




Source: GCP/Mott MacDonald

The strategic management levels, highlighted above in orange, have been described in detail in Sections 4.2 to 4.4. Technical issues are addressed by the CSET Phase 2 Project Delivery Team, overseen by the appointed Project Manager, as highlighted in blue. These are described below, and the specific roles of both strategic and project level management are summarised in Table 5.1.

## 5.2 Project Manager and Project Delivery Team

The CSET Phase 2 Project Delivery Team is accountable to the Transport Projects Board and ultimately the GCP Executive Board. It is the Project Delivery team who will manage the delivery of CSET Phase 2. The Project Management Team will be responsible for the day to day delivery of the scheme and will ensure technical and financial control.

The 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; and
- Land and Compulsory Purchase Orders.

The CSET Phase 2 Delivery Team structure is illustrated in Figure 5.2 below:

**Figure 5.2: CSET Phase 2 Delivery Team Structure**


Source: GCP/Mott MacDonald

The roles and responsibilities of strategic and project level management are summarised in Table 5.1 below.

**Table 5.1: CSET Governance Roles**

| Management Level | Function |
|---|---|
| Greater Cambridge Partnership (GCP) Executive Board | The key decision-making group. Overall strategic direction of the City Deal programme and overall scope of projects aligned with GCP aims and local and national policy. Leader from each partner organisation. Members of the public can participate in meetings, posing questions to be discussed in public. |
| 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. |
| Transport Projects 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. |
| Project Manager | Overall control of each element of the project. Senior representative from each partner organisation. |
| Project Delivery Team | Day to day management of each project and delivery of technical work streams. Leads project team. |

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 for the project. 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 terms of reference and state that all Local County, District and Parish Members on the route are to be invited and that the LLF does not make decisions but can make suggestions.

## 5.4 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.

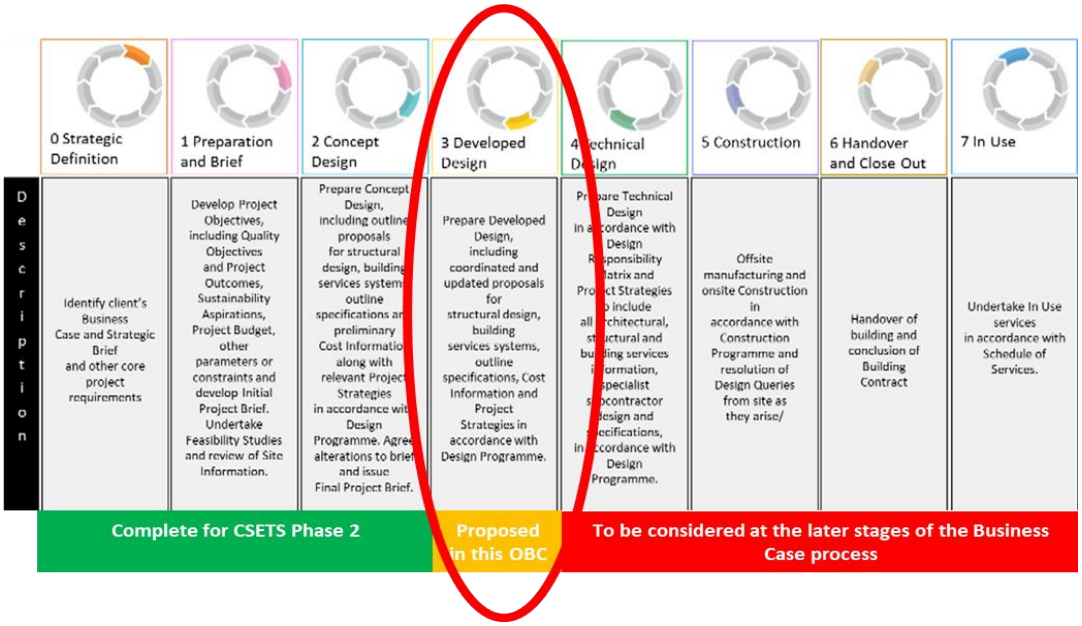
The following is the format of the Project Status Report:

- 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 Project Plan

Figure 6.1 illustrates the RIBA (Royal Institute of British Architects) work stages. CSET is currently at RIBA Stage 3.

**Figure 6.1: RIBA Work Stages**




Source: Mott MacDonald

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 6.2.

From Figure 6.2 it can be seen that development of the OBC aligns with the Feasibility Phase of the GCP Key Decision Framework and Stage 2 of the DfT WebTAG Business case process. Work contained within this OBC is intended to allow CSET Phase 2 to successfully reach GCP's Key Decision Point 4 (approval of preferred option design) and progress to the Decision Phase.

## Figure 6.2: GCP Key Decision Framework

| Major Infrastructure Project Development Key Phases | RESEARCH PHASE | GATEWAY | RESEARCH PHASE | GATEWAY | FEASIBILITY PHASE | GATEWAY |
|---|---|---|---|---|---|---|
| | Policy/ Local transport plan (LTP3), Strategic Studies/ Engagement | 1 | Initial Options | 2 | Consultation on Initial Options | 3 |
| | Strategy Stage | Key Decision | Delivery Stage | Key Decision | Delivery Stage | Key Decision |
| Delivery Stage/ Executive Key Decision | SS0 | EKD1 | DS1 | EKD2 | DS2 | EKD3 |
| | Policy & Strategy | Approval of Project Scope | Project Set Up / Initial Options | Approval to consult on initial options | Feasibility Study | Approval to design and consult on preferred option(s) |
| Definition | 1. Development of a scope which sets out:<br>the issues & problems the scheme will address, wit past lessons learnt, together with outline costs and potential funding sources.<br>2. Identify:<br>the objectives/ approach<br>Governance/ decision stream<br>Exec key decision stages<br>key stakeholders,<br>key opportunities<br>and key risks.<br>3. Hold a resources meeting using the agreed PID/ Agree QAA project team | ***Document Checklist***<br>1. Project Scope<br>2. Project Initiation Document (PID)<br>3. Project Management Plan<br>4. Initial Budget Estimate<br>5. Initial Risk Register<br>6. Communications Plan<br>7. Draft Business Case<br>8. Quality assurance audit (QAA) Resources plan | 1. Transport modelling,<br>2. Conceptual design,<br>3. Initial engagement with stakeholders & initial options to take forward to first round public consultation.<br>4. Data collection and analysis,<br>5. environmental constraints mapping,<br>6. identify land requirements.<br>7. Route or other intitial options development,<br>8. high level transport and environmental assessment.<br>9. Public consultation planning.<br>10. QAA Options workshop | ***Document Checklist***<br>1. Scheme Definition Report:<br>Consents strategy,<br>Land strategy,<br>Options strategy,<br>Modelling strategy,<br>Procurement strategy.<br>2. Initial Options Report Plan<br>3. Public Consultation<br>4. Budget Estimate<br>5. Communications Plan<br>6. Quality assurance audit | 1. Public and stakeholder consultation on initial options<br>2. Analysis of feedback and identification of shortlist options,<br>3. Technical appraisal,<br>4. Environmental assessment,<br>5. Traffic assessment<br>6. Public consultation planning.<br>7. Strategic Outline Business Case (SOBC)<br>8. QAA Feasilbility workshop | ***Document Checklist***<br>1. Strategic Outline Business Case<br>2. Options Appraisal Report (OAR)<br>3. Public Consultation Plan<br>4. Communications Plan<br>5. Budget Estimate<br>6. Quality assurance audit |

| Major Infrastructure Project Development Key Phases | FEASIBILITY PHASE | GATEWAY | DECISION PHASE | GATEWAY | BUILD PHASE | END PHASE | MAINTENANCE |
|---|---|---|---|---|---|---|---|
| | Options Development & Consultation on Options | 4 | Develop Preferred Option | 5 | Delivery Programme | | |
| | Delivery Stage | Key Decision | Delivery Stage | Key Decision | Delivery Stage | Post Project | |
| Delivery Stage/ Executive Key Decision | DS3 | EKD4 | DS4 | EKD5 | DS5 | | |
| | Preliminary Design | Approval of preferred option design | Detailed Design | Approval of project implementation | Construction (Mobilisation and Construction) | Key Documents | Maintenance |
| Definition | 1. Public consultation on feasible options and analysis leading to preferred option selection.<br>2. Further stakeholder consultation.<br>3. Value Engineering.<br>4. Further preliminary design of preferred option,<br>5. Traffic assessment,<br>6. Environmental assessment leading to Outline Business Case for preferred option.<br>7. Road Safety Audit Stage 1<br>8. Build ability<br>9. Design sufficient for planning.<br>10. Prepare planning application & statutory consents.<br>11. Early Contractor Involvement.<br>12. QAA Prelim design workshop | ***Document Checklist***<br>1. Public Consultation Report<br>2. Preferred Options Report<br>3. Outline Business Case<br>4. Communications Plan<br>5. Procurement Plan<br>6. Budget Estimate<br>7. Land identification schedule<br>8. Approve land acquisition<br>9. Quality assurance audit | 1. Development of preferred option for: environmental impact assessment, land referencing, land requirements, accommodation works, property cost estimates.<br>2. Negotiations with landowners and stakeholders.<br>3. Planning Application, Orders,<br>4. Compulsory Purchase,<br>5. Statutory Consents.<br>6. Public Inquiry<br>7. Detailed design,<br>8. Value Engineering,<br>9. Early Contractor Involvement.<br>10. Update risk register.<br>11. Full Business Case (FBC).<br>12. Prepare firm budget estimate based on contractor pricing and risk register.<br>13. Construction plan.<br>14. Maintenance and legacy arrangements.<br>15. Stage 2 Road Safety Audit.<br>16. QAA Detailed design workshop | ***Document Checklist***<br>1. Environmental Impact Assessment<br>2. Land schedule<br>3. Risk register<br>4. Construction Plan<br>5. Communications Plan<br>6. Budget<br>7. Full Business Case<br>8. Quality assurance audit | 1. Mobilisation and Construction<br>2. Stage 3 Road Safety Audit<br>3. Public Liaison | 1. Post project evaluation & Lessons learnt<br>2. Health & Safety file<br>3. As Built Records. | |
| Risk | 1. Environment<br>2. Contractor<br>3. Procurement | | 1. Environment<br>2. Contractor<br>3. Procurement | | 1. Environment<br>2. Contractor | | |
| Web-TAG (Web Based Transport Analysis Guidance) | **Stage 2 Further appraisal:**<br>10: Undertake Further Appraisal<br>11: Public Consultation on Appraised Options<br>12: Outputs from the Study | OBC | **Stage 3 Monitoring & Evaluation:**<br>13: Implementation Programme<br>14: Monitoring and Evaluation | FBC | | | |

Source: Mott MacDonald

# 7 Assurance and Approvals Plan

## 7.1 Assurance and Approvals

As detailed in the previous section, the approvals process at each development phase dictates that the project must pass through a number of key decision points where assurance will be carried out in order to ensure the project meets the required standards to be approved and progressed to the next phase of work. These key decision points are known as Gateway Reviews.

