

A684 Bedale, Aiskew, Leeming Bar Bypass

Best and Final Funding Bid

The Commercial Case

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1 Introduction

1.1 Introduction

This report presents the Commercial Case for the A684 Bedale, Aiskew, Leeming Bar Bypass (BALB) Best and Final Funding Bid (BAFFB).

In line with new Departmental guidance the Commercial Case provides evidence on the commercial viability of the proposal and the preferred procurement strategy, taking into account the financial implications.

This report presents evidence on risk allocation and transfer, contract timescales and implementation timescales.

The Commercial Case is structured as follows:

- **Chapter 2** sets out the approach taken to procurement, including output based specifications, procurement strategy, programme and potential constraints;
- **Chapter 3** sets out the contract options available and provides detail on NYCC's preferred procurement option;
- **Chapter 4** looks at contracting in more depth, including details of payment mechanisms, risk allocation and contract management.
- **Chapter 5** presents a summary.

2 The Commercial Case – Procurement Approach

2.1 Introduction

This section of the Commercial Case sets out what is required in terms of outcomes and outputs as well as detailing the strategy for procurement.

This chapter is structured as follows:

- **Procurement Strategy** – A summary of the options available for procuring a contractor, work undertaken to establish a preferred approach and identification of the preferred option;
- **Programme** – Provides an outline of the delivery programme; and
- **Constraints** – Sets out the potential constraints to successful delivery of the scheme within the required programme.

2.2 Procurement Strategy

The Procurement Strategy for the A684 BALB is clearly a fundamental decision for the project and has a significant influence on the design, programme and risk allocation of the project as well as achieving the Client’s key objectives of ensuring cost efficiency and value for money.

The following procurement strategies are potential options for the A684 BALB:

- Traditional Approach (Design by Consultant with Contractor appointed by Tender);
- Design and Build;
- Early Contractor Involvement (ECI); and
- Other (PFI / DBFO, Management Contract etc).

Depending on the choice of Procurement Option there are differing contract mechanisms with differing risk allocations including:

- Lump Sum;
- Remeasure;
- Target Cost; and
- Cost Reimbursable.

For each procurement option there are also different Conditions of Contract which may be adopted including:

- NEC Options A to E;
- ICE Fifth to Seventh Editions;
- JCT; and
- Professional Services Contract (For ECI).

Procurement Strategy Workshop

Whilst some discussion took place at the Interactive Planning Meeting held in August 2008 a further detailed Procurement Workshop has been undertaken, to establish the preferred Procurement Strategy, through Jacobs Procurement and Contracts advisor Allan Thomas. This workshop was based on the following issues for consideration:

- Objectives; and
- Cost.

An objective of the strategy must be to seek a high level of change / cost control and accuracy of estimating, through the design development, and achieve a final outturn cost as close as possible to the accepted tender total for the construction contract.

The selected procurement strategy must comply with public procurement rules and demonstrate value for money through commercial / price competition as well as quality considerations.

Further discussions were held in summer 2011 in order to review the preferred procurement approach reflecting changes in scheme financing and revised risk sharing, as proposed by DfT.

The primary objectives of the procurement strategy are to deliver value for money and cost efficiency; it is considered that these objectives are most likely to be achieved by progressing the scheme on the basis of the construction phase being executed through an NEC/ECC Option A contract with Employer design.

As such, the project programme has been developed on this basis, taking into account the need to actively pursue the mitigation of project risk with the aim of minimising any risk premium and / or negative reaction from the market. This approach will also ensure the application of robust change control, cost control and value management procedures.

The preferred approach is discussed in more detail later in this report.

2.3 Programme

The delivery programme is driven by the required statutory procedures and DfT funding approvals together with a desire to complete construction by October 2016.

To achieve completion by October 2016 a contract will need to have been placed to enable construction to commence in October 2014; in order to achieve this it is programmed that procurement will be completed by July 2014.

2.4 Constraints

The main constraints to the programme are related to planning and physical considerations.

To gain planning approval and complete statutory procedures, in order to meet the construction start date a certain amount of detailed design will need to be undertaken ‘at risk’ prior to the Public Inquiry. Given the relatively fixed nature of the scheme, it not anticipated that significant design changes will be required following the Inspector’s recommendations.

Physical constraints include the crossings of the existing railway line at either end of the scheme, together with linking into a new grade separated junction on the A1(M) at the

midpoint of the bypass. These factors impose limitations on the vertical and horizontal alignments.

Archaeological areas of interest have previously been identified as a potential constraint; an archaeological survey was undertaken prior to the MSBC submission and concluded that there was little archaeological potential. Construction of the A1(M) upgrade is now well progressed and no significant archaeological finds have been identified as part of the works in the vicinity of Leeming Bar..

3 The Commercial Case – Contract Options

3.1 Introduction

This section of the Commercial Case sets out the options available for procurement and provides more detail of the preferred option for this scheme.

3.2 Types of Highways Construction Contract

The following provides a very brief summary of differing types of contracts, commonly used in the procurement of highway projects, that were considered in the procurement workshop.

Early Contractor Involvement (ECI) – (HA Model)

This form of contract, usually based on the NEC/ECC, involves appointing the Contractor early in the design stage, often prior to draft order publication. This gives the Contractor the opportunity to contribute buildability, cost estimating and construction planning expertise early enough in the design process to effect better value designs. This is claimed to provide for better risk control, more accurate pricing and greater programme certainty.

