

Specification for Oxford to Cambridge Expressway Strategic Study

1. Introduction

The Oxford to Cambridge Expressway Study is a strategic study sponsored by the Department for Transport. The requirement for this study was set out in the first [Roads Investment Strategy](#) (RIS), published in December 2014, which announced a programme of new **Strategic Studies** to explore options to address some of the Strategic Road Network's large and complex challenges. The results of these high-level studies will inform the development of the next RIS. The Department for Transport has commissioned Highways England to undertake the study on its behalf.

This specification is for the transport-related technical and engineering advice, research and consultancy services required for delivery of the **Oxford to Cambridge Expressway Strategic Study**.

2. Definitions

'Brain Belt': the broad arc to the North of London from Didcot – Oxford – Milton Keynes – Bedford – Cambridge.

Expressway: as defined in the RIS Investment Plan (p7), "a consistently good road which is largely or entirely dual carriageway, with grade-separated junctions, giving most users a motorway-quality journey."

3. Purpose of the Strategic Study

The RIS Investment Plan published last year describes the purpose of this study as follows,

"...examine the case for creating an Expressway to connect the towns and cities of the 'Brain Belt' together. It will also look at other enhancements on existing roads along the route, including the A34 around Oxford."

The strategic aim of the **Oxford to Cambridge Expressway Study** is to consider options for improving connectivity between the towns and cities in the Brain Belt. It should identify and provide an initial appraisal of the improvements to the road network which can support the growth in this area. For the better options, this will include preparation of strategic outline business cases which can be considered in developing future Road Investment Strategies.

4. Background

Some of the fastest growing towns in England are located in a belt to the north of London, and improved infrastructure can support the growth of these towns, bringing wider economic benefits to the UK as a whole. However transport connections between cities such as Cambridge, Milton Keynes and Oxford are notably poor and create an artificial barrier between hubs of knowledge-based growth. With better links between Oxford and Cambridge the synergies between these cities would be stronger. In turn, improved connections for the communities alongside this corridor could further to drive growth in other towns alongside this route, such as Bicester.

Major housing growth is proposed at Towcester (2750 homes), Brackley (1900 homes) and employment growth is expected at Silverstone racing circuit (4000 jobs). Further East, the route also bypasses St. Neots, where there are major growth proposals, and Cambourne, where considerable growth in housing and employment is planned. To the South, there are development pressures on the A34 in the Didcot area (incorporating the Science Vale sites) and other significant developments at Oxford and Bicester towards the north of the A34 in Oxfordshire.

In total, the South East Midlands LEP alone is predicting almost 100,000 new houses and the creation of 135,000 jobs in its area. The other LEPs along this route are also predicting growth in both jobs (Oxford: 7,000, Thames Valley Berks: 15,000, Greater Cambridgeshire: 32,000) and homes (Oxford: 16,000, Thames Valley Berks: 29,000, Greater Cambridgeshire: 35,000).

Such developments are likely to congestion and subsequently increase traffic congestion on the SRN in this area.

Much of an Expressway throughout this area could be created through improving the existing road network. However, there is a gap in the SRN between the M1 at Milton Keynes and the M40 near Oxford: traffic travelling the 30 miles between the two cities by dual carriageway has to take a 60 mile route. Filling this gap should be the main focus of this study.

The current dual carriageway route travels along the A43 and a large proportion of the junctions are not grade separated. The shortest route along major A roads requires drivers to journey along a 16 mile single carriageway, the A421, which incorporates only non-graded junctions.

On the Eastern side of the study area, delays and slow speeds are currently experienced at a number of points, such as on the M40 at junctions 9 and 10, approaching the A421 on the A43 North of Bicester and approaching the M4 on the A34 South of Oxford. There are plans to make technology improvements to the A34 between the M4 and the M40 and make improvements to the Oxford junctions on the A34 planned in the current Road Period.