The assurance process which Phase 2 of CSET is following is set out in the Draft Assurance Framework for the City Deal.

## 7.2 Assurance Frameworks

As outlined, there are a number of key milestones where internal and/or external approvals will be required in order for the project to progress. CSET Phase 2 will be progressed through GCP's standard approval processes, inclusive of Gateway Reviews. For the varying level of project decisions that are made in relation to the scheme, the Project Manager has authority to determine in which of four categories a decision falls under:

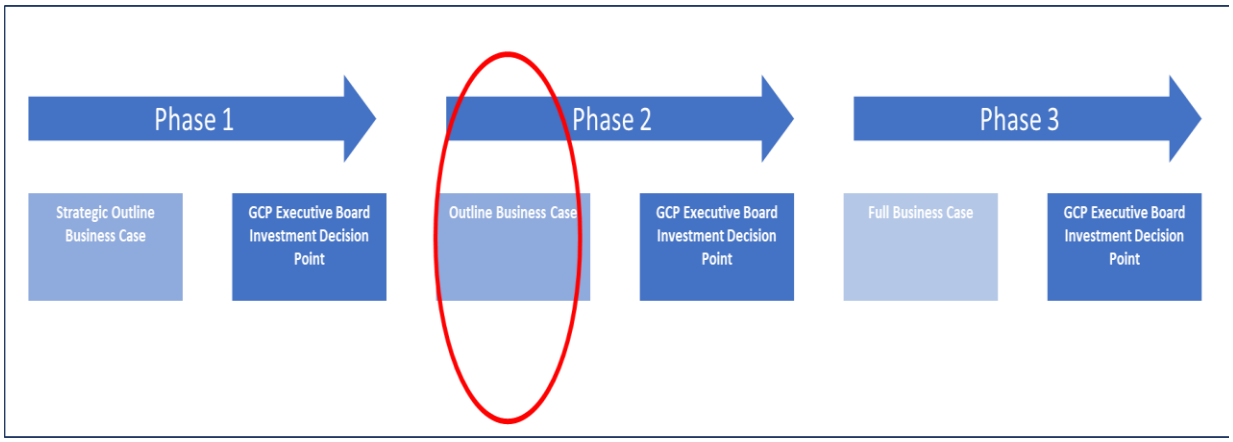
- **Key Decision**: These decisions are as defined in the GCP paper agreed in January 2015 and are the major 'gateway' decisions to allow the overall project progress. These key decisions form the outer scope of the project and define the 'project parameters'. Key decisions are the sole responsibility of the GCP Executive Board with advice from the GCP Joint Assembly and Chief Executives' Group.
- **Scope Change Decisions**: These decisions are those which will take the project out of the 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.
- **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 and time and will require a change to the Project Plan. A major decision is the sole responsibility of the Project Board.
- **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.

The scheme will pass through three business case stages as part of the overall approval process. The first stage of the business case process has been approved by the GCP Executive Board, progressing the scheme to Outline Business Case stage. A further two stages will now require approval by the GCP Executive Board to secure funding for this scheme. The three-stage process which is being undertaken for this scheme is aligned to the Department for Transport's 'The Transport Business Cases' (January 2013) approach:

- **Strategic Outline Business Case (SOBC):** consisting of high-level analyses which establish the need for the project and identify the options to be shortlisted.

- **Outline Business Case (OBC):** containing more detailed analysis of shortlisted 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.

**Figure 7.1: Business Case Approval Process**




Source: Mott MacDonald

## 7.3 Approvals to Date

The timescales for the various assurance approvals are outlined in Table 7.1.

**Table 7.1: Assurance Approvals - Key Milestones**

| Key Project Milestone | Completion Date |
|---|---|
| Phase 1 signed off | July 2018 |
| Approved Public Transport Strategies for further development | October 2018 |
| Approved shortlist of options for consultation | June 2019 |
| OBC Submission | May 2020 |
| GCP Executive Board Decision/approval of OBC | June 2020 |
| Approval to submit Transport & Works Act Order (TWAO) application | May 2021 |
| FBC Submission | December 2021 |
| GCP Executive Board Investment Decision on FBC | TBC |
| FBC Submission (Final) | TBC |
| Approval to proceed with construction | TBC |

Source: GCP/Mott MacDonald

# 8 Delivery Programme

Table 8.1 provides a draft outline programme of the key milestones and associated delivery dates for Phase 2 of CSET, following on from the scheme's progression to date.

**Table 8.1: Delivery Programme - Key Milestones**

| Key Project Milestone | Date |
|---|---|
| **Option Development and Appraisal** | |
| Review initial optioneering undertaken by WSP | September-October 2018 |
| Option development | January - March 2019 |
| Option appraisal | March – September 2019 |
| Public Consultation on shortlisted options | September 2019 |
| Options Appraisal Report | October 2019 |
| **Option Refinement** | |
| Draft Outline Business Case (OBC) | February 2020 |
| OBC completion | May 2020 |
| Final (preferred) option recommendation to GCP Executive Board | June 2020 |
| GCP confirmation of preferred option recommendation | June 2020 |
| **FBC Development** | |
| Detailed design completion | TBC |
| Statutory procedures completion | April 2022 |
| Draft FBC | December 2021 |
| Final FBC submission | TBC |
| **Construction and Hand Over to Final Operator** | |
| Appoint contractor | TBC |
| Construction start | April 2023 |
| Construction completion and hand over | May 2025 |
| Scheme opening | June 2025 |

Source: GCP/Mott MacDonald

# 9 Risk Management Strategy

Risk is defined as 'the effect of uncertainty on objectives', or 'uncertainty that matters[7]', therefore all risks arise from there being an uncertainty during the project.

Risk management is an integral element of project management and is crucial to the achievement of objectives (time, cost, scope), the realisation of any opportunities for acceleration and cost reduction, and the avoidance of delivery issues and crises. In support of this, the prime goal of risk management is the early identification and resolution of uncertainties – as far as possible to eliminate uncertainty at the paper design stage, when it is cheaper and quicker than during the construction stage.

Critical success factors for risk management are shown in Figure 9.1.

**Figure 9.1: Risk Management Critical Success Factors**


Source: Practice Standard for Project Risk Management – PMI 2009

The risk management strategy developed for CSET Phase 2 establishes roles and responsibilities for management of risk by stakeholders and describes principles for escalation of risks from the project to more senior levels within the governance structure. It also addresses identification and capture of risk statements from delivery plans and the wider context, and provides a structured approach relating responses to the identified risks. The key output of the risk management strategy is the risk register which will remain live through development and delivery of the project.

[7] Hillson, How to manage the risks you didn't know you were taking, 2014

The risk management methodology identified in this section draws on industry standard guidance, including ISO 31000:2009, BSI 31100:2011, Management of Risk[8], Practice Standard for Project Risk Management[9]

## 9.1 Risk Management Objectives

The objectives of risk management for CEST Phase 2 are to:

- Increase knowledge about all aspects of the scheme and its delivery, to inform the production of plans, schedules and estimates that describe the work that will be conducted to deliver the scheme;
- Identify and provide for areas of uncertainty and ambiguity that may result in future change to scheme delivery, and identify ownership and responsibility for those changes;
- Develop and manage execution of plans that eliminate or minimise the effects of threats to the scheme, to minimise the occurrence of unanticipated issues that may delay progress, increase costs, or detract from the quality of the delivered scheme at all stages of delivery;
- Identify and develop plans that exploit opportunities for quicker, cheaper, or better delivery that arise from circumstances being more favourable than those assumed in the planning;
- Develop fall-back or contingency plans to expedite the handling of risks that are realised, thereby minimising downside and maximising upside of risk impacts.

The scope of risk management addressed by this strategy extends to event and knowledge risks but excludes consideration of variability risks which are concerned with uncertainty in estimation of productivity, effort, duration, cost, or other variable parameters and the modelling of their effect on cost and timescales.

## 9.2 Prioritisation of Risks

Project risks have been defined in terms of the ‘Iron Triangle’ of time, cost, and scope (quality).

Scope is the highest priority, with extensions to time and costs being permitted to deliver a compliant scheme capable of realising the predicted benefits. The second priority is cost; incurring additional costs to shorten timescales is not generally under consideration.

## 9.3 Risk Management Activities

Table 9.1 outlines the key activities either have been or will be undertaken in the ongoing management of risks throughout the development and delivery of CSET Phase 2.

**Table 9.1: Risk Management Activities and Timings**

| Meeting | Agenda Items | Inputs | Timing |
|---|---|---|---|
| Kick off meeting | • Review objectives and delivery plans<br>• Review of any previous risk register<br>• Identification of new risks | • Contract / scope of work<br>• Delivery plans<br>• Risk register<br>• Issues log<br>• Schedule<br>• Cost Estimate | Commencement of the project |
| Design review meetings by workstream | • Review of risk register<br>• Review of assumptions register | • Risk register<br>• Assumptions register<br>• Issues log | As and when required for the design phase – to be detailed in the |

[8] Management of Risk: Guidance for Practitioners 3rd Edition – AXELOS 2012

[9] Practice Standard for Project Risk Management – PMI 2009

| Meeting | Agenda Items | Inputs | Timing |
|---|---|---|---|
| | • Review of any mitigation actions<br>• Identification of new risks | • Updated plans<br>• Change orders | Project Management Plan.<br>After any significant changes to scope or budget. |
| Project progress meetings including with the client and relevant workstream leads | • Review of all open risks<br>• Review of any mitigation actions<br>• Identification of new risks | • Risk register<br>• Assumptions register<br>• Issues log<br>• Updated plans<br>• Change orders | Monthly as a minimum.<br>After any significant changes to scope or budget. |
| Subcontractor meetings | • Review of top risks<br>• Review of risks ≥ 6 months in advance<br>• Review of any mitigation actions<br>• Identification of new risks | • Summary risk register<br>• Assumptions register<br>• Issues log | Following appointment of key subcontractors<br>Monthly as a minimum. |
| Risk workshops (Joint team) | • Purpose of workshop<br>• Identification techniques to be used<br>• Outputs to be produced<br>• Timescales | • Risk register<br>• Assumptions register<br>• Issues log<br>• Updated plans<br>• | Quarterly.<br>As and when required. After any significant changes to scope or budget. |

Source: GCP/Mott MacDonald

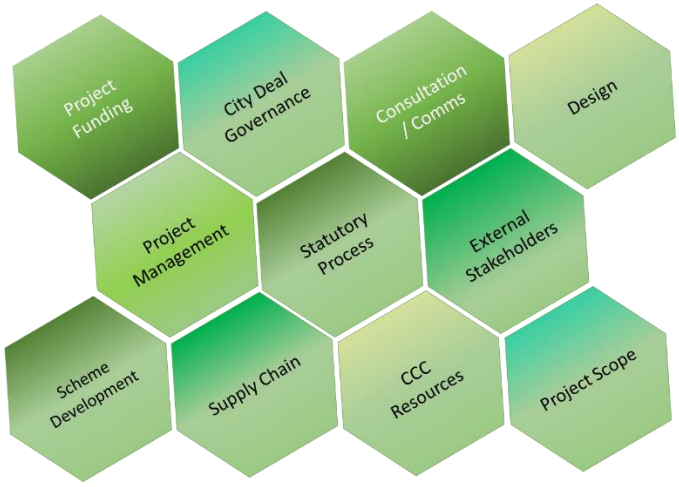
## 9.4 Approach to Risk Identification and Assessment

This section provides an overview on how identified risks were categorised into homogenous groups and articulated as risk statements. It then goes to explain how risks were scored based on their probability of occurrence and the impact they would have should they materialise.

