



# **Cambridge South East Transport Phase 2**

Outline Business Case

Appendix B: Appraisal Specification Report

15 May 2020



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# Contents

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>Introduction</b>   | <b>1</b>  |
| 1.1      | Purpose of the Appraisal Specification Report               | 1         |
| 1.2      | This Report   | 1         |
| <b>2</b> | <b>Strategic Case</b>                                       | <b>2</b>  |
| 2.1      | Context   | 2         |
| 2.2      | Scheme Objectives   | 2         |
| 2.3      | Option Generation and Assessment                            | 3         |
| <b>3</b> | <b>Economic Case</b>  | <b>8</b>  |
| 3.1      | Transport Benefits Assessment                               | 8         |
| 3.2      | Wider Economic Assessment                                   | 9         |
| 3.3      | Environmental Assessment                                    | 11        |
| 3.4      | Deliverability Assessment                                   | 12        |
| 3.5      | Economic Analysis of Preferred Option                       | 13        |
| <b>4</b> | <b>Financial Case</b>                                       | <b>15</b> |
| 4.1      | Costs   | 15        |
| 4.2      | Quantified Risk   | 15        |
| 4.3      | Funding Arrangements  | 15        |
| <b>5</b> | <b>Commercial Case</b>                                      | <b>16</b> |
| 5.1      | Procurement Strategy  | 16        |
| 5.2      | Procurement Options   | 16        |
| 5.3      | Payment Mechanisms  | 17        |
| 5.4      | Risk Allocation and Transfer                                | 17        |
| 5.5      | Contract Management   | 18        |
| <b>6</b> | <b>Management Case</b>                                      | <b>19</b> |
| 6.1      | Governance  | 19        |
| 6.2      | Project Assurance and Approvals                             | 19        |
| 6.3      | Project Plan  | 19        |
| 6.4      | Risk Management   | 20        |
| 6.5      | Stakeholder Management, Benefits Realisation and Monitoring | 20        |
| <b>7</b> | <b>Deliverables</b>   | <b>21</b> |



# 1 Introduction

This report provides the Appraisal Specification Report (ASR) in support of the Outline Business Case (OBC) being prepared for the Cambridge South East Transport Study (CSETS) Phase 2.

## 1.1 Purpose of the Appraisal Specification Report

This ASR provides an early template for business case documentation and it:

- Helps to minimise subsequent delays by gaining agreement on processes from all relevant parties;
- Confirms the approach to quantified elements of the business case, such as the Economic Case appraisal and estimation of Wider Economic Benefits (WEBs). This includes the approach to demand forecasting and modelling;
- Defines the level of detail required on cost related elements; and
- Includes consultation with relevant statutory environmental bodies. This may also entail how differences in environmental impact can be captured and monetised as appropriate in the OBC.

## 1.2 This Report

Following the initial introductory section, this report continues with the critical considerations for the five cases:

- Section 2: Strategic Case
- Section 3: Economic Case
- Section 4: Financial Case
- Section 5: Commercial Case
- Section 6: Management Case
- Section 7: Deliverables



## 2 Strategic Case

The Strategic Case will articulate both the transport-related and wider strategic problems and opportunities for the A1307 corridor to the south east of Cambridge and determine a rationale for intervention. In achieving this, the key issues and opportunities that the scheme is aiming to address will be clearly defined along with scheme objectives, and the scheme's fit with wider strategic objectives outlined with a review of local, regional and national policy.

### 2.1 Context

#### 2.1.1 Evidence Review

An evidence review will be undertaken; it will compile and analyse relevant data sources, maps and trends that can set the context for intervention. This will principally include:

- Socio-economic data review;
- Planned development;
- Environmental review;
- How people travel;
- Congestion and flows;
- Highways infrastructure; and
- Wider transport provision.