On the western side of the study area, the RIS investment plan commits to widening the A428 from Caxton Gibbet west of Cambridge to the Black Cat Roundabout at the junction of the A1, which will create an Expressway from Cambridge to Milton Keynes. However, there are a number of junctions and roads along the route between Milton Keynes and Cambridge, which experience capacity issues. The junction between the A1 and A421 at the Black Cat roundabout experiences severe and frequent congestion and the A428 between the A1 and A1198 in Cambridgeshire is reliably and heavily congested during peak periods. Improvements to the A428, the A34 and the A14 have also been planned for the current Road period. At Cambridge, the study will include Girton Interchange, a complex and heavily-trafficked intersection between the M11 motorway, the A14 and A428 and an arterial route into Cambridge.

The study area has three of the Top 75 collision locations at M40 J9 (No 21), M1 J13 (No 52) and Black Cat Roundabout (No 69). There are also AQMAs along the A421 around Bedford and the A34 along the Southern by-pass in Oxford (also a Noise Important Area).

Details of specific areas of cultural and ecological sensitivity found along the route can be found in Highways England's route strategies.

5. Requirements

The study will identify improvements to the transport network in the Brain Belt to support growth, the benefits, and impacts of improving transport; and will identify options that can feasibly be constructed. It will provide a high-level assessment of the strategic, economic, safety, environmental and operational performance of each of these options.

As set out in the Transport Investment and Economic Performance Report and the Department for Transport's response on Understanding and Valuing the Impacts of Transport Investments, the study will need to reach an understanding on how options impact on the local and regional economy. This includes understanding how options:

- affect local labour markets, wages, employment and skill formation;
- What the impact would be on firms from bringing them closer together, such as reduced costs of supply, greater co-operation benefits, economies of scale (agglomeration benefits);
- whether there would be any land use changes and what that means;
- whether increased investment would likely to be brought into the region and what form that would take;
- to what degree impacts are truly additional (particularly in light of planned improvements to East-West rail in the area) and which areas/groups gain and lose. Related to this it will be important to understand whether options have a negative impact on other areas eg. reducing investment and growth in those areas.

5.1. Objectives

The objectives of the Oxford to Cambridge Expressway Strategic Study are to:

- assess and form a preliminary strategic case for improving the transport network in the region based on the strategic and economic benefits;
- define the transport objectives that this ongoing study should seek to identify options for;
- identify a long-list of options which could meet the transport objectives, and undertake a high level assessment of the potential VfM, benefits and impacts of the different options using the Early Assessment Sifting Tool (EAST).
- short-list the better options to be carried forward.
- prepare a Strategic Outline Business Case for the better option(s) for consideration in the development of future RIS.

5.2. Principles

Delivery outputs have been explicitly designed around Highways England's Project Control Framework (PCF), simplifying the process to submit the findings and pursue the findings to subsequent stages. The appropriate PCF Stage for this study is Stage 0. The consultant should also follow other guidance and reports as referenced in the relevant tasks of this study.

DfT are leading on stakeholder engagement and communications for this study, and the consultant should not price for this aspect of the work other than as described in section 9.

At least one option for creating an Expressway, as defined in section 2, between Oxford and Cambridge should be identified. As required by Highways England's Licence, this study should not exclude identifying additional work which would achieve a higher specification expressway (eg that described in the RIS Strategic vision) where it might be possible to reduce or eliminate long-term costs or disruption to the network; all Expressway options should be compatible with the definition of Expressway included in the Strategic Vision, should future improvements be proposed.

The study should,

- Consider:
 - Previous studies on the transport network in and around the study area, including the relevant route strategies
 - Local transport and spatial strategies.
- Take account of:
 - Planned growth in the Brain Belt and the surrounding areas
 - Committed road schemes, including but not limited to, A428, A34, A14
 - Already planned improvements to non-road transport in this area, such as the East-West Rail Link.

5.3. *Work Required*

Research and consultancy is required to complete three key tasks which are set out below.