### 9.4.1 Risk Categorisation

Risks were identified and grouped into one of 11 categories as shown Figure 9.2.

**Figure 9.2: Risk Register Risk Categories**




Source: Mott MacDonald

### 9.4.2 Risk Statement Metalanguage

Risk statements have therefore been constructed in the format set out in Table 9.2.

**Table 9.2: Risk Statement Format**

| Cause | | Event | | Impact | |
|---|---|---|---|---|---|
| Because of … / Due to … | <Description of unknowns, and assumptions made to develop plans> | There is a risk that … | <Assumption may prove incorrect; project may diverge from the plan by …> | Leading to … | <Description of the effect on objective(s) for the workstream, stage, or project.> |

Source: Mott MacDonald

### 9.4.3 Risk Scoring

Risks have been scored by assessing their likelihood and impact ratings and combining these scores to prioritise actions. Parameters for assigning Red, Amber and Green (RAG) ratings to likelihood and impact of risks are based on of likelihood values, and consideration of the impact as a proportion of the scheme cost estimate.

#### Likelihood

Likelihood has been specified using a score of 1-5. The bands equate to single values of likelihood shown in Table 9.3, considered to represent a reasonable range of confidence in planning assumptions.

**Table 9.3: Scoring Parameters for the Likelihood of Risk Occurrence**

| Score | Likelihood |
|---|---|
| 1 | 5% |
| 2 | 10% |
| 3 | 25% |
| 4 | 50% |
| 5 | 90% |

Source: Mott MacDonald

In terms of RAG ratings Red, Amber and Green have been assigned to Likelihood scores as noted in Table 9.4.

**Table 9.4: 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 time | **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: Mott MacDonald

### Impact

Impact has been specified by specified using a score of 1-5. When a score is selected, a three-point estimate has been produced in the risk register based on the overall scheme costs.

**Table 9.5: Scoring Parameters for Risk Impact**

| | % of scheme cost | | |
|---|---|---|---|
| **Score** | **Optimistic** | **Most Likely** | **Pessimistic** |
| 1 | 2% | 5% | 15% |
| 2 | 10% | 20% | 45% |
| 3 | 35% | 50% | 75% |
| 4 | 50% | 60% | 90% |
| 5 | 85% | 90% | 100% |

Source: Mott MacDonald

In terms of RAG ratings Red, Amber and Green have been assigned to Impact scores as noted in Table 9.6.

**Table 9.6: Risk Impact Ratings**

| Description | Descriptor | Scale |
|---|---|---|
| Insignificant disruption to internal business or corporate objectives<br>Little or no loss of front line service<br>No environmental impact<br>No reputational impact<br>Low financial loss (proportionate to budget involved) | **Negligible** | **1** |
| Minor disruption to internal business or corporate objectives<br>Minor disruption to front line service<br>Minor environmental impact<br>Minor reputational impact<br>Moderate financial loss (proportionate to budget involved) | **Marginal** | **2** |
| Noticeable disruption to internal business and corporate objectives<br>Moderate direct effect on front line services<br>Moderate damage to environment<br>Extensive reputational impact due to press coverage<br>Regulatory criticism<br>High financial impact (proportionate to budget involved) | **Significant** | **3** |
| Major disruption to corporate objectives or front line services<br>High reputational impact – national press and TV coverage<br>Major detriment to environment<br>Minor regulatory enforcement<br>Major financial impact (proportionate to budget involved) | **Critical** | **4** |
| Critical long term disruption to corporate objectives and front line services<br>Critical reputational impact<br>Regulatory intervention by Central Govt.<br>Significant damage to environment<br>Huge financial impact (proportionate to budget involved) | **Catastrophic** | **5** |

Source: Mott MacDonald

### 9.4.4 Risk Reporting

There are three key recipients of reports from the risk management process,

- Project Delivery Team;
- Transport Projects Board; and
- GCP Executive Report Board.

Reporting schedules are driven by gated reviews and major delivery milestones.

## 9.5 Quality Assurance of Deliverables

Delivery of the risk register follows these steps:

- Internal review with discipline leads and Project Manager to update risks and progress against responses; and
- Review of key risk areas with GCP team to identify activities that GCP owns.

During the risk register reviews with workstream leads and the Project Manager the following checks will be made:

### 9.5.1 Risks

- That the date of last review was not greater than two months ago;
- The project stage agrees with the schedule;
- Risk titles remain meaningful, describing the impact and event at a high level;
- A three-part risk statement (Cause, Event, Impact) exists for each risk that describes the risk in detail;
- Verification that each risk has an owner;
- Each risk category is populated to allow filtering;
- Risks are correctly allocated to the employer or suppliers/contractors; and
- That review comments are being acted upon to show development of risk and response.

### 9.5.2 Actions

- Action descriptions in the register are Specific, Measurable, Achievable, Relevant and Time-based (SMART), and their outcomes are clearly identified;
- Verification that all actions have owners;
- Verification that all actions have due dates; and
- Action due dates in the future are included for all open actions.

### 9.5.3 Assessments

- Where there are no mitigation activities, post-mitigation assessments remain the same as current assessments.

## 9.6 Risk Register

In accordance with the above activities a risk register has been developed. Noting that this is a live document, it is included as it stood at 15 May 2020, in full, in Appendix L document reference 403394-MMD-BCA-00-RP-BC-0373.

Based on the product of the likelihood of a risk occurring with its associated impact, the highest possible risk score is 25 (5, where the likelihood of occurrence is very high multiplied by 5, where the impact is catastrophic). The highest scoring inherent risks are noted in Table 9.7; only those with a score of over 15 are included, with 13 risks exceeding this value at the time of writing.

### Table 9.7: Top Risks from the Risk Register

| Risk | Impact | Inherent Risk Rating | Mitigation Measure | Post Mitigation Risk Rating |
|---|---|---|---|---|
| Ongoing funding subject to changes in priorities for allocation of finite resources.<br>Competing schemes within City Deal programme. | Support may be withdrawn, or the continuation of the scheme may be conditional on a review, which would incur delay and additional cost preparing business justification for the review. | 20 | Escalate: Maintain good relationships with funding bodies and submit detailed and rigorous funding bids. Adequate resources will be devoted to maintaining funding bids. | 15 |
| COVID-19 situation and Government guidance do not permit programme-critical activities to be progressed | Delays and additional costs associated with prolongation. | 20 | Treat: Review current activities and those planned for the next 3 months. Identify those that can and can't be progressed. For those that can't be progressed, identify actions that can be taken to mitigate impact on overall programme. | 15 |
| A shortlist of route and travel hub site options has been produced.<br><br>Political considerations that may influence the selection of a preferred option have not been available. | Extensive rework to identify further options and develop to a stage where they can be supported by CPCA. | 20 | Escalate: Work closely with CPCA (but it should be noted this is a strategic risk not a project level risk).<br><br>At a project level, collaborate with CAM consultants to develop a preferred option that supports regional CAM extension to Haverhill. | 12 |
| The scheme schedule assumes that third party technical approvals are granted according to 'normal' timescales.<br><br>It is known that where there are sensitive issues, or where the granting authority has resource constraints or competing demands, permissions and consents may take longer. | Delay pending processing of approvals.<br><br>Additional costs, if further information is required | 16 | Treat: Early engagement with relevant contacts in Highways England, Environment Agency, Network Rail, etc. to agree programme for technical approvals.<br><br>Develop alignment to minimise impact and interface with third party stakeholders. | 4 |
| Planning assumes that third party plans for other transport schemes do not introduce dependencies that affect scheme progress. | Delays are introduced into plans, delaying milestone achievement and increasing costs due to prolongation. | 16 | Treat: High level programme management is to undertake thorough liaison with all relevant transport authorities and scheme promoters.<br><br>Collaborative planning between affected parties to align plans and share awareness of constraints. | 6 |
| The OBC is based on estimated values for land acquisition. Local land values may be volatile as the requirement for development land increases.<br>Individual landholders may inflate demands for land critical to the scheme. | Increased costs for scheme delivery.<br><br>Possible delay and cost impact if alternative designs/routes are considered to avoid contentious areas. | 16 | Treat: Ensure land cost estimates are robust and consider compensation payable.<br><br>Negotiate with developers | 8 |