#### 2.1.2 Policy Review

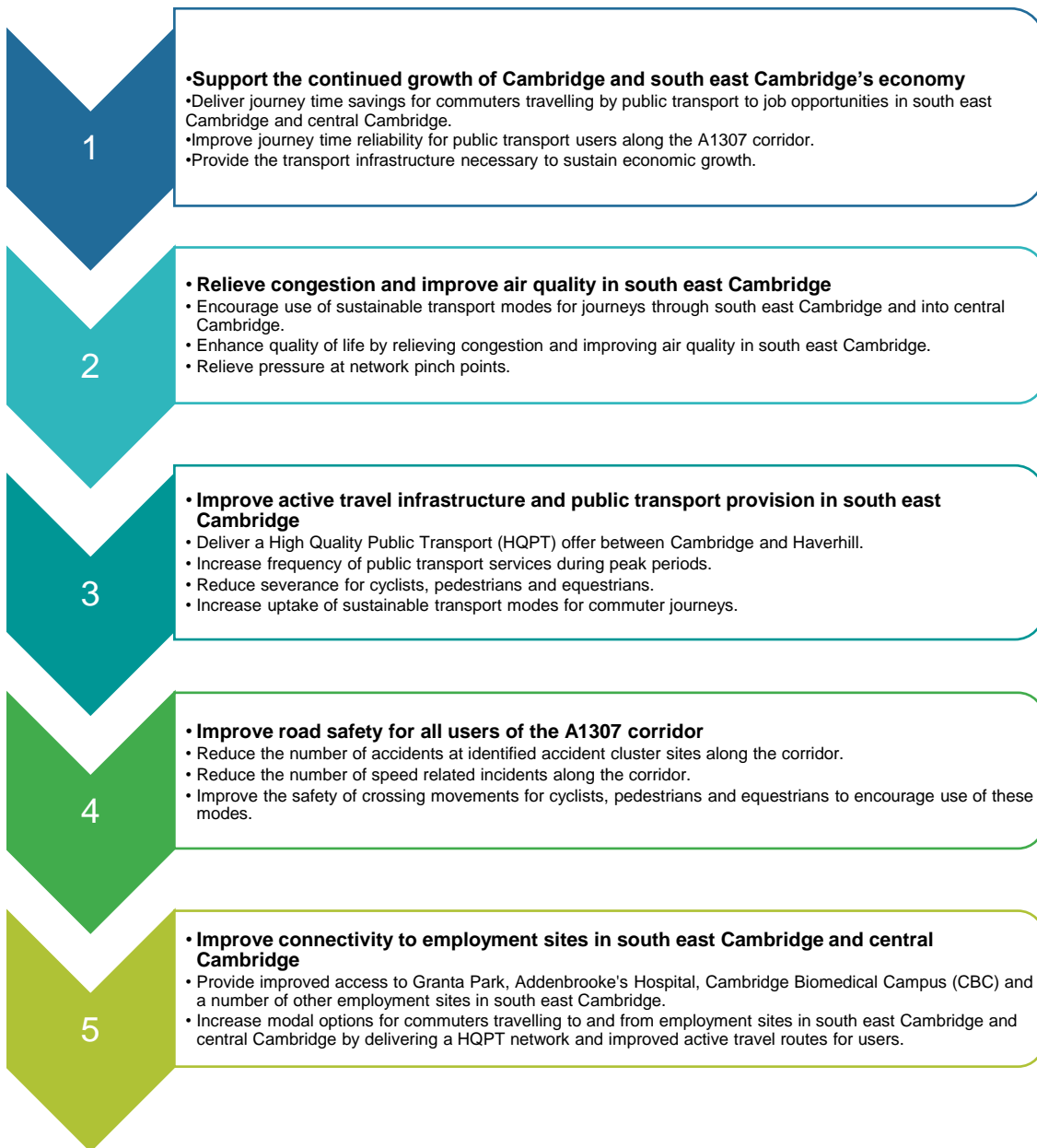
An updated review of strategy and policy will be undertaken, building on the existing evidence base presented in the A1307 Cambridge to Haverhill OBC, developed by WSP and published in September 2018. This exercise will provide an overview of national, regional and local policy and strategy that frames transport investment in south east Cambridge.

Together, both exercises will establish a clear rationale for intervention and establish why investment along the A1307 corridor is required. It is anticipated that this will focus on the need to relieve congestion, improve active travel infrastructure and deliver improvements to the provision and reliability of public transport.

### 2.2 Scheme Objectives

The wider GCP aims and CSETS aims as defined in the interim OBC report developed by WSP will be reviewed and confirmed. In consultation with GCP, Mott MacDonald have developed scheme specific SMART objectives that align with wider aims and the evidence-based need for intervention which will be set out in the Strategic Case. These can be seen in Figure 1. The agreed objectives will be set out in this section of the OBC, along with details of the objective setting process which has been undertaken.

**Figure 1: Proposed CSETS Phase 2 Objectives**



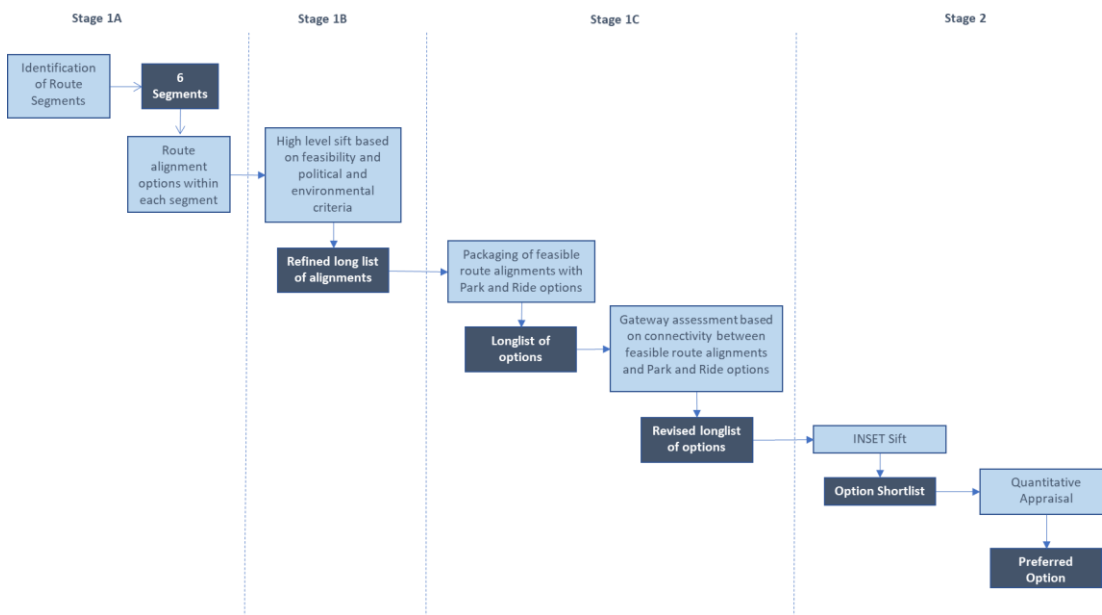
Source: GCP/Mott MacDonald

### 2.3 Option Generation and Assessment

The option generation and sifting process undertaken by WSP, prior to Mott MacDonald's OBC commission will be documented for context and then extended to ensure a robust appraisal process has been undertaken.

In order to ensure a detailed and robust appraisal process is undertaken, a 4-stage options appraisal process has been developed for Phase 2. The proposed process will allow for provision of evidence-based appraisal at each stage. The four stages of the option generation and assessment process are illustrated in Figure 2.