The study will be reviewed at the end of each task to confirm the value of proceeding and review the scope of the subsequent phases of work.

Task 1	Review existing materials and prepare a preliminary strategic case for transport improvements
	<p>Objective: Review previous study work, other relevant data, and current investment plans to understand current and anticipated future performance and constraints of the transport infrastructure (taking account of committed future improvements), and prepare a preliminary strategic case for considering further investment to the transport network in and around the Brain Belt.</p> <p>Task specific requirements and instructions:</p> <p>This review should consider the approach set out in Steps 1 to 3 of DfT's 2014 publication Transport Analysis Guidance: The Transport Appraisal Process</p> <p>Further guidance on preparation of a Strategic Case can be found at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/85930/dft-transport-business-case.pdf</p> <p>The Consultant will summarise the evidence and information obtained to reach a preliminary view on the strategic and macro-economic benefits for improving the transport corridor between the towns and cities of the Brain Belt. This will involve referencing wider economic evidence including the regional economy, labour markets and the current business environment in the region and its sub-regions, community and social factors, and the impacts of the seaports and airports on transport and trade.</p> <p>Existing transport and traffic models will be identified and reviewed in the context of this study and any gaps in modelling information will be reported to Highways England. It is assumed that no additional traffic modelling will be required within the scope of this study but the Consultant will advise if additional modelling is required to achieving study outcomes and, if this is the case, the implications on the timetable for and cost of the study.</p> <p>Deliverables:</p> <ul style="list-style-type: none"> Initial report, based on the relevant sections of a Strategic Case, to determine whether or not an investment is needed in the transport system within the study area, either now or in the future. It should demonstrate the case for change – that is, a clear rationale for making investment; and strategic fit, how an investment will further the aims and objectives of the organisation(s). To include supporting annexes and datasets as required. Commence preparation of an Options Assessment Report (PCF Product), covering Steps 1 to 3. A Product Checklist (PCF Product) will be produced to track the progress being made on each PCF Product. <p>Milestone: Task to be completed and all deliverables submitted in final form by 18 December 2015.</p>

Task 2	Define the transport objectives that will solve the problems identified and identify a long-list of options which could meet the transport objectives
---------------	--

Objectives:

- a) Define the transport objectives that will solve the problem identified.
- b) Identify a long-list of options which could meet the transport objectives.

Task specific requirements and instructions:

This review should consider the approach set out in Steps 4a to 5 of DfT's 2014 publication [Transport Analysis Guidance: The Transport Appraisal Process](#)

The identification of a long-list of possible transport improvements should build upon work done in previous studies and identifying any additional options worthy of further consideration. It is assumed that between eight and ten options will be identified at this stage although the Consultant will advise Highways England if it believes that a greater or lesser number of options should be long-listed.

Road improvements are not limited to enhancements of the existing strategic road network. Improvements to local roads or the consideration of building new roads are not excluded from the scope of this study.

In addition to one or more Expressway options, potential options using other modes must be considered.

Deliverables:

- Add to the Options Assessment Report (PCF Product), started in Task 1 covering Steps 4a to 5.
- An Appraisal Specification Report (ASR) (PCF Product) will be provided which will state how the further appraisal work will be undertaken.

Milestone: Task to be completed and all deliverables submitted in final form by 5 February 2016.

Task 3a Initial Sifting of options

Objectives:

- A high level assessment of the different options to discard any options that will not meet the transport objectives nor fit with local, regional, national strategies, or would be highly unlikely to pass key viability and acceptability criteria
- Based on the assessment above, identify a short-list of potential options to be carried forward to Task 3b for further development and assessment.

Task specific requirements and instructions:

This review should consider the approach set out in Step 6 and 9 of DfT's 2014 publication [Transport Analysis Guidance: The Transport Appraisal Process](#), including use of the Early Assessment Sifting Tool (EAST).