| Risk | Impact | Inherent Risk Rating | Mitigation Measure | Post Mitigation Risk Rating |
|---|---|---|---|---|
| The scheme is dependent on the development and production of the technological solution that is capable of running guided vehicles at the required speeds. | Delay and possible additional costs for the design and delivery of infrastructure associated with implementing a kerb-guided system. | 16 | Treat: Review state of art in technology areas and establish maturity at early stage.<br><br>Avoid reliance on emerging technology unless risk can be managed.<br><br>Development and implementation of testing programme to provide assurance of capability of the selected technology to support running guided vehicles at the required speeds, and associated design requirements. | 12 |
| Scheme design assumes that technological guidance will be approved in time for in-service dates to be achieved. | Design change to kerb-guided system. | 16 | Treat: Activities to promote change to GTMO.<br><br>Engagement with CPCA, CCC, etc. Support to Mayoral engagement with DfT and Ministers.<br><br>Need to understand parallelism in plan between legislation and scheme.<br><br>Allow the possibility of a change to kerb-guided within the envelope and design. | 12 |
| GTMO does not currently provide for technological forms of guidance.<br><br>Assumed that legislation will have amended the GTMO to accommodate technological guidance. | Delay pending alternative approach to consents, or to allow the presentation of a kerb-guided scheme. | 16 | Treat: Legal advice and promotion of a revision to the GTMO. | 12 |
| It is intended to use the TWAO process as a route to gain planning consent. | DfT TWA unit may require additional information and justification to accept the application.<br><br>Delay and additional cost may be incurred if the challenge has to be addressed during the inquiry. | 16 | Treat: Continue dialogue with DfT.<br><br>Use of legal advice. Ensure consistent approach and decision making across C2C and CSET Phase 2 schemes. | 9 |
| Planning constraints protect the Green Belt.<br><br>Two shortlisted sites for the Travel Hub are within the Green Belt. The Green Belt may | Additional work (cost and delay) to justify the use of a Green Belt location. Additional mitigations required to landscape and/or hide the facility, incurring additional cost and | 15 | Treat: GCP to commission assessment of the impact of the project on the Green Belt, consistent with other GCP transport projects. Report to be completed by end of Q1 2020 and included in evidence base for scheme. | 10 |

| Risk | Impact | Inherent Risk Rating | Mitigation Measure | Post Mitigation Risk Rating |
|---|---|---|---|---|
| lead to a lower performing site being favoured, if that site is outside the Green Belt, leading to a sub-optimal solution or the loss of user benefits in order to maintain protection of the Green Belt. | time into the programme. Other option preferred, outside the Green Belt, delivering (potentially) lower user utility. | | Early discussions with Planning Authority to understand key issues and evidence base required. Early discussions with key stakeholders. Development of a robust design and evidence base. | |
| Some elements of the design have not been costed in detail, but an allowance has been made based on estimates and previous works. | Re-evaluation, design changes, and value engineering will result in delays and additional costs. | 15 | Treat: During design development, cost estimates will be reviewed, and allowances replaced with detailed costings where possible.<br><br>Client property consultants will develop detailed costs based on land acquisition plans.<br>Regular liaison meetings to progress land costs. | 6 |
| Procedure for scheme submission has options around approach that affect submitted materials, consultation, form of application. | Responding to a legal challenge incurs additional time and cost, delaying the start of the scheme and its final delivery. | 15 | Capture every product required legally in the plan and programme for the next stage.<br><br>Create plan and programme for next stage of the project to prepare and deliver the TWAO submission, following completion of the governance process to select a preferred option.<br><br>Ensure that all statutory procedures are followed to ensure that there is no scope for a judicial review - use of GCP legal advisors.<br><br>Identify potential vectors for challenge and review actions required to achieve compliance in these areas. | 5 |

Source: Mott MacDonald

## 9.7 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 Transport Projects 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.

## 9.8 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 CSET Phase 2 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.

# 10 Communications 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 CSET Phase 2 project and is supported by the Stakeholder Engagement and Communication Plan (Appendix F, document reference 403394-BCA-00-RP-BC-0371) which has been prepared by GCP.

## 10.1 Communications Plan

The Stakeholder Engagement and Communication Plan has been guided by the principles of the City Deal wide communication strategy. The strategy outlines how all internal and external stakeholders are informed of relevant project information. Table 10.1 highlights the key Phase 2 activities extracted and updated from the aforementioned Plan.

**Table 10.1: Project Dates and Tactical Communication Plan**

| Date | Project Element | Duration | Key Communications Activities and Comments |
|---|---|---|---|
| 20 Sept 2018 | Assembly | | • Recommendations for Phase 2 for further development.<br>• Social Media. |
| 11 Oct 2018 | Board | | • Recommendations for Phase 2 for further development<br>• Social Media<br>• Web page<br>• Press release |
| 5 Nov 2018 | Assembly Papers | | • Social Media |
| 15 Nov 2018 | Assembly | | • Social Media |
| 6 Dec 2018 | Board | | • Social Media |
| 6 June 2019 | Assembly | | • Recommended route and travel hub site options for consultation<br>• Social Media |
| 27 June 2019 | Board | | • Recommended route and travel hub site options for consultation<br>• Social Media<br>• Web page<br>• Press release |
| Summer 2019 | Community events | | • Providing information material for and/or attending some key events in villages along route |
| 9 Sept - 4 Nov 2019 | Consultation on Phase 2 route details and travel hub site options | 8 weeks | • Pre-consultation briefing for local Councillors<br>• Leaflet and questionnaire<br>• Online<br>• Direct door to door distribution<br>• Email/letter to ALL stakeholders and keep informed<br>• Councillor and business briefings |

| Date | Project Element | Duration | Key Communications Activities and Comments |
|---|---|---|---|
| | | | • Public exhibition events<br>• Social Media<br>• Advertising and promotions |
| Spring 2020 | Phase 2 Summary Report of Consultation Findings published | | • Consultation report<br>• Update to web page<br>• Email/letter to ALL stakeholders and keep informed<br>• Social media |
| 22 May 2020 | Assembly Papers | | • Social Media |
| 4 June 2020 | Assembly | | • Recommended preferred route and travel hub site option<br>• Social Media |
| 25 June 2020 | Board | | • Recommended preferred route and travel hub site option<br>• Social Media<br>• Web page<br>• Press release |
| Autumn 2020 | Environmental Impact Assessment consultation | | • Web page<br>• Events<br>• Promotion |
| August 2021 | Transport and Works Act Order application submitted | | • Web page<br>• Email/letter to ALL stakeholders & keep informed<br>• Social media<br>• Press release |
| Spring 2022 | Transport and Works Act Order Inquiry | | • Web page<br>• Email/letter to ALL stakeholders & keep informed<br>• Social media<br>• Press release |
| 2022 | Pre-construction | | • Councillor briefing<br>• Attending Parish Council meetings<br>• Community information events |
| Summer 2022 | Community events | | • Providing information materials for and/or attending some key community events in villages along route |
| Spring 2023 | Start of Phase 2 construction | | • Start of Works ceremony<br>• Email/letter to ALL stakeholders and keep informed<br>• Social Media |
| 2023-2025 | Construction | | Ongoing communication activities:<br>• Updates, social media, emails, letter, press releases on road works and closures<br>• Photos, videos or project progress<br>• Regular Councillor/Parish Council meetings<br>• Bi-monthly newsletter to keep informed |
| May 2025 | Whole scheme complete | | • Opening event (larger scale): ribbon ceremony, community event such as bike ride fun run<br>• Web page<br>• Email/letter to ALL stakeholders and keep informed<br>• Social media |

Source: Mott MacDonald

## 10.2 Stakeholder Engagement

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 for stakeholder engagement for CSET Phase 2 are to:

- Keep stakeholders aware of the scheme's 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 or groups both during delivery and once operational; and
- Address perceptions of the scheme where these are inconsistent with the scheme objectives and forecast outcomes.

GCP has grouped stakeholders into four distinct groups in order to develop an appropriate communications approach to successfully engage necessary parties. The four overarching approaches are set out below.

**Manage Closely**

Stakeholders which are considered to have high influence and high interest need to be actively and closely managed through frequent communications to keep this group fully engaged with the project.

This should include regular face to face meetings and activities to allow for active discussion and consultation, supported by tailored communications that maintain an open dialogue between those solely involved with the project.

**Keep Satisfied**

Stakeholders which are considered to have high influence and low interest are regarded as 'opinion formers' and should be managed through regular, tailored communications that satisfy their needs. Pro-active consultation on specific areas can be used to increase their interest and support for the project. Communications to this group need to be timely and relevant, with opportunities for face-to-face and two-way communication to help build relationships.

**Keep Informed**

Stakeholders which are considered to have high interest and low influence need to be kept informed of developments through regular communications providing general updates and relevant information. Offering opportunities to share their views on specific areas that may affect them can help to increase support and goodwill for the project. Communication channels could include newsletters, emails, direct mail, forums and questionnaires and social media opportunities.

**Monitor**

Stakeholders who are considered to have low interest and low influence are unlikely to be actively seeking information about the project. This group can be kept informed through easily accessible, general communications, e.g. news articles, social media, website, brochures. Reactive communications may also be required, for example, to respond to specific queries.

Details of all identified stakeholders and the group to which they belong are set out in Section 10 of the Strategic Case.

Figure 10.1 illustrates the relative position of stakeholder groups in terms of their levels of interest and influence on the progression of the scheme.

**Figure 10.1: Stakeholder Mapping**


Source: Mott MacDonald

## 10.3 Engagement and Consultation at SOBC Stage

The consultation strategy at SOBC stage was designed by the GCP Communications Team with input from the County Council's Research Team.

The consultation adopted a multi-channel approach to promote and seek feedback including through traditional and online paid-for, owned and earned media, community engagement events in key or high footfall locations along the route and through the widespread distribution of around 22,000 consultation leaflets.

Public consultation events took place between February and April 2018; Quantitative data was recorded through a formal consultation questionnaire (online and hard copy) with 1,785 complete responses in total recorded. In addition, a significant amount of qualitative feedback

was gathered via the questionnaire, at events, via email and social media and at other meetings.

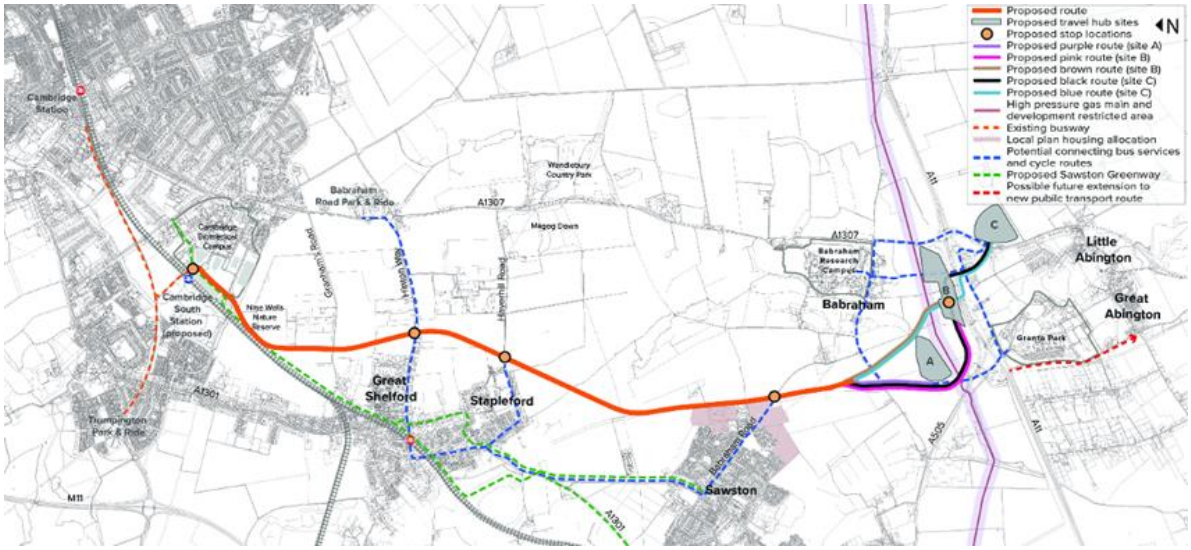
## 10.4 Key Findings from Consultation at SOBC Stage

Consultation focused on three alignments, referred to at SOBC stage as Strategies 1, 2 and 3. Strategies 2 and 3 were on-line options, making use of or running alongside the existing A1307 highway corridor. Strategy 1 was a new offline route that would provide dedicated infrastructure for public transport vehicles and non-motorised users. Strategy 1 was found to have the most support with 64% of responses in favour of this proposal.