**Figure 2: Options Assessment Framework**



Source: Mott MacDonald

The process set out above has been aligned with the Department for Transport (DfT) transport appraisal process. The three stages of the DfT transport appraisal process are:

- Stage 1 - Option Development. This involves identifying the need for intervention and developing options to address a clear set of locally developed objectives which express desired outcomes. These are then sifted for the better performing options to be taken on to further detailed appraisal in Stage 2.
- Stage 2 - Further appraisal of a small number of better performing options in order to obtain sufficient information to enable decision makers to make rational and auditable decisions about whether to proceed with an intervention. The focus of analysis is on estimating the likely performance and impact of intervention(s) in sufficient detail.
- Stage 3 - Implementation, Monitoring and Evaluation.

Stages 1A, 1B and 1C of the Phase 2 appraisal process can be seen to align with Stage 1 of the DfT process - Option Development, whilst Stage 2 of the Phase 2 appraisal process set out in Figure 2 directly aligns with Stage 2 of the DfT appraisal process - Further appraisal.

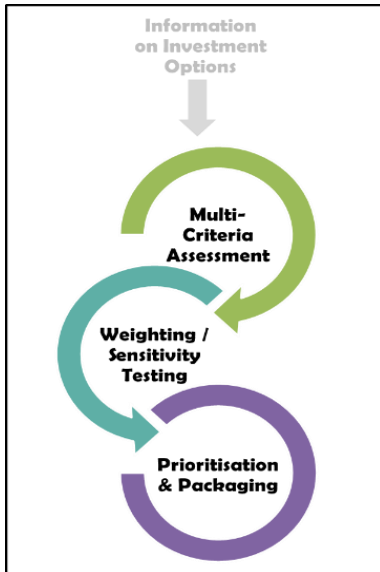
### 2.3.1 Stage 1

Building upon work undertaken at Strategic Outline Business Case (SOBC) stage by WSP, prior to Mott MacDonald's OBC commission, Mott MacDonald will identify a preferred option for Phase 2 of the CSETS through a four-stage process. The first of which will involve route segmentation.

At SOBC stage WSP divided the proposed Phase 2 route into key route segments. Mott MacDonald will review work undertaken on route segmentation to date and determine six, well defined route segments. Work will then be undertaken to establish the different route alignment options within each of the six identified route segments. Once all potential route alignments within each route segment have been identified, a high-level INSET sift will be undertaken.

Mott MacDonald’s Investment Sifting and Evaluation Tool (INSET) is a decision support toolkit developed in-house by Mott MacDonald and is designed to be simple, flexible, replicable and transparent. An overview of the tool can be seen in Figure 3. INSET is based on Green Book compliant Multi-Criteria Decision Analysis (MCDA). INSET draws on standard tools for comparing scheme options, primarily DfT’s EAST (Early Assessment and Sifting Tool) and adds functionality to these existing tools. Principally, INSET uses a set of assessment criteria to appraise each of the design options.

**Figure 3: Mott MacDonald’s Investment Sifting and Evaluation Tool (INSET)**



Source: Mott MacDonald

High level appraisal criteria have been established for the purposes of Stage 1B appraisal. Appraisal criteria have been developed against four assessment themes: Transport User Benefits, Environment, Deliverability and Social Impacts (Quality of life). Assessment themes and criteria which will be used for the Stage 1B sift are summarised below in Table 1.

**Table 1: Stage 1B Sift Criteria**

| Theme                          | Main Criteria          |                                      |   |                            |  |                 |                   |
|--------------------------------|------------------------|--------------------------------------|---|----------------------------|--|-----------------|-------------------|
| <b>Transport User Benefits</b> | Reliability of journey | Journey time (scheme users)          | Route flexibility - Links into CAM            | Impact on existing traffic | Degree of route segregation                      |                 |                   |
| <b>Environment</b>             | Visual Impact          | Noise                                | Air Quality                                   | Biodiversity               | Heritage   | Greenbelt       | Water/ flood Risk |
| <b>Deliverability</b>          | Public acceptability   | Scheme cost                          | Engineering feasibility - construction method | Land acquisition required  | Impact on local road network during construction | Future-proofing |                   |
| <b>Social Impacts</b>          | Safety                 | Links to Cambridge Biomedical Campus | Links to Babraham Research Park               | Links to Granta Park       | Loss of homes or property                        |                 |                   |

Source: Mott MacDonald

A seven point-scoring scale (+3 to -3 with 0 being neutral) will be used to capture the dis-benefits and benefits of each of the route alignment options. At Stage 1B weighting will be applied equally across all themes and criteria.

The assessment will be carried out by a range of Mott MacDonald staff who have extensive experience and knowledge of the CSETS, the geographic area and INSET as an appraisal tool. Scoring will be primarily assigned on a qualitative basis at this stage, scores will be assigned based on informed judgement and in-house expertise with similar schemes. This is except for the Environment theme, where it will possible to assign scores based on quantitative metrics generated from available information sources such as flood risk mapping. Further details of the rationale used to assign scores will be included in the CSETS Phase 2 Options Appraisal Report (OAR).

The best performing alignment options will proceed to Stage 1C, generating a refined long list of route alignments to be packaged at the next stage of the process.

Route alignment options which are progressed to Stage 1C will be packaged with Park and Ride site options, beginning the development of holistic scheme options for Phase 2. Route alignment options and Park and Ride site options will be packaged together to produce a longlist of options.

The longlist of options will then be progressed through a gateway assessment based on connectivity between feasible route alignments and Park and Ride site options. Options which are deemed not to be feasible when packaged together as a whole scheme will be discounted at this stage, and excluded from further appraisal, producing a revised longlist of options.