Consideration of air quality effects of the options is required and will need to go beyond the approach outlined in EAST, but should make use of available information and no modelling is expected. Air quality as a constraint to the deliverability or delivery timescale of the options should also be identified.

The approximate time for option delivery, must give regard to any option that will be a Nationally-Significant Infrastructure Project (NSIP) and will therefore be delivered under Planning Act 2008 powers;

Deliverables:

- Add to the Options Assessment Report (PCF Product), started in Task 1 covering Step 6.
- Update the Appraisal Specification Report (ASR) (PCF Product) produced in Task 2 state how the further appraisal work will be undertaken.

Milestone: Task to be completed and all deliverables submitted in final form by end May 2016.

Task 3b	Work to assess the affordability, value for money and deliverability of short-listed potential options
<p>Objective:</p> <p>To document the appraisal of the short-list of better performing potential options to strategic outline business case level.</p> <p>Task specific requirements and instructions:</p> <p>Further guidance on preparation of a Strategic Outline Business Case can be found at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/85930/dft-transport-business-case.pdf</p> <p>The <i>Consultant</i> should appraise transport benefits using the WebTAG methodology and wider economic benefits using an approach consistent with the approach outlined in Transport Investment and Economic Performance Report¹ and the Department for Transport's response together with Understanding and Valuing the Impacts of Transport Investments² in addition to the assessment methods required by Highways England's Project Controls Framework (PCF) system. This should include</p> <ul style="list-style-type: none"> • an assessment of the impacts, benefits and costs of each transport improvement option, considering its strategic and economic case together with its effects on traffic and congestion, road safety, and the environment; • consideration of the impact of each option on local and regional labour markets, wages, employment levels, and skills; on the cost of supply and on the benefits of greater collaboration and economies of scale; • consideration of the impact of each option on current and future land use and what this means to the local and regional economy as well as to the environment and communities; • consideration of the consequences of the scheme in terms of increased investment in the region and the most likely form which this would take; • an assessment of the degree to which impacts and benefits are truly additional and whether options will have a negative impact on other areas in terms of reduced employment, investment and growth; • calculation of the estimated cost of each option and the approximate time for its delivery, giving regard to any option that will be a Nationally-Significant Infrastructure Project (NSIP) and will therefore be delivered under Planning Act 2008 powers; and • identifying the risks and opportunities associated with each option, including those relating to the development process, construction, commissioning, operation and use, maintenance, security and safety. <p>The Consultant should work with the consultants for the A1 East of England Strategic Study to understand the interdependencies between the potential options arising, and consider strategic risks arising from major complex projects being undertaken within the same broad area potentially over a similar timeframe; to include:</p> <ul style="list-style-type: none"> • Understanding the implications of the timing and phasing of potential schemes over the study locations, to minimise impact on the performance of the 	

¹ Transport Investment and Economic Performance: Implications for Project Appraisal
 Anthony J Venables, James Laird, Henry Overman; October 2014 (Department for Transport)

² Understanding and Valuing the Impacts of Transport Investment
 October 2013 (Department for Transport)

network during the build phases;

- Identification of opportunities for synergy or optimal sequencing of major road and rail works involved in, and options for mitigating strategic risks arising from, major complex projects being undertaken within the same geography potentially within the same Road Period.

The consultant will advise if it is not possible to develop full strategic outline business cases in the time, and set out what level of detailed and robust appraisal can be achieved within the timescale. If strategic outline business case level could not be reached in the time available, they should also document the further work necessary to develop proposals to the stage to which Government would be able to take an investment decisions

Deliverables:

- For each of the short-listed better performing potential options
 - A Strategic Outline Business Case documenting the appraisal of the option and refining any assumptions made in the Options Assessment Report.
 - An Appraisal Specification Report (ASR) (PCF Product) will be provided which will state how the further appraisal work will be undertaken.
 - An Order of Magnitude Estimate (PCF Product) is required to identify the costs incurred for each of the options.
 - An Appraisal Summary Table (PCF Product) is required to summarise the costs and benefits associated with each of the options identified.
 - An Investment Submission (PCF Product) will be produced to submit the evidence for a PCF Stage 0 Gateway Review.
 - An Environmental Assessment Report will be produced which will identify the high level environmental risks and impacts as a result of each of the identified options.
 - A Value Management Workshop Report (PCF Product) will be produced which will summarise the opinions expressed by each appraisal discipline.