## 10.5 Engagement and Consultation at OBC stage

Consultation at OBC stage ran for 8 weeks from 9 September to 4 November 2019 and sought the views of the general public on the proposed alignment for the new route (Strategy 1 at SOBC Stage) with alternative route options to the east of Sawston, linking to three potential Travel Hub locations, annotated A, B and C, near the A11/A1307/A505 interchange. This is shown in Figure 10.2.

**Figure 10.2: Proposed Alignment for New Route taken for Public Consultation at OBC Stage**




Source: Mott MacDonald

The dates and locations of the events are set out in Table 10.2.

**Table 10.2: Public Consultation Events**

| Location | Date | Time | Address |
|---|---|---|---|
| **Full Public Exhibition** (Residents, general public, potential users and directly affected residents) | | | |
| Cambridge | Wednesday 9 October 2019 | 5:00-7:00pm | Long Road 6th Form College, CB2 8PX |
| Haverhill | Thursday 10 October 2019 | 5:00-7:00pm | Haverhill Arts Centre, High Street, CB9 8AR |
| The Shelfords and Stapleford | Monday 14 October 2019 | 5:30-7:30pm | Stapleford Pavilion, Gog Magog Way, CB22 5BQ |

| Location | Date | Time | Address |
|---|---|---|---|
| Sawston | Thursday 15 October 2019 | 5:30-7:30pm | Spicers Pavilion, Cambridge Road, CB22 3DG |
| The Abingtons | Monday 21 October 2019 | 5.30-7:30pm | The Abington Institute, 66 High Street, CB21 6AB |

Source: GCP

As at SOBC stage, the OBC consultation adopted a multi-channel approach to promote and seek feedback to either provide advance information ahead to those attending the events noted in Table 10.2 or to supplement feedback from those events. The following channels and materials were used:

- Social Media campaigns (Facebook, Twitter, Instagram);
- Door to door distribution (Leaflets flyers and posters to 18,500 households and businesses, see Figure 10.3);
- Direct email (GovDelivery to stakeholders, interested parties, schools and businesses);
- Advertising (Newspapers, magazines, bus stops and Park & Ride sites);
- GCP Web page and on-line survey (promoted on all materials);
- Display boards (featured at events and key locations such as libraries and parish council buildings); and
- Press releases (through local media).

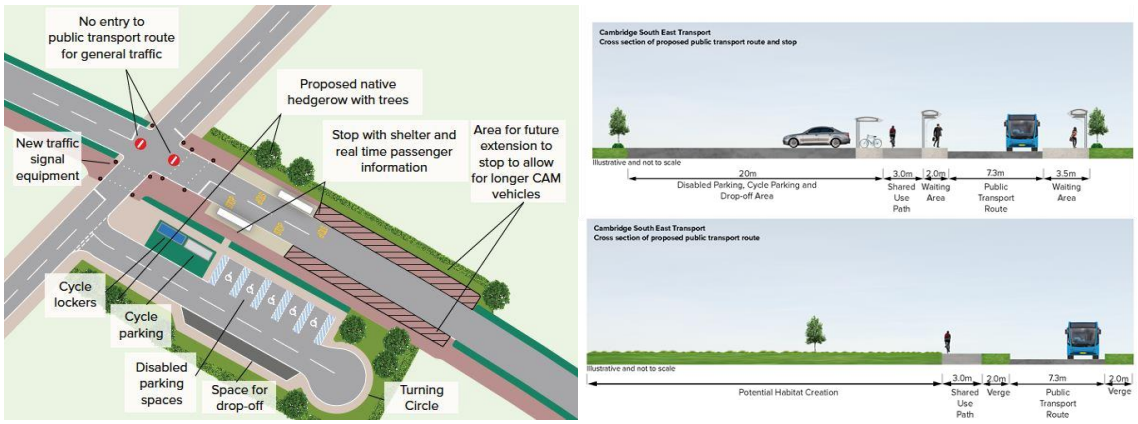
**Figure 10.3: Extent of Door to Door Distribution of Leaflets, Flyers and Posters**


Source: Mott MacDonald

## 10.6 Consultation Materials

Background information in the public consultation materials noted that the proposed new public transport route would link the Cambridge Biomedical Campus via Great Shelford, Stapleford and Sawston to a new travel hub near the A11/A1307/A505 with connections to Babraham, the Babraham Research Campus and Granta Park. It was noted that the route would be entirely off-road, only interacting with other traffic at junctions. Junctions between existing roads and the new public transport route would be controlled by traffic lights. The same schematic as shown in Figure 10.2 was provided for reference. Consultees were also provided with a schematic of the typical layout of the stops along the proposed route alignments and cross sections of the proposed route and at a stop were provided as shown in Figure 10.4.

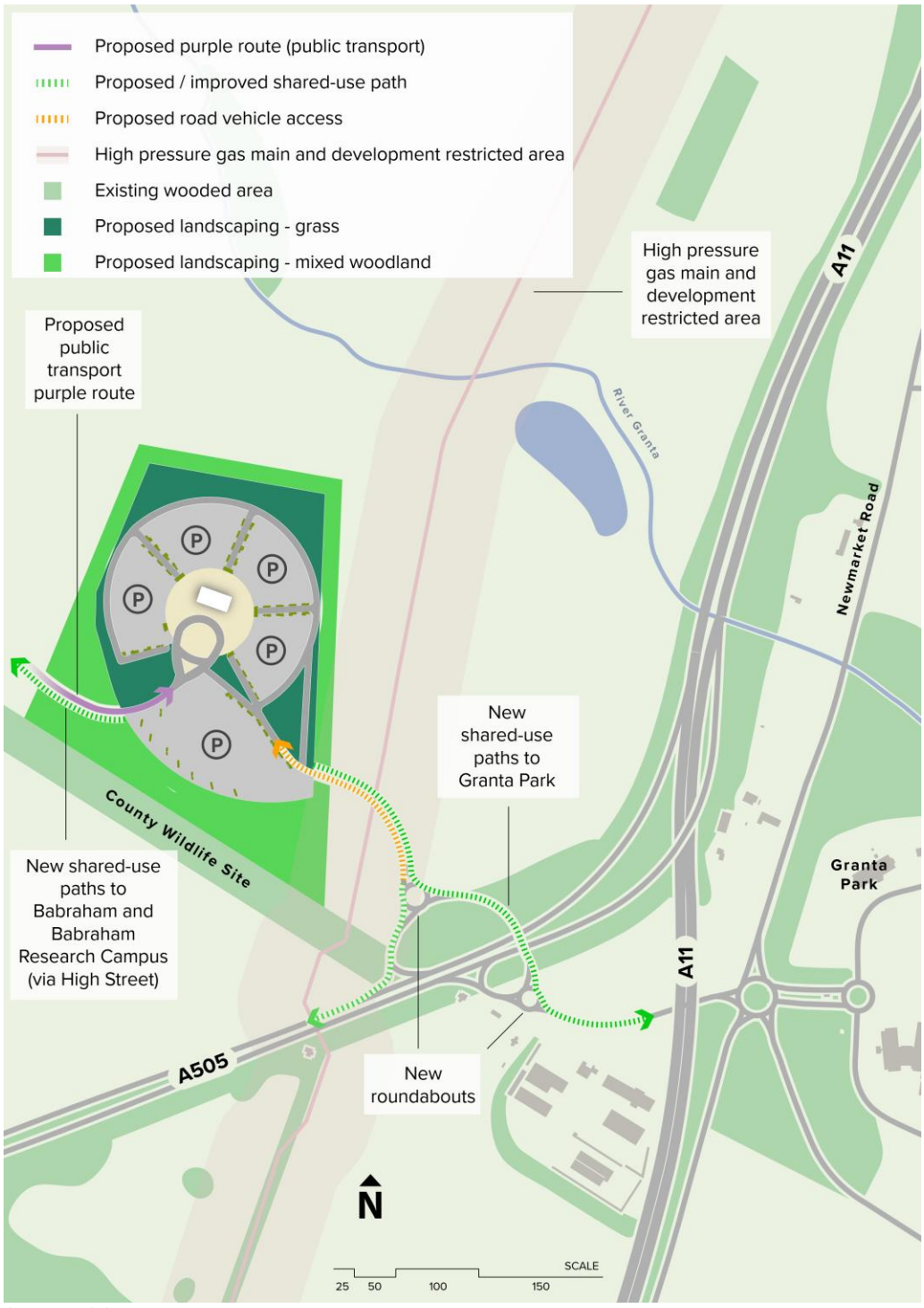
**Figure 10.4: Typical Stop Layout and Cross Section of Route Stop**