### 2.3.2 Stage 2

A second, more complex, INSET sift will then be undertaken to appraise the revised long list of options and produce an options shortlist. Assessment themes for Stage 2 appraisal will be developed in full at the completion of Stage 1 to ensure they are fit for purpose. These themes will be tailored appropriately for the purposes of this scheme, but the following themes have been used for projects of similar size, value and scope.

- Alignment with objectives;
- Policy alignment;
- Transport benefits;
- Wider economic benefits;
- Environmental impacts; and
- Deliverability.

Criteria will be developed in consultation with GCP under these themes and options will be scored as to how well they meet or align with the criteria. A 7-point scoring scale will be used again at Stage 2. The assessment of the options at this stage will be both qualitative and quantitative.

Both the themes and the criteria developed under each theme will be weighted at this stage to capture their relative importance to each other. Weighting will again be developed in consultation with GCP.

The top three performing options will be shortlisted and progressed to the next stage of appraisal, compared to a Do-Minimum option. Quantitative appraisal will then be undertaken to

determine the preferred option. The approach to the quantitative appraisal process is outlined in the following section.

The 4-stage option generation and appraisal process will be documented in an accompanying Options Appraisal Report (OAR) which will form part of the Strategic Case.

## 3 Economic Case

The Economic Case will assess the shortlisted options under the preferred strategy which will include a Do-Minimum option as well as several Do-Something options. The assessment will identify cost savings, and the resulting Value for Money (VfM), to fulfil HM Treasury's requirements for appraisal and demonstrate VfM in the use of taxpayers' money. It will take into consideration Environmental Impacts and the value of Wider Economic Benefits in this process.

### 3.1 Transport Benefits Assessment

#### 3.1.1 Data/Survey Requirements

Additional surveys consisting of automatic traffic counts and manual classified counts are proposed for March 2019 to ensure that suitable data is available for the assessment of Phase 2.

The CSRM D-series SATURN model base year is 2015, earlier than that of the VISSIM base year model being developed. The 2015 model flows will be compared against the available local study area count data to understand any changes between 2015 and 2018/2019.

#### 3.1.2 Modelling and Forecasting

##### 3.1.2.1 Model calibration/validation

The CSRM D-series highway base SATURN model received from Atkins has been re-calibrated for the A428/A1303; A10/Hauxton Road and A1307 corridors to ensure it is a suitable and consistent base for assessing schemes along all these corridors. This included a few additional links along the A1303 Madingley Road, additional zoning detail along Grange Road and an additional zone within Trumpington P&R to split out the John Lewis collection point into its own zone. Further updates to signal timings, junction layouts and turning flows were carried out to improve journey times and screen line flow calibration/validation along all three corridors.

A public transport model will be prepared using CUBE software. A synthetic matrix based on a previous public transport model has been prepared as well as a matrix based on surveys carried out. These two sets of matrices will be combined, and the model will be calibrated/validated in line with guidance.

##### 3.1.2.2 Forecasting

The Phase 1 highway improvements will be added to the D-series foundation case models received from Atkins for 2026 and 2036 to create Do-Minimum (DM) highway models. Three Do-Something options will be modelled for two forecast years.

The highway model inputs will be prepared before passing them to Atkins for CSRM demand model runs. The differences between the forecast matrices output from the demand model and the D-series base year model will be calculated and applied to the re-calibrated base year highway and public transport matrices to ensure any zone changes or flow adjustments undertaken as part of the base model calibration are reflected.

These revised forecast matrices will then be assigned to the forecast highway and public transport networks to provide the final assignments for each option. The outputs from these assignments will feed into the economic assessment.

### 3.1.2.3 Sensitivity testing

Sensitivity testing is anticipated to be carried out for high growth scenarios, assuming a level of development consistent with the Cambridgeshire and Peterborough Independent Economic Review report (CPIERS growth).

### 3.1.3 Appraisal Assumptions

Time, distance, and trip/passenger matrices will be output from the highway and public transport models and feed into the TUBA economic assessment of user benefits. The level of user benefits will be compared to the scheme cost for each option to provide a Benefit Cost Ratio (BCR).

### 3.1.4 Value for Money Statement

A preferred option will be identified using appraisal scores generated from the Transport Benefits Assessment and the other themes covered in Sections 2 and 3 of this report. This will be documented in detail in the OAR and summarised in the Economic Case. However, the Economic Case will focus on the merits of the preferred option.

## 3.2 Wider Economic Assessment

Mott MacDonald's proprietary Transparent Economic Assessment Model (TEAM) will be applied to assess the impacts of Phase 2 of the CSETS, primarily in terms of jobs, GVA and the potential to bring forward employment and housing sites for development.

Our approach consists of two key stages; the selection of sites that may be impacted by the scheme, and the analysis of those sites using TEAM to determine potential Wider Economic Benefits.

### 3.2.1 Land Use Analysis - Site Level Analysis

This first stage will focus on identifying development sites in and around the scheme that could potentially be unlocked for development or where development may be brought forward sooner than would otherwise be the case. Our analysis of each development site will focus on identifying:

- Proposed end uses (i.e. office, industrial, retail, leisure, residential)
- Potential development footprints and density of development (including the number of residential units where appropriate)
- Any existing job estimates that have been prepared for proposed/potential developments
- Timescales and phasing.
- Level of dependency with the proposed scheme.

We will review key local planning and economic development documents, working closely with GCP and where necessary engage with property agents, developers, and other key stakeholders in the area to ensure we have relevant up to date information to support this initial analysis.