Milestone: Task to be completed and all deliverables submitted in final form by 30 November 2016.

6. Study Governance

The Oxford to Cambridge Expressway Strategic Study is being undertaken by Highways England. The Senior Responsible Officer (SRO) for the study is Leon Poole, Policy Advisor at the Department for Transport.

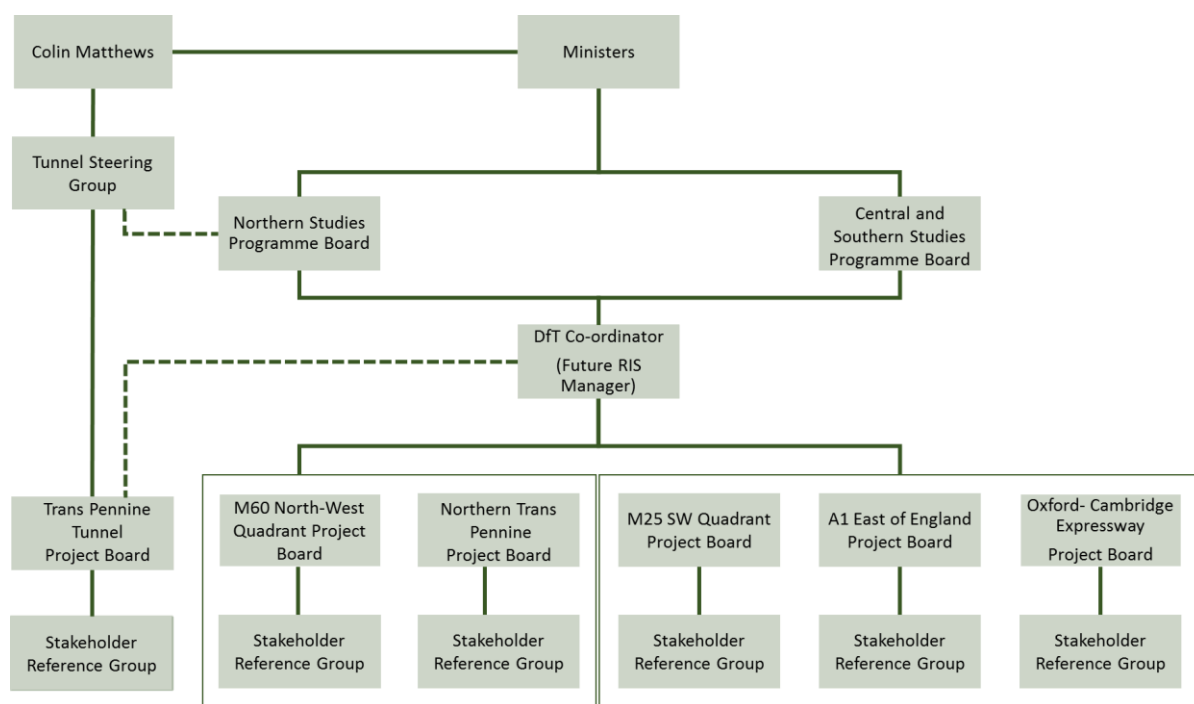
Governance of the study will be provided by the *Central and Southern Studies Programme Board* and the *Oxford to Cambridge Expressway Project Board*.

The *Programme Board* will set the overall direction of the study at each of its stages and will review and approve the outputs of study work, and the *Consultant* will be expected to report to, and provide information for, this Board. The *Programme Board* will include representatives from the Department for Transport and Highways England. There is no requirement for consultant attendance at Programme Board.