Source: GCP

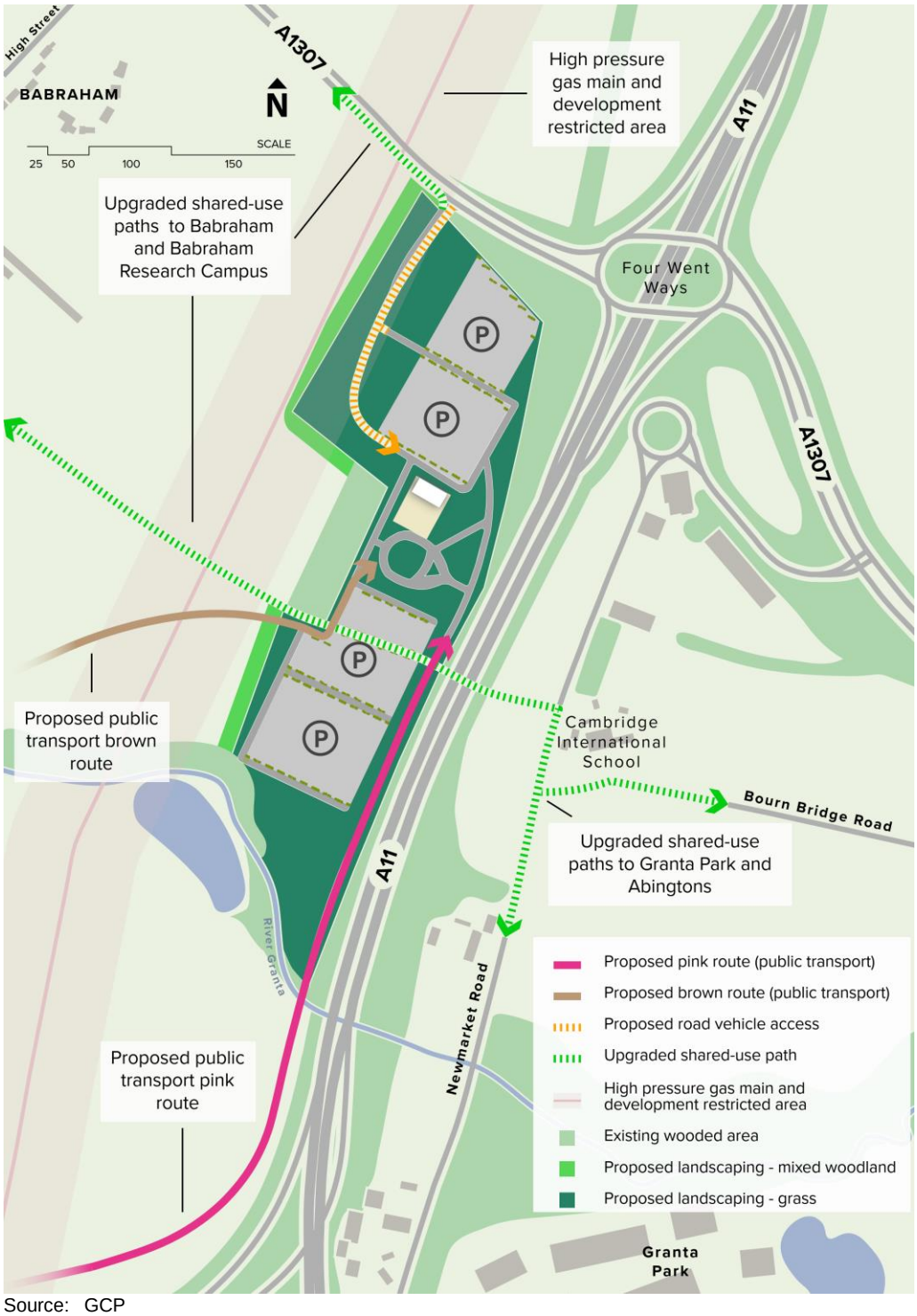
The three Travel Hub locations were presented for public consultation in the level of detail as shown in Figure 10.5, Figure 10.6 and Figure 10.7. Consultees were asked for their views on the proposed alternative options linking to three potential locations for a new Travel Hub site near the A11/A1307/A505.

**Figure 10.5: Travel Hub Site A**




Source: GCP

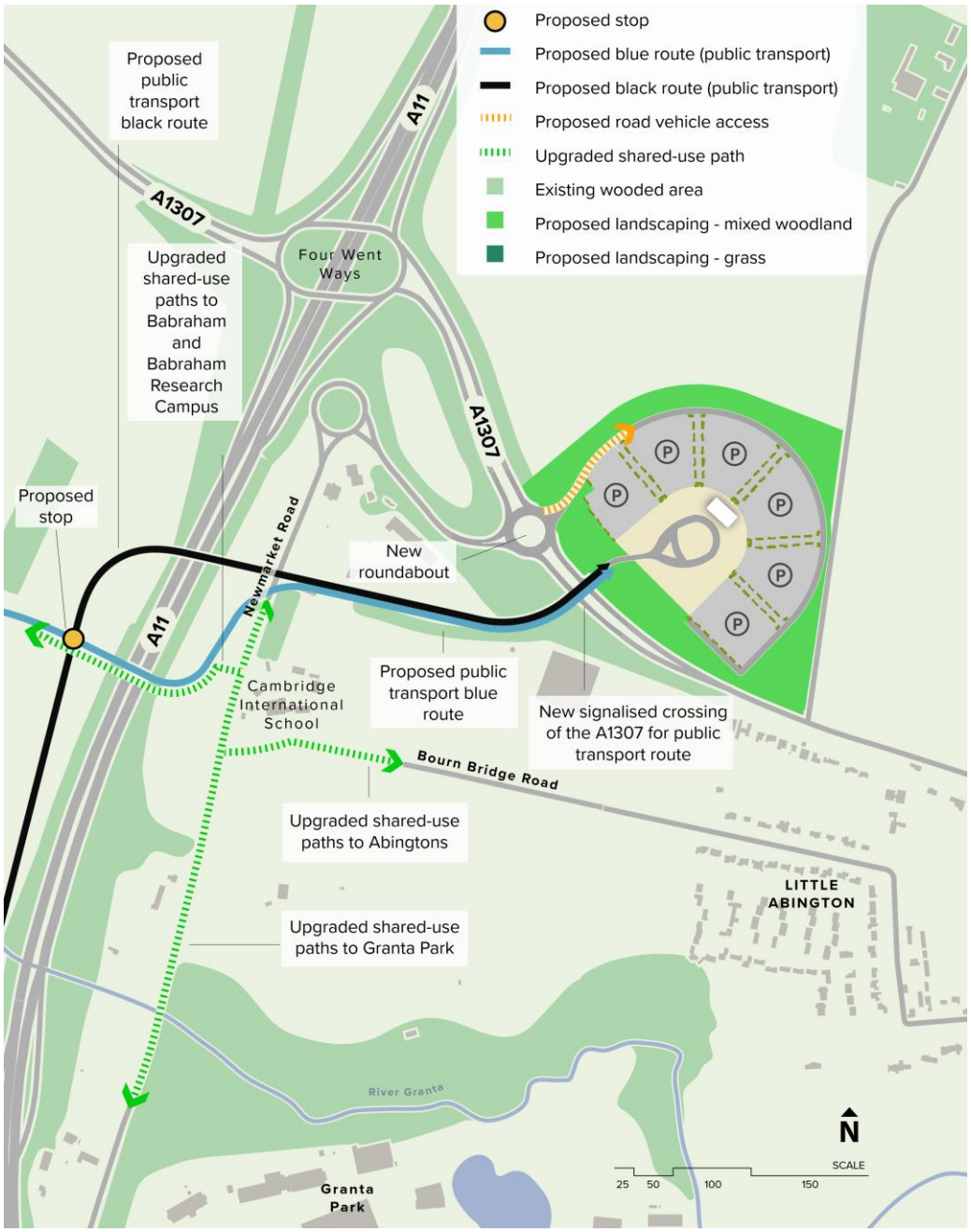
**Figure 10.6: Travel Hub Site B**




Source: GCP

Unlike site A, where only one possible access route (Purple) was proposed, two possible access routes to site B were proposed, the Pink and the Brown Route.

**Figure 10.7: Travel Hub Site C**




Source: GCP

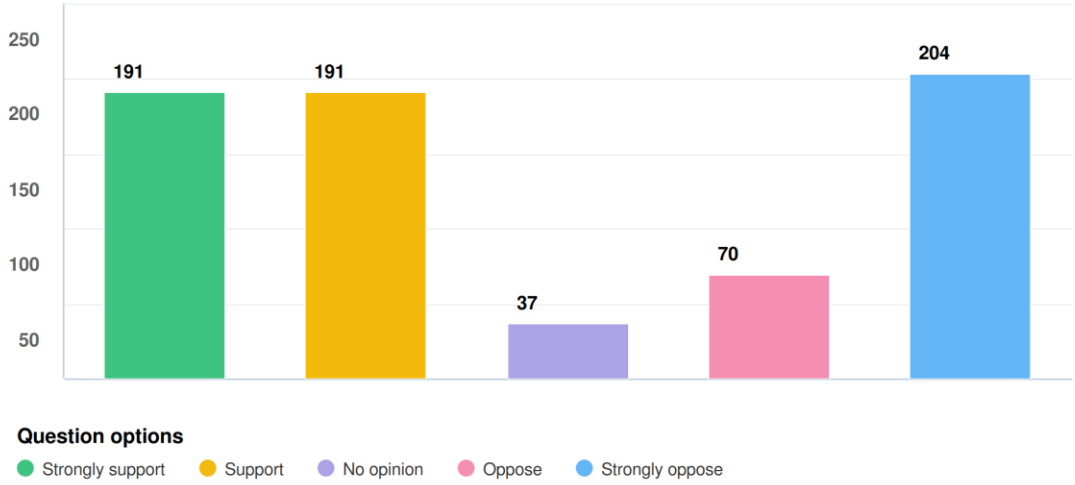
As with Travel Hub site B, two access options were proposed, the Blue route and the Black route.

## 10.7 Key Findings from Consultation at OBC Stage

Quantitative data was recorded through the consultation questionnaire (online and hard copy) with 702 responses in total recorded, though not all respondents answered all questions. A detailed account of the feedback can be found in the Statement of Community Involvement that accompanies this OBC as Appendix E, document reference 403394-MMD-BCA-00-RP-BC-0371, however the high-level responses to key questions that influenced the selection of the preferred option are noted here.

In terms of general support for the scheme proposals it was found that 382 (55%) out of 693 responses received to this question supported them to some extent compared to 274 (40%) who opposed the proposals to some degree; 37 (5%) of the respondents expressed no opinion. This is illustrated in Figure 10.8.