### 3.2.2 Land Use - Economic Impact Assessment Analysis (TEAM)

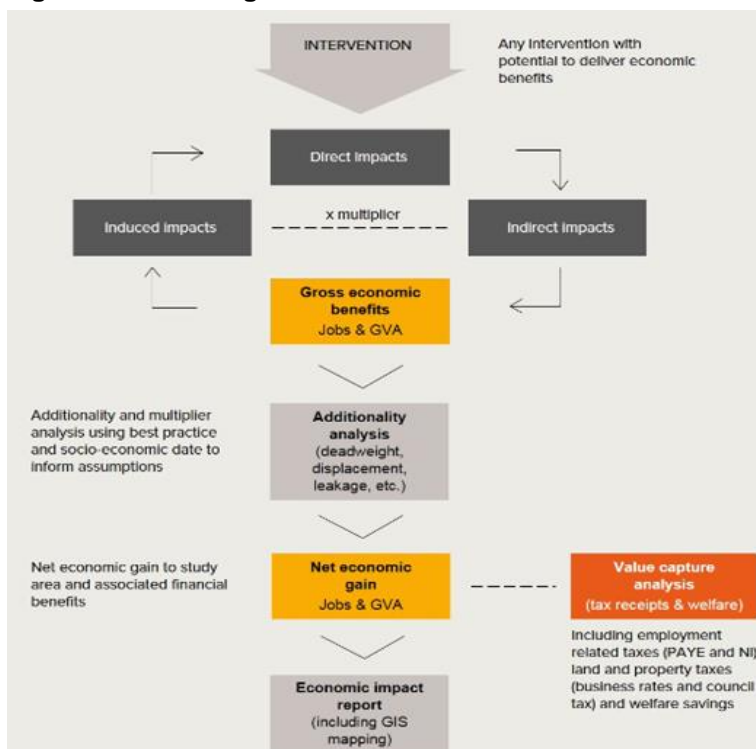
Using the site information gathered in the first stage we will then use TEAM to assess the potential gross and net economic benefits (in terms of jobs and GVA) to the local economy associated with developing those sites.



The Transparent Economic Assessment Model (TEAM) has been proposed to assess this scheme as it produces a robust and comprehensive assessment of the economic impacts of land-use change that can result from this scheme. TEAM enables the assessment of employment impacts of a scheme and quantifies the increase in economic output, in the form of Gross Value Added (GVA), an internationally-recognised metric of production. TEAM was produced and is operated by experts in economic development and regeneration and was developed in line with HM Treasury Green Book principles and follows guidance from Homes England and the Department for Housing, Communities and Local Government (DHCLG). This ensures that TEAM is a robust and methodologically strong way to assess the Wider Economic Benefits of a scheme such as this. TEAM has been used on hundreds of schemes all over the world and has assisted in securing public investment of more than £250m in the UK alone. Among TEAM's key differentiators against rival models is its transparency. TEAM assessments clearly set out the inputs, assumptions and outputs to clients in order to enable clear understanding of the assessment and to allow clients, appraisers and funding agencies to be confident in the validity and reliability of the assessment.

In this way, TEAM rejects the conventional 'black box' approach to modelling, where the process of the assessment and the assumptions applied within it are unclear and the reliability of the assessment can be called into question. TEAM produces a robust assessment of the direct, indirect and induced employment impacts a scheme can support as well as the impact on business rates and welfare within the local economy. TEAM is a tried and tested model for assessing the wider economic benefits of transport schemes and we feel it is well suited to this project as it provides a methodologically robust appraisal that is clear, transparent and reliable, enabling greater understanding of the analysis undertaken and of the full wider economic benefits a scheme such as this can support. The TEAM process is shown below.

**Figure 4: TEAM Logic Model**



We will also assess the potential tax and welfare impacts associated with development and job creation, including employment and property related taxes (PAYE, Business Rates and Council Tax) and savings to the Exchequer resulting from people moving from benefits into employment.

A preferred option will be identified using appraisal scores generated from the Wider Economic Assessment and other assessment themes covered in Sections 2 and 3 of this report. This will be documented in the OAR and summarised in the Economic Case. However, the Economic Case will focus on the merits of the preferred option.

### 3.3 Environmental Assessment

#### 3.3.1 Data/Survey Requirements

The first stage of environmental assessment will be to define what desktop studies will be undertaken, using existing data sources to identify environmental constraints/baseline conditions; these will include:

- Existing baseline air quality conditions (especially if near an Air Quality Management Area)
- Existing noise baseline information (if available)
- Historic Environment Record
- Biological records office information
- MAGIC (Multi Agency Geographic information for the Countryside)
- Local planning policies related to environment
- Identification of areas with special protective measures/policies (e.g. Conservation Areas and Green Belt)
- Any existing users of water resources such as licensed water abstractions, surface and groundwater discharge consents, private abstractions registered by local authority
- Flood risk
- Historic land use (especially any information on waste sites)
- Land quality/soils – identification of soil classification

Following on from this, the level of environmental surveys required for the OBC will be defined, making sure a proportionate approach is taken. As a minimum we will allow for:

- A Phase 1 Habitat Survey
- A selection of key landscape viewpoint images (to inform consultation)
- Seeking to address any gaps in Air Quality/Noise monitoring that are key to OBC assessment (i.e. if we have no information in large sections where there could be sensitive receptors, or if there are specific community concerns that would benefit from more up to date/local information).

#### 3.3.2 Approach to Assessment

After this review and gathering of data, the interaction between environment and other disciplines will be identified as indicated in the table below. This shows where primary data is required for environmental topics for OBC assessment and identifies what information is required.

| Topic       | Traffic Modelling | Design | Social/Land use information | Planning |
|-------------|-------------------|--------|-----------------------------|----------|
| Air Quality | Yes               | Yes    | Yes                         | Yes      |

| Topic               | Traffic Modelling | Design | Social/Land use information | Planning |
|---------------------|-------------------|--------|-----------------------------|----------|
| Biodiversity        |                   | Yes    |                             | Yes      |
| Greenhouse Gas      | Yes               | Yes    |                             | Yes      |
| Heritage            |                   | Yes    |                             | Yes      |
| Landscape           |                   | Yes    |                             | Yes      |
| Noise and vibration | Yes               | Yes    | Yes                         | Yes      |
| Water               | Yes               | Yes    |                             | Yes      |

An assessment methodology for the main topics listed above will be developed that will generally follow WebTAG worksheets and we will identify the outputs required for INSET, in line with the Assessment Criteria that fall under the Environmental Impacts theme. The environmental appraisal will carry out NPV calculations for the preferred scheme based on transport modelling providing the appropriate AADT/AAWT and %HGV information.