The *Project Board* will provide strategic oversight to the study and will confirm that the terms of reference for the study are being addressed in the delivery of the *Services*. It will be chaired by Leon Poole, SRO for the study and will include other representatives from the Department for Transport and Highways England.

The *Consultant's* project manager and project director will attend the *Project Board*, which will initially meet on a monthly basis. For the purposes of preparing your tender returns and fee estimates; assume Progress and Project Board Meetings are to be held in Bedford.

The following diagram illustrates the proposed governance arrangements for the Strategic Study and its relationship with the other ongoing strategic studies.



Strategic Studies Governance Arrangements

7. Geographic scope

The geographic scope of the study will include

- the broad arc from Didcot – Oxford – Milton Keynes – Bedford – Cambridge
- the A34 between the M4 and the M40
- Girton Interchange between the A428, A14 and M11

A map of the proposed approximate geographical scope of the study is included at Figure 1 below.

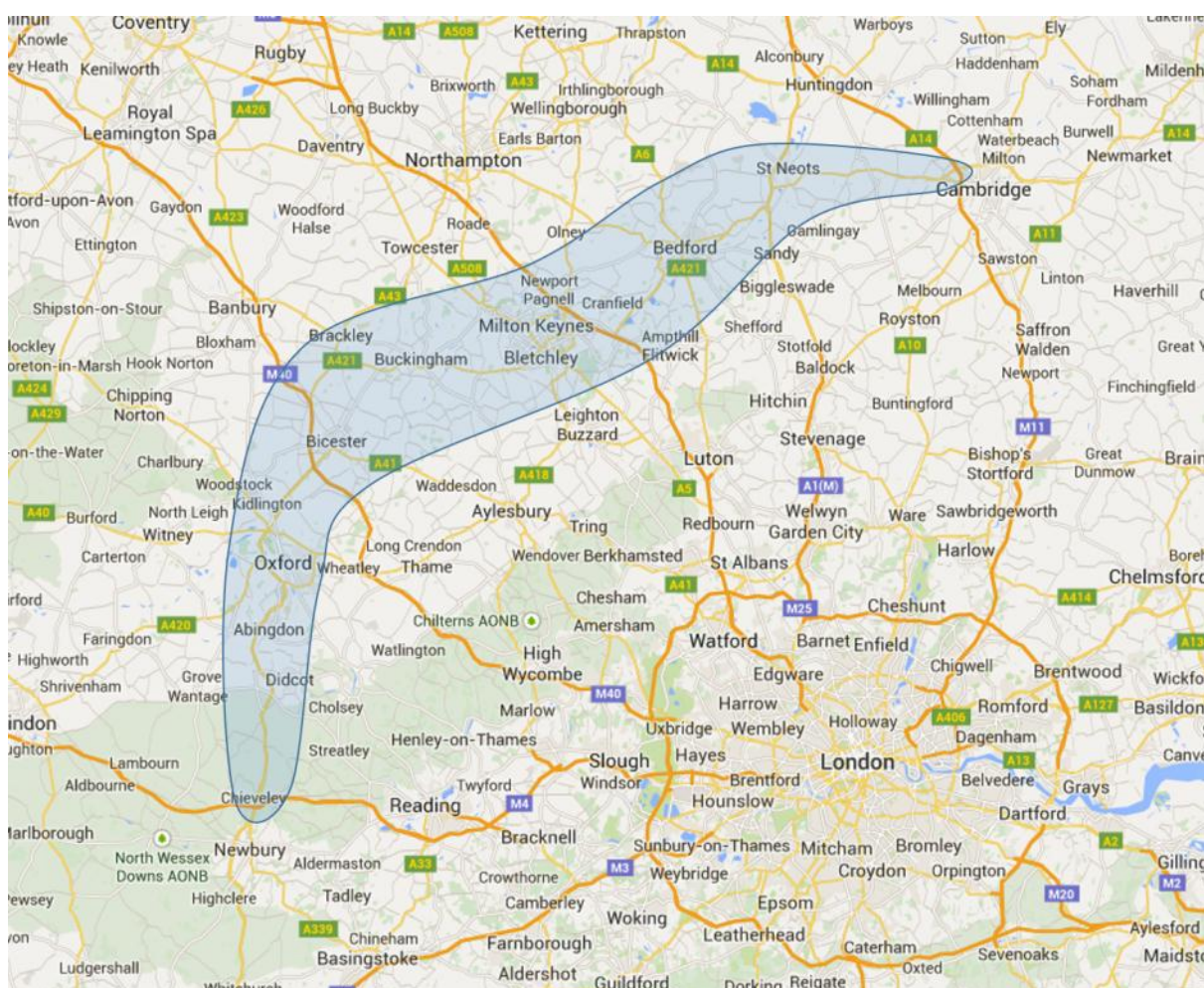


Figure 1: Approximate geographical scope of the study

8. Modal scope

The study is primarily aimed at exploring the case for improvements to the road network in the study area, but this should be in the context of proposed projects in other modes, eg the East-West Rail Link.

Road improvements are not limited to enhancements of the existing strategic road network. Improvements to local roads or the consideration of building new roads are not excluded from the scope of this study.

This study must consider options for improving connectivity in the study area through other modal options for comparison with road improvements. Where there is the potential for other modal options to perform better in meeting transport objectives, the fit with local, regional, national strategies, or key viability and acceptability criteria they should be taken forward.

9. Stakeholders

There are a comparatively large number of stakeholders with an interest in this study, ranging from local authorities and Local Enterprise Partnerships to private businesses and trade associations and Environmental NGO's. Prior to the procurement specified by this document, a list of key stakeholders for the study has been produced by the Department for Transport.

The Department for Transport will retain overall responsibility for stakeholder relationship management.