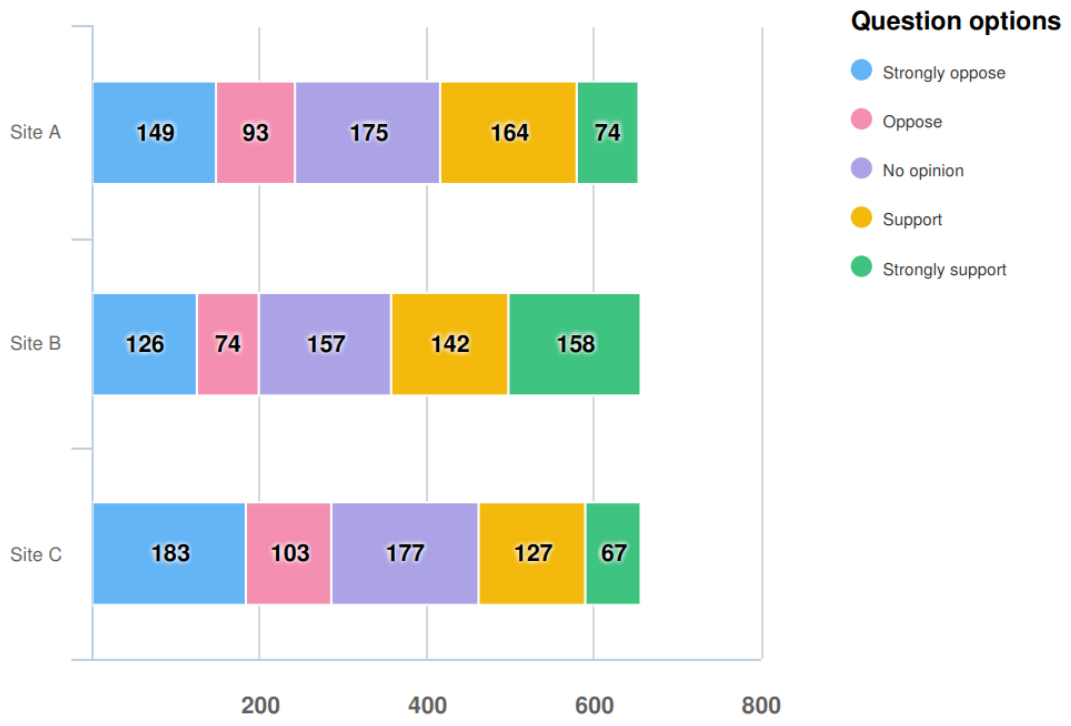
**Figure 10.8: Level of Support for the Scheme Proposals in General**




Source: GCP

Regarding the preferred location for the Travel Hub most support was expressed for Site B, with 300 (45%) of the 668 responses either supporting or strongly supporting this option and 200 (30%) opposing the site to some degree. Site C proved to be the least supported site with only 194 (30%) supporting it to some extent and 286 (43%) opposing it. This is illustrated in Figure 10.9.

**Figure 10.9: Level of Support for the Travel Hub Sites**




Source: GCP

When asked about the route alignments the Brown option, which connects to the most strongly supported Travel Hub site (Site B), received the greatest level of approval with 228 out of the 651 responses received supporting the option to some extent, compared with 198 opposing it to some degree. This was closely followed by the Pink option, also connecting to Site B, with 218 responses supporting the option, compared with 200 opposing.

The Purple option, connecting to Site A, received less support than either of the options connecting to Site B, with 201 responses supporting and 209 opposing this option.

The Black and Blue options which connect to Site C, the least popular Travel Hub site, received the least support with only 158 and 173 respondents respectively showing some level of support. This is shown in Figure 10.10.

**Figure 10.10: Level of Support for the Complete Option Packages**


Source: GCP

On this basis consultation concluded that, from a public acceptability standpoint, the Brown option was the indicative preferred option. This aligns with the findings of the formal INSET appraisal process.

# 11 Benefits Realisation

This section outlines the approach to managing the realisation of benefits of the CSET Phase 2 project. Benefits in this context are referred to as ‘a measure of the improvement that will be enjoyed by the organisation’. The benefits of any transport investment often play a crucial part in the justification for intervention. Therefore, identification of the benefits of the scheme and how they will be measured is fundamental to making the case for investment.

An outline Benefits Realisation Plan has been produced and is set out in Table 11.1. The plan defines how the identified benefits of CSET Phase 2 align with the scheme objectives, who the key beneficiaries would be, and the outputs required to realise the benefits. The table below also notes that some benefits will be realised at project level, whilst others are considered to be at a programme level i.e. delivering the wider growth and therefore may not be realised directly by the scheme.

**Table 11.1: CSET Phase 2 Benefits Realisation Plan**

| Benefit | Objective Alignment | Who Benefits | Benefit Owner | Key Outputs / Deliverables Required to Realise the Benefit | Expected Level of Benefit | |
|---|---|---|---|---|---|---|
| Improved accessibility to key employment and education sites within south east Cambridge and Cambridge City Centre | 1iii, 5i | • Stakeholders<br>• Education establishments i.e. UoC<br>• Businesses i.e. Biomedical Campus | • GCP - scheme promoter | • Completion of CSET Phase 2 | Programme | An increase in the number of employment and education opportunities in south east Cambridge and central Cambridge. |
| Improved accessibility to Cambridge Biomedical Campus particularly from the South and South East | 5i | • Employees<br>• Visitors<br>• Businesses | • Cambridge Biomedical Campus | • Completion of CSET Phase 2<br>• Completion of other transport schemes e.g. Cambridge South West Park & Ride | Project | Reduction in journey times for people travelling to Cambridge Biomedical Campus and a reduction in the number of vehicles accessing the Campus each day |
| Reduced congestion along one of Cambridge's key radial routes | 2, 2ii | • Commuters<br>• Visitors<br>• Residents<br>• Businesses | • GCP- scheme promoter | • Completion of CSET Phase 2<br>• Implementation of City Access Measures | Project | Reduction in journey time for people travelling to key employment sites and central Cambridge from the south east. Improved journey experience. |
| Reduction in $NO_2$ along the A1307 corridor | 2 | • Commuters<br>• Visitors<br>• Residents within the surrounding area | • GCP - scheme promoter | • Completion of CSET Phase 2<br>• Implementation of City Access Measures | Programme | Reduction in measurable levels of NOx and PM10 pollution |
| Reduction in public transport journey times between Haverhill and the City Centre | 1i, 3ii, | • Residents<br>• Public transport operators<br>• Commuters | • GCP - scheme promoter | • Completion of CSET Phase 2 | Project | Reduction in journey times for public transport operating between Cambridge and Haverhill. |
| Increase in sustainable travel mode share for commuter journeys | 2i, 3iii, 5ii | • Local stakeholders<br>• Commuters<br>• Visitors<br>• Businesses | • GCP - scheme promoter | • Completion of CSET Phase 2<br>• Effective marketing campaigns to encourage use of buses and active travel amongst local stakeholders and businesses<br>• Implementation of City Access Measures | Project | Increase in number of people using public transport and active travel modes as an alternative to private car for commuter journeys. |
| Growth of Cambridge's key employment sectors | 1, 1iii, | • Businesses<br>• Stakeholders | • Local businesses<br>• UoC | • Completion of CSET Phase 2<br>• Aligned business marketing programmes to promote development | Programme | An increase in employment levels within Cambridge's professional |

| Benefit | Objective Alignment | Who Benefits | Benefit Owner | Key Outputs / Deliverables Required to Realise the Benefit | Expected Level of Benefit | |
|---|---|---|---|---|---|---|
| | | • CCC/CaCC/SCDC | | of scheme and the economic benefits to businesses.<br>• Marketing for future investment and development opportunities | | services, manufacturing and education sectors |
| Increased attractiveness of land for commercial and residential developments along the A1307 corridor | 1, 1iii | • Local stakeholders<br>• Housing developers | • GCP - scheme promoter<br>• Housing developers<br>• Commercial investors | • Completion of CSET Phase 2 | Programme | Increase in number of new housing and commercial units delivered along and close to the A1307 corridor. |
| Reduction in accident rates along the A1307 | 4, 4i, 4ii, 4iii | • Local stakeholders<br>• Visitors<br>• Commuters | • GCP - scheme promoter<br>• CCC Highways department | • Completion of CSET Phase 2 | Programme | Reduction in KSI along the A1307 corridor |
| Improved pedestrian and cycle safety for people travelling along the A1307 | 3iii, 4iii, | • Cyclists<br>• Local stakeholders<br>• Visitors | • GCP - scheme promoter | • Completion of CSET Phase 2 | Project | Increase in the number of people cycling and walking along the A1307 as a result of safer, more attractive routes |
| Greater opportunities for cycle access into the City Centre from peripheral or longer distances. | 2i, 3iii, 5ii | • Cyclists<br>• Local stakeholders<br>• Visitors | • GCP - scheme promoter | • Completion of CSET Phase 2 | Project | Increase in the number of people cycling between Haverhill and Cambridge City Centre and interim rural towns and villages. |
| Improved journey quality and user experience | 1i, 1ii, | • Local stakeholders<br>• Commuters<br>• Visitors | • GCP - scheme promoter | • Completion of CSET Phase 2 | Project | Improvement in commuters' journey satisfaction along the A1307 corridor. |

Source: GCP

# 12 Monitoring and Evaluation

Monitoring and evaluation are essential parts of any infrastructure project. This 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. GCP have a responsibility to report on how funding is being utilised and how its expenditure represents value for money to the taxpayer and how spending aligns with the scheme objectives. This section outlines the Monitoring and Evaluation Plan for the CSET Phase 2 project.

The DfT guidance 'Monitoring and Evaluation Framework for Local Authority Major Schemes' forms the basis of this monitoring and evaluation strategy, alongside GCP's Assurance Framework.

The DfT guidance outlines three tiers of monitoring and evaluation, they are:

- Standard monitoring (all schemes);
- Enhanced monitoring (schemes above £50m or which are anticipated to have a significant impact on particular indicators); and
- Fuller evaluation (schemes above £50m and where the scheme is considered to be either innovative, have an adjusted BCR of less than 2, or significant potential risks and sensitivities that may impact delivery or the realisation of benefits. The generation of evidence to inform key evidence gaps is also a criterion for fuller evaluation).

It is currently recommended for CSET Phase 2 to broadly follow the DfT's enhanced monitoring practice as the total scheme cost, from inception in 2015 through to completion in 2025, of £132.3m exceeds the £50m mentioned in the DfT framework. This is shown in Table 12.1 below.

Following the enhanced monitoring guidance, the scheme will be monitored against a set of standard measures. 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 infrastructure built, bus services delivered);
- Outcomes (i.e. intermediate effects, such as changes in traffic flows, modal shifts); and
- Impacts (i.e. longer-term effects on wider social and economic outcomes, such as supporting economic growth).

Upon the development of final scheme specifics at FBC stage, the monitoring and evaluation plan will be reviewed and re-confirmed.