A description will be provided in respect of environmental constraints for the study area based on desk studies and site works. This will be covered by map(s) and minimal descriptions to illustrate the following:

- Sensitive social receptors (schools, hospitals etc – linked to air quality / noise);
- Air quality management areas (if applicable) and air quality monitoring locations (and contours/mapping if available);
- Noise monitoring locations (and results if available);
- Water resources including any Source Protection Zones and licensed abstractions using information provided by the Environment Agency;
- Flood zones (Environment Agency and local authority information);
- All protected sites related to biodiversity;
- Tree Preservation Order sites;
- Public Rights of Way (PROW);
- Historic Environment Records (HER) records to show all listed buildings/scheduled monuments and other notable heritage assets;
- Green Belt;
- Conservation Areas; and
- Any other location specific sensitivities/constraints not included above

A preferred option will be identified using appraisal scores generated from the Environmental Assessment and other assessment themes covered in Sections 2 and 3 of this report. This will be documented in the OAR and summarised in the Economic Case. However, the Economic Case will focus on the merits of the preferred option and will include NPV information relating to air quality, greenhouse gas and noise effects of the preferred option.

### 3.4 Deliverability Assessment

The deliverability assessment theme compares the feasibility and practicality of delivering each of the options as opposed to assessing benefits and alignment with policy and objectives. Criteria will be defined in accordance with development of the options but typically assessment criteria under the deliverability theme include the following:

- Cost;

- Risk;
- Physical land use constraints;
- Planning issues;
- Land ownership; and
- Public acceptability/support.

A preferred option will be identified taking into account appraisal scores generated from the Deliverability Assessment alongside the other assessment themes covered in Sections 2 and 3 of this report. This will be documented in the OAR and summarised in the Economic Case. However, the Economic Case will focus on the merits of the preferred option.

### 3.5 Economic Analysis of Preferred Option

#### 3.5.1 Confirmation of Transport and Wider Economic Benefits and Value for Money

Once a preferred option has been identified and any minor design and cost revisions made, a final transport BCR and an adjusted BCR (which includes wider and reliability impacts) will be calculated.

In addition to the economic assessment of user benefits undertaken for all options, the following benefits will be additionally calculated for the preferred option:

- Accident benefits
- Wider transport impact assessment
- Reliability
- Air quality
- Greenhouse gases
- Noise

Outputs from the traffic modelling will be fed into the assessment of each of the above. A Traffic Modelling and Economic Appraisal Report will be produced to accompany the OBC that will outline the modelling and appraisal process in detail.

Wider Economic Benefits will also be confirmed for the scheme and a Land Use and Economic Assessment report produced to accompany the OBC.

#### 3.5.2 Environmental Assessment Report

The Environmental Assessment Report will document the process and output from the Environmental Assessment discussed in Section 3.3.

#### 3.5.3 Social Impact (SI) Appraisal

SI appraisal covers the human experience of the transport scheme and its impact on wider society. Guidance is included in WebTAG Unit 4.1. The impacts considered are accidents, physical activity, security, severance, journey quality, option and non-use values, accessibility, and personal affordability.

Each SI is assessed using qualitative analysis, transport model outputs, and WebTAG recommended worksheets. The appraisal produces summary assessment scores for each social impact on a seven-point scale of beneficial, neutral or adverse impacts and these will be entered into the Appraisal Summary Table (AST) whilst the process and full results of the appraisal will be noted in a Social Impacts Appraisal Report which will accompany the OBC.

### 3.5.4 Distributional Impact (DI) Appraisal

DI appraisals consider the variance of a scheme's impact across different social groups. Both beneficial and/or adverse DIs of proposed interventions are considered, along with the identification of social groups likely to be affected. The impacts considered are user benefits, noise, air quality, accidents, security, severance, accessibility and personal affordability. The purpose of the DI is to assess whether these impacts disproportionately affect certain social groups.

A DI appraisal encompasses several stages. Step 1 consists of an initial screening process which examines the eight impacts and determines whether they need to be appraised further. This may be based upon professional judgement, or when certain criteria are triggered. Step 2A confirms the impact area extents for mapping of the impacts using GIS software. Step 2B identifies social groups and 2C identifies related amenities and trip attractors in the impact areas. Finally Step 3 appraises the results, usually quantitatively using outputs from the transport model, and provides an assessment of the impacts of the intervention. The process and full results of the appraisal will be noted in a Distributional Impacts Appraisal Report which will accompany the OBC.

## 4 Financial Case

The Financial Case will outline the affordability of Phase 2 of the CSETS, its funding arrangements and technical accounting issues. The case presents the financial profile of the scheme and an overview of how the scheme will be funded.

### 4.1 Costs

Mott MacDonald will be responsible for preparation of all high-level cost estimates for the shortlisted options to aid in the options assessment process, under the theme of deliverability.

Once a preferred option has been identified, detailed cost estimates will be prepared and broken down by cost type and year of programmed expenditure. A 60-year time horizon for the cost profile will likely be adopted. A Quantified Risk Assessment based on the risks identified in the risk register will be undertaken for the preferred option and applied to the overall scheme costs.