A *Stakeholder Reference Group* will be established by the Department for Transport. The Group will be chaired by a representative from the Department for Transport and will meet from time to time during the study period. The Group will ensure that stakeholder views are understood and will give stakeholders the opportunity to review and provide feedback on study outputs and outcomes

The *Consultant* should not cost for hosting stakeholder events or producing materials; however, the *Consultant* should cost for attending 4 No. Stakeholder reference groups so as to ensure that there is broad representation of views and opinions in the study outputs and to support Highways England in the development and management of these. For the purposes of preparing your tender returns and fee estimates, assume Stakeholder Reference Groups are to be held in Bedford.

10. Skills/Experience

The *Consultant* shall have, or have access to, a full range of skills, experience and facilities needed to cover the scope of this brief. The *Consultant* will manage any sub-consultants.

The *Consultant* should also possess:

- An understanding of Highways England business and policy objectives, and the strategies developed to support their delivery,
- Good communication, presentation and report writing skills.

The *Consultant* should also be able to demonstrate:

- Previous Strategy and Policy Development for the Highways England;
- Previous strategy and policy development work for other strategic infrastructure authorities;
- Experience of major strategic road network study work;
- Economic Impact assessment using both WebTAG and non-WebTAG (HMT Green Book / GVA) methodologies.

The *Consultant* should also be able to initiate quickly, and be able to respond to developments and client requests during delivery of this high-level study.

11. Location

The *Consultant* will provide the services required to deliver this study from its own offices within the United Kingdom but will be required to attend meetings and workshops at the offices of Highways England and at other locations in England from time to time at the request of the client and to perform its duties under the Contract.

12. Timescales

A work programme and initial *Consultant's* Monthly Report is to be submitted within 2 weeks of the award of this contract.

All tasks are to be completed by 30 November 2016, with specific milestones to be agreed with the Highways England Project Manager.