**Table 12.1: Components of Enhanced Monitoring**

| Item | Stage | Type of Information Provided | Data Collection Timing | Rationale |
|---|---|---|---|---|
| Scheme build | Input | • Programme/project plan assessment<br>• Stakeholder management approaches<br>• A review of the risk register and assessment of the impacts<br>• Assessment whether the scheme is on track | During delivery | Knowledge |
| Delivered scheme | Output | • Full description of scheme outputs<br>• Identification of any changes to the scheme since funding approval<br>• Identification of any changes to assumptions<br>• Assessment of whether the scheme has reached the intended beneficiaries<br>• Identification of changes to mitigation measures | During delivery/post opening | Accountability |
| Costs | Input | • Outturn investment costs<br>• Analysis of risk in the elements of investment costs<br>• Identification of cost elements with savings<br>• Analysis for cost elements with overruns<br>• Outturn operating costs<br>• Outturn maintenance or other capital costs | During delivery/post opening | Accountability |
| Scheme Objectives | Output/ Outcome/ Impact | • Identification of the main objectives | Pre or during delivery / post opening (up to 5 years) | Accountability |
| Travel demand | Outcome | • Junction delay across the network<br>• Patronage of the public transport system in the area<br>• Counts of pedestrians and cyclists | Pre or during delivery / post opening (up to 5 years) | Knowledge/ Accountability |
| Travel times and reliability | Outcome | • Travel times in the corridors of interest<br>• Junction delay across the network | Pre or during delivery / post opening (up to 5 years) | Knowledge/ Accountability |
| Impact on the economy | Impact | • Travel times/accountability changes to businesses<br>• Employment levels and<br>• Rental values | Pre or during delivery / post opening (up to 5 years) | Knowledge/ Accountability |
| Noise | Impact | • 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 | • Effect of the schemes on local air quality in the area of interest. | Pre or during delivery/post opening (up to 5 years) | Knowledge/ Accountability |
| Accidents | Impact | • 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: Mott MacDonald

## 12.1 Reporting

The GCP Executive Board will need to agree the proposed plan as part of the 'sign off' process and ensure that subsequent evaluation is undertaken in line with guidance and will have a role in the scrutiny and review of findings. To evaluate the impact and understand the effectiveness of the scheme in meeting its objectives, GCP will arrange to collect and publish relevant data, comparing the conditions before and after scheme opening.

GCP will publish an initial report based on data collected at least one-year post scheme opening, and a final report based on further data collected approximately three years after scheme opening. The results of the evaluation will be independently reviewed and will be made available, including publication on the relevant website.

Data collection may involve using nationally purchased datasets such as Trafficmaster and data provided by bus operators, as well as specifically commissioned surveys near sites of influence. For each objective, at least one indicator is proposed to allow the performance of any scheme that is delivered to be measured over time, as shown in Table 12.3.

## 12.2 Evaluation

To evaluate the success of the scheme, and whether the objectives defined for CSET have been met, a structured outline monitoring and evaluation plan has been established which is divided into two parts:

- Monitoring of project delivery, which focuses on scheme inputs and outputs; and
- 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 12.2.

**Table 12.2: Monitoring of Project Delivery (Inputs and Outputs)**

| Aspect of Project Delivery | Method of Monitoring | Timeframe | Responsibility |
|---|---|---|---|
| Delivery of CSET Phase 2 to timeframe | • Programme/project plan assessment<br>• Review of risk register and assessment of impacts<br>• Project review during scheme design and build.<br>• Site inspections | Ongoing throughout delivery and construction | GCP |
| Delivery of CSET Phase 2 to budget | • Programme/project plan assessment<br>• Identification of any changes to assumptions.<br>• Analysis of risk in the elements of costs.<br>• Project review during scheme design and build.<br>• Site inspections | Ongoing throughout delivery and construction | GCP |
| Delivery of CSET Phase 2 to specification | • Programme/project plan assessment<br>• Review of risk register and assessment of impacts<br>• Project review during scheme design and build.<br>• Site inspections | Ongoing throughout delivery and construction | GCP |

Source: Mott MacDonald

Table 12.3 below shows how the achievement of scheme objectives will be monitored. Each objective has a performance indicator which acts a proxy for the success of the scheme. The methodology for the associated data collection is also listed.

## Table 12.3: Monitoring of Meeting Objectives (Outcomes and Impacts)

| Main Objective | Sub-Objective | Performance Indicator | Methodology | Timescale |
|---|---|---|---|---|
| Support the continued growth of Cambridge and south east Cambridge | Deliver journey time savings for commuters travelling by public transport to job opportunities in south east Cambridge and central Cambridge | • Public transport journey times for commuter journeys | • Analysis of bus journey times from Haverhill to CBC, Granta Park, Babraham Research Park and central Cambridge | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| | Improve journey time reliability for public transport users along the A1307 corridor | • Journey time reliability for journeys undertaken by public transport | • Analysis of bus journey times and reliability from Haverhill to CBC, Granta Park, Babraham Research Park and central Cambridge | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| | Provide the transport infrastructure necessary to sustain economic growth | • Economic growth across south east Cambridge | • Market Analysis Study | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| Relieve congestion and improve air quality in south east Cambridge | Encourage use of sustainable transport modes for journeys through south east Cambridge and central Cambridge | • Number of people cycling and walking<br>• Public transport patronage | • NMU counts and active travel surveys<br>• Analysis of bus patronage data from relevant bus operators | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| | Enhance quality of life by relieving congestion and improving air quality in south east Cambridge | • Number of reported health problems associated with traffic congestion- including respirator and health related illnesses in south east Cambridge<br>• Levels of $PM^{10}$ and $NO^{2}$ in study area. | • Analysis of air quality receptors in south east Cambridge<br>• Statistical analysis | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| | Relieve congestion at network pinch points | • Junction delay at identified pinch points along the A1307 corridor | • Trafficmaster data analysis | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| | Deliver a High Quality Public Transport (HQPT) offer between Cambridge and Haverhill | • Patronage of public transport along the A1307 between Cambridge and Haverhill | • Analysis of patronage from relevant public transport operators | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| | Increase frequency of public transport services during peak periods | • Number of public transport services during peak periods | • Analysis of public transport frequency during peak periods | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |

## Table 12.3: Monitoring of Meeting Objectives (Outcomes and Impacts)

| | | | | |
|---|---|---|---|---|
| Improve active travel infrastructure and public transport provision in south east Cambridge | Reduce severance for cyclists, pedestrians and equestrians | • Number of cyclists, pedestrians and equestrians along the A1307 corridor<br>• Number of crossing movements by cyclists, pedestrians and equestrians along the A1307 corridor | • NMU counts and active travel surveys | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| | Increase uptake of sustainable transport modes for commuter journeys | • Number of cyclists, pedestrians and equestrians along the A1307 corridor<br>• Reduction in private car journeys | • NMU counts and active travel surveys<br>• ATC counts | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| Improve road safety for all users of the A1307 corridor | Reduce the number of accidents at identified accident cluster sites along the corridor | • Number of reported accidents at identified accident cluster sites<br>• Number of KSI along the A1307 | • Accident data analysis | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| | Reduce the number of speed related incidents along the corridor | • Number of reported accidents related to speed | • Accident data analysis | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| | Improve the safety of crossing movements for cyclists, pedestrians and equestrians to encourage use of these modes | • Number of cyclists, pedestrians and equestrians along the A1307 corridor<br>• Number of crossing movements by cyclists, pedestrians and equestrians along the A1307 corridor | • NMU counts and active travel surveys | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |
| | Provide improved access to Granta Park, Addenbrooke's Hospital, Cambridge Biomedical Campus (CBC) and other employment sites in south east Cambridge | • Uptake of employment opportunities at employment sites in south east Cambridge | • Market Analysis Study | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |

**Table 12.3: Monitoring of Meeting Objectives (Outcomes and Impacts)**

| | | | | |
|---|---|---|---|---|
| Improve connectivity to employment sites in south east Cambridge and central Cambridge | Increase modal options for commuters travelling to and from employment sites in south east Cambridge and central Cambridge by delivering a HQPT network and improved active travel route for users | • Number of cyclists and pedestrians travelling to CBC, Granta Park, Babraham Research Campus and central Cambridge<br>• Patronage of public transport services serving CBC, Granta Park, Babraham Research Campus and central Cambridge | • NMU counts and active travel surveys<br>• Analysis of patronage from relevant public transport operators | Prior to or during delivery to assess baseline data and 1 and 3 years post completion |

Source: Mott MacDonald

# 13 Summary

- CSET Phase 2 is being promoted and managed by the GCP, the delivery body for the Cambridge City Deal comprised of representatives from several partner organisations who form an Executive Board and Joint Assembly.
- The GCP Transport Projects Board is responsible for governing all major transport schemes being delivered as part of the City Deal, whilst the Mayor and the Cambridgeshire and Peterborough Combined Authority (CPCA) have power over certain transport functions.
- The strategic management levels include the GCP Executive Board and Joint Assembly, the Transport Projects Board, and the Transport Programme Manager. Technical issues are addressed by the CSET Phase 2 Project Delivery Team, overseen by the appointed Project Manager.
- The Project Delivery team will manage the delivery of CSET Phase 2. The Project Delivery Team will be responsible for the day to day delivery of the scheme and will ensure technical and financial control.
- The GCP Key Decision Framework aligns with the DfT Business Case process and RIBA work stages. The OBC currently aligns with the Feasibility Stage of the GCP Key Decision Framework with this document intended to allow the scheme to reach GCP's Key Decision Point 4 (approval of preferred option) and progress to the Decision Stage.
- The approvals process at each development phase dictates that the project must pass through several Gateway Reviews. The assurance process is set out in the Draft Assurance Framework for the City Deal. The scheme will also pass through a total of three business case stages as part of the approval process. The SOBC has previously been approved however the OBC and FBC still require approval for the scheme to be funded.
- Risk management is an integral element of project management and is crucial to the achievement of objectives (time, cost, scope). The risk management methodology identified in this section draws on industry standard guidance, including ISO 31000:2009, BSI 31100:2011, Management of Risk, Practice Standard for Project Risk Management. Scope is the highest priority, followed by cost and then time. All risks for the project have been reviewed with mitigation measures outlined to reduce the potential impact on the project.
- Public and stakeholder consultation is essential with stakeholders grouped into four groups based on their influence and interest. The four overarching approaches to these stakeholders are: manage closely; keep satisfied; keep informed; and monitor.
- Multi-channel consultations occurred at the SOBC and OBC stages. The OBC consultation found a majority of respondents supported the scheme proposals in general, with the most support shown for Travel Hub Site B. Out of the five route options consulted on, the Brown route received the highest levels of support, closely followed by the Pink route; both routes would serve Site B.
- An outline Benefits Realisation Plan has been produced defining how the identified benefits of CSET Phase 2 align with the scheme objectives, who the key beneficiaries would be, and the outputs required to realise the benefits.
- Monitoring and evaluation provide an opportunity to improve performance by reviewing past and current activities. The DfT guidance 'Monitoring and Evaluation Framework for Local Authority Major Schemes' forms the basis of this monitoring and evaluation strategy, alongside GCP's Assurance Framework.

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