### 4.2 Quantified Risk

A risk workshop will be undertaken to identify risk associated with the Do-Something options advanced to the Economic Case. Key members of the project team will attend as well as GCP representatives. A risk register will be developed at an early stage of the project and maintained through all stages, ultimately permitting a Quantified Risk Assessment (QRA) to be undertaken. The exercise will enable an expected value of the cost of the scheme to be calculated. Risk will be quantified according to the probability of its occurrence and the severity of the impact if it was to occur. Costs will subsequently be adjusted for risk. A separate QRA report based on the risks in the risk register will be produced by Mott MacDonald's cost estimation team and will accompany the OBC.

### 4.3 Funding Arrangements

We will work with GCP to establish all sources of funding for the scheme including third-party contributions and any match funding. Any third-party contributions should be evidenced by letter of support/intent.

## 5 Commercial Case

The Commercial Case for Phase 2 of the CSETS provides evidence on the commercial viability of the proposal and the procurement strategy that will be used to engage the market. Here, risk allocation and transfer, contract timescales and implementation timescales, capability and skills of the team delivering the project are all documented.

### 5.1 Procurement Strategy

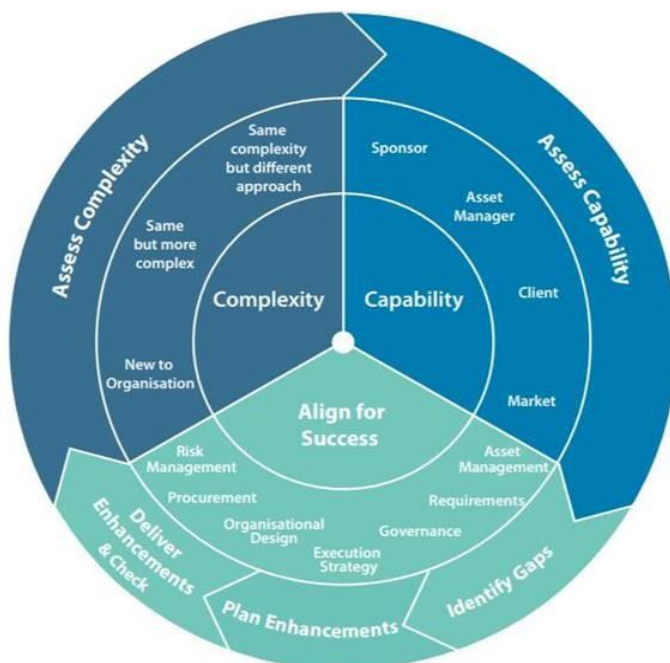
Procurement is an integral part of the project management process. The procurement strategy will be developed in consultation with GCP and be designed to ensure the following:

- Value for Money: CCC is under a duty to secure value for money for all of its transactions;
- Compliance with legislation: a wide variety of UK and European Union statutes and regulations apply to procurement;
- Avoidance of fraud and corruption: procurement must be visible and tightly controlled to limit potential fraud and avoid any suggestion of corruption; and
- Delivery of the GCP’s transport objectives: procurement contributes directly to the delivery of the GCP’s transport priorities.

### 5.2 Procurement Options

The Procurement Options to be considered and adopted by GCP should follow the Infrastructure Project Authority (IPA) Handbook on Improving Project Delivery - Project Initiation Routemap (Routemap).

**Figure 5: The Project Initiation Routemap**



The focus of Routemap is to help determine:

- Complexity and context of the delivery environment;
- Capability of current and required sponsor, client, asset manager and market; and
- Key considerations to enhance capability where complexity-capability gaps are identified.

Routemap is not a:

- Prescriptive process. It is meant to enable reflection on the project environment;
- Route to a single solution. It ensures that the “right” questions are asked at critical points in the project lifecycle;
- Replacement for existing assurance and review procedures, though its outcomes can support these;
- Maturity model for organisational capability building. However, applying Routemap on specific projects may identify organisational issues that need enhancing.

Routemap is aimed primarily at public or private sector sponsor and client organisations that deliver infrastructure projects. It provides particular value where a proposed project is either new in its nature to the participating organisations, is being delivered in a different way, or is on a significantly bigger scale than those previously undertaken.

It may be the case that following the Routemap assessment, that the project has all the necessary attributes for success and is well established in terms of the requirements, governance, organisational capability, procurement and delivery approaches.

For successful procurement, and to avoid identified causes of project failure, this project should be compared with projects of similar nature and magnitude and should have:

- Clear links between the project and the organisation’s key strategic priorities, including agreed measures of success;
- Clear senior management ownership and leadership;
- Effective engagement with stakeholders;
- Skills and a proven approach to project management and risk management;
- Attention paid to breaking development and implementation into manageable steps;
- Evaluation of proposals driven by long-term value for money (especially securing delivery of business benefits) rather than by initial price;
- Understanding of and contact with the supply industry at senior levels in the organisation; and
- Effective project team integration between clients, the supplier team and the supply chain.

The sponsors and clients of infrastructure projects have a key role to play in establishing the appropriate delivery environment, in order to create the foundations for project success.

### **5.3 Payment Mechanisms**

The proposed payment mechanisms and providers that are to be used to procure the scheme will be set out in this section.

### **5.4 Risk Allocation and Transfer**

This section will set out how each type of risk is to be shared amongst relevant parties for the scheme. This will assign the risks and associated mitigation measures identified in the risk



register. The risk register will be updated with the project's ongoing development and reviewed at regular project meetings.

## **5.5 Contract Management**

The contract management arrangements between the parties will be set out here. It is anticipated that the contract will be managed by GCP. There will be an internal project management team, including a project manager, project planner and communication and marketing officer.