The *Consultant* shall submit a *Consultant's* Monthly Report to reach the Project Sponsor no later than the penultimate working day of each month. The Report template will be provided.

The final contract reporting and invoicing should be completed by 31 December 2016.

13. Evaluation Criteria

The *Consultant* shall submit outline proposals (not more than 5 pages, 10 sides of A4) of the method and approach for carrying out the work together with an outline programme showing all the key activities involved and clearly stating any caveats or exceptions.

The *Consultant* shall submit monthly spend profiles for each phase of work with his tender which shall relate to the submitted programme of work.

Tenderers are to provide details of the project team with a short summary of their experience and suitability to undertake this work.

The quality of the tender will be evaluated using the following criteria:

Tenders will be scored on an appropriate scale, the matrix below shows scores on a scale of 1 – 10, with a score of 5 representing an acceptable level. The assessment panel will use the marking system as shown below, to award marks for approach or evidence, as relevant to the sub-criteria in the following table. Additional sub-criteria may be added under the primary criteria headings, if there are particular attributes that need to be assessed, although the framework board recommends that these are kept to a minimum.

Score	Reason	Mark
Weak	The proposed approach fails to demonstrate an adequate understanding of the project objectives and fails to address adequately the risk management issues. There is little evidence that the proposed approach has been influenced by experience on other projects.	1-4
Acceptable	The proposed approach demonstrates an adequate understanding of the project objectives; it addresses the success factors and risk management issues to an acceptable standard. There is an adequate level of evidence that the proposed approach has been developed as a result of successful experience on other projects.	5-7

Good	The proposed approach demonstrates a good understanding of the project objectives; it addresses fully the success factors and risk management issues and provides for delivering continuous improvement over the life of the framework. There is substantial evidence that the proposed approach has been developed from other projects using formal continual improvement processes.	8-9
Excellent	The proposed approach has been tailored specifically to deliver the project objectives, and deals comprehensively with the risks to maximising performance against Key Performance Indicators and to delivering continuous improvement. There is substantial evidence that the approach has been developed using continual improvement processes, which are routinely used to develop approaches and deliver the objectives successfully on all projects.	10

The table below provides an example of potential evaluation criteria:

Primary Criteria	Sub-criteria	Score	Weighting Applied	Weighted score
Resources and capabilities	Supplier's prior performance on this type of work		2	
	Suitability of key personnel		1	
	Appropriate allocation of resource		1	
	Overall capability and expertise		2	
Technical solution proposed and competence	Demonstrates understanding of the objectives and deliverables		1	
	Robustness of the proposal and methodology		3	
	Creative and innovative thinking		1	
	Adequacy of the proposed project management and quality control systems		2	
Suitability of proposed processes	Identification and management of risks		2	
Subtotal			15	
Total	Total Mark (Subtotal x 100/150*)			

The quality proposal with the highest mark will be given a score of 100. The score of other competing suppliers will be calculated by deducting from 100 one point for each full percentage point by which their mark is below the highest mark. The minimum requirement for this work package is to reach a threshold of 60%. A submission that has failed to achieve the minimum quality requirements may not be considered further in the assessment.

The lowest priced tender will be given a score of 100. The score of other competing suppliers will be calculated by deducting from 100 one point for each full percentage point by which their price is above the lowest price. The overall quality score and the finance score will be combined in the ratio 60:40 applied to the quality and financial scores respectively.

Hourly rates and expected expenses should be stated.

No work outside the scope of this Specification may be undertaken unless agreed by the Project Sponsor.

The scope of this study may be expected to evolve subsequent to the findings of each stage. The bidder should take this into account in their outline proposal.

The bidder should also explain how they will ensure that they will ensure that they are able to engage the correct specialists required, and how they will manage any financial risk involved.

14. Contact Information

Role	Location	Phone
Project Sponsor	Louise Heywood	07825 69 68 67
Project Manager	Mark Corbin	0121 678 8178
Procurement Officer	Ron Davis	0121 678 8473