## 6 Management Case

The Management Case will set out the project planning, governance structure, evidence of delivering similar projects, risk management, communications and stakeholder management. The primary purpose of this case is to establish if adequate resources are in place to ensure delivery on time, on budget and to specification.

### 6.1 Governance

This section will describe the key roles of those involved in the project delivery, lines of accountability and how they are resourced.

### 6.2 Project Assurance and Approvals

This section will set out the project plan, key assurances and approval milestones. It is anticipated that review points for the project will occur in accordance with key decision points which are the standardised governance approval gateways for all GCP projects. These are noted below, and it is recognised that the status of this project is at Phase 3, working toward Key Decision 3 in the context of overall project development and delivery.

**Table 2: Project Review Points**

| Review Point   | Date       |
|--|------------|
| Phase 1: Work needed to establish project (leading to Key Decision 1)                                  | TBC        |
| Phase 2: Work needed to identify outline concepts (leading to Key Decision 2)                          | TBC        |
| <b>Phase 3: Work needed to identify a preferred option (leading to Key Decision 3) Current Status</b>  | <b>TBC</b> |
| Phase 4: Work needed to achieve Full Business Case and statutory approvals (leading to Key Decision 4) | TBC        |
| Phase 5: Work needed to achieve final design scheme for approval (leading to Key Decision 5)           | TBC        |
| Phase 6: Work needed to construct the scheme and hand over to a final operator                         | TBC        |

Source: Mott MacDonald

### 6.3 Project Plan

The key milestones and progress will be documented, the key milestones are set out in the table below. Project dependencies and deliverables will also be noted in the Management Case. Accompanying detailed project delivery plans will also be provided as appendices.

**Table 3: Key Project Milestones**

| Milestone   | Date   |
|---|--|
| Technical work including options design and appraisal, environmental assessment | November 2018 to June 2019   |
| Surveys   | December 2018 to March 2019  |
| Cost estimation/QRA   | April 2019 to June 2019  |
| Transport Modelling   | February to May 2019   |
| Outline Business Case Development   | OAR- October 2018 to July 2019<br>OBC- January 2019 to December 2019 |
| Consultation  | September to October 2019  |

Source: Mott MacDonald

## 6.4 Risk Management

This section will set out the arrangements for risk management. An appropriate strategy will identify threats to project delivery and enable effective risk management actions to be assigned. A suitable risk management strategy will be agreed with GCP upon initiation of the project.

A separate Risk Register will accompany the OBC and will include programme as well as project risks. Risk categories will be developed in consultation with GCP, but typically they are:

- Strategic Programme Risks
- Funding Risks
- Environmental Risks
- Construction Risks

## 6.5 Stakeholder Management, Benefits Realisation and Monitoring

Key stakeholders will be identified, and a stakeholder engagement programme will be constructed in consultation with GCP and a Stakeholder Engagement and Consultation Plan developed to accompany the OBC and a follow-on Stakeholder Feedback report that documents responses to scheme proposals.

An outline Benefits Realisation Plan will also be included as an integral part of the Management Case; this will identify the benefits of the Phase 2 scheme and how they will be measured. Included will be the key beneficiaries of the scheme, outcomes, baseline measures, responsibility, and timeframes for the scheme objectives.

Outline arrangements for monitoring and evaluating the scheme will also be documented in a separate report, focusing on the impacts and outcomes of the scheme. Performance indicators will be assigned to each outcome and act as a proxy for the success of the scheme.

## 7 Deliverables

This section notes the suite of final deliverable documents that will be produced for Phase 2 of the CSETS by Mott MacDonald. It is understood that GCP will produce the Stakeholder Engagement and Consultation Plan and the Statement of Community Involvement which will document the responses and feedback to consultation.

- **Outline Business Case** using the DfT WebTAG compliant five-case model covering the:
  - Strategic Case;
  - Economic Case;
  - Financial Case;
  - Commercial Case; and
  - Management Case
- **Options Appraisal Report**, outlining the process of option generation and appraisal to identify the preferred option
- **Portfolio of preliminary design drawings** of the preferred option
- **Cost Plan** showing the breakdown of scheme costs by category and component on an annual basis
- **Risk Register**, which will include wider strategic programme risks, such as funding risks, as well as risks associated with construction and environmental impacts
- **Quantified Risk Assessment (QRA) Report** outlining the calculation of risk based on the risk register
- **Traffic Modelling Technical Notes** to include;
  - Model validation
  - Scenario runs for the Public Transport Model (maximum 10 scenarios)
  - VISSIM Model for Park and Ride
  - CSRМ modelling brief
- **Economic Appraisal Report** documenting the approach to modelling and analysis of monetised costs and benefits of the preferred option to include:
  - Appraisal Summary Table (AST);
  - Value for Money Statement;
  - Transport Economic Efficiency Table; and
  - Public Accounts Table
- **Environmental Assessment Report** for the preferred option and the following accompanying technical documents:
  - Greenbelt Assessment
  - Landscape and Townscape worksheet
  - Air quality worksheet
  - Noise worksheet
  - Greenhouse gases worksheet
  - Heritage worksheet
  - Water worksheet

- Biodiversity worksheet
- Initial Biodiversity Net Gain/Loss Assessment
- **Land Use and Economic Assessment Report** documenting wider economic impacts of the preferred option such as potential growth in jobs, GVA uplift and increases in housing and commercial developments
- **Social Impacts Assessment Report** documenting the social impacts of the preferred option
- **Distributional Impacts Assessment Report** documenting the distributional impacts of the preferred option
- **Outline Benefits Realisation Plan** documenting key benefits of the scheme, how they relate to scheme objectives and the approach for ensuring they are realised
- **Outline Monitoring and Evaluation Plan** outlining key performance indicators that will be used to measure the schemes success and the approach to data collection and analysis for performance measurement and management.