The HA has used their model ECI contact widely on their major projects in England over the past 4-5 years. The HA’s model is essentially early D&B in that the Contractor takes responsibility for the design, albeit at a much earlier stage. The major difference is that ECI contracts are awarded on virtually a 100% quality basis but contractors are incentivised to minimise construction costs via a cost reimbursable target price contract for the construction stage. During Phase 1 the Contractor and his designer develop the (preferred route) design up to and including publication of draft orders, conclusion of Public Inquiry and finalisation of a Target Price for the remaining detailed design and construction. A cost reimbursable target price contract, based on ECC Option C (see 3.2(iv)), is then used during Phase 2 for detailed design and construction.

In addition to incentivisation of the Contractor during Phase 2, the HA’s model ECI contract also provides for a potential gain share at the end of Phase 1 should the scheme cost remain within the HA’s budget (as published at Preferred Route announcement stage). This has rarely been paid due to apparent inadequacies in HA budget estimates, often set well in advance of contract award. The increase in scheme costs of ECI projects, relative to original HA budgets, has led to criticism of this model in the press and from Government offices. Further concerns have been raised at the high costs incurred during Phase 1 where reimbursable costs are not subject to a target price pain/gain share.

NEC / ECC Contracts

i. General

The New Engineering Contract/Engineering and Construction Contract (NEC/ECC) now in its 3rd edition is published in the form of a set of core clauses with a range of main and secondary option clauses enabling scheme specific contracts to be produced to reflect individual requirements.

ii. Option A (Priced Contract with Activity Schedule)

This option is only viable if the design is fully defined at time of tender and or design liability is placed with the contractor when it provides the greatest degree of cost certainty of any of the NEC options. This form of contract is attractive to Employers as it provides relative cost certainty. The contract is awarded as a lump sum based on the activity schedule and the Employer can award on the lowest price or a quality/price ratio. The contractor is paid the lump sum for each activity.

iii. Option B (Priced Contract with Bill of Quantities)

By utilising a Bill of Quantities (BoQ) the quantification of risk lies with the Employer so the design may be less complete at time of tender. The contract is awarded based on the tendered total of BoQ prices. The Employer can award on the lowest price or a quality/price ratio. The contractor is paid for the actual quantities of work undertaken at the rates in the submitted BoQ provided any changes in quantity do not exceed a defined limit. Changes in quantities in excess of the defined limit are treated as compensation events. As with all Options, compensation events are assessed and paid on an actual cost reimbursable basis. However, the BoQ may be used as the basis of assessment should the contractor and Project Manager agree.

Whilst Option B may incorporate some elements of contractor design, it is not suitable for use where the intention is to transfer major elements of design liability to the contractor. The opportunity for placing risk with the contractor is therefore limited and cost certainty is reduced from that achievable with Option A.

iv. Option C (Target Contract with Activity Schedule)

The contractor is paid actual cost for the work undertaken with incentivisation via a pain/gain mechanism based on actual cost vs Target Price. The share percentages of the pain/gain mechanism are defined by the Employer.

The Activity Schedule in this case is simply the way in which the Target Price is built up and related to the intended programme. The risks associated with the accuracy of the Target (i.e., quantification risk) lies with the contractor but the degree of risk transfer is determined by the share ranges specified. The Employer can award on a lowest price or quality/price ratio.

Target cost reimbursable contracts are used predominately in situations where the full extent of the required work cannot be determined at the time of award. They provide the facility of sharing risk in situations where contractors would either not be prepared to provide fixed prices and/or the risk premium would be unacceptably high. They may also provide the employer with the opportunity of sharing in cost savings where the project has opportunities for innovative design/construction methods to be introduced by the contractor.

Option C does not provide a high level of cost certainty.

v. Option D (Target Contract with Bill of Quantities)

As with Option C the contractor is paid his actual costs. The BoQ is used to derive the Target and to adjust the Target if the quantities vary within a defined range. Thus the Employer is taking quantification risk. Otherwise comments are as under Option C above.

Early Contractor Involvement (ECI) – Retained Design

This is a form of ECI but with the Employer retaining the design risk and bringing the contractor in to advise as and when required on both design development and estimated costs up to the point when the design is sufficiently developed to permit a realistic target to be proposed by the contractor. It is not a process recognised by any published forms of contract and requires a bespoke contract to be drafted. Jacobs have prepared bespoke contracts adopting this principle for a number of Local Authority major projects.

The contractor appointment comprises a separate contract form for each of two Phases, both implemented under a bespoke over-arching agreement. For Phase 1 (design to completion of statutory process and finalisation of Contractor’s Target Price) the contractor works under a NEC PSC contract. For Phase 2 the contract switches to a NEC ECC Target contract (option C or D depending on the Employer’s preference). If a target price cannot be agreed at the end of Phase 1 the agreement can be terminated without moving to Phase 2. To proceed the Employer could then tender the construction work to others using any chosen form of contract. This would however incur considerable delay to the programme.

This procurement model enables the Employer to retain full control of the design whereas under the HA’s ECI model the Contractor controls the design and hence finishes, appearance, etc. A further advantage is the facility for the Employer to confine contractor involvement in Phase 1 on a task by task basis to inform the design, thus avoiding the high Phase 1 costs common under the HA model.

This approach provides the benefits of a contractor’s input to the design development and estimating processes without the disadvantages of incurring loss of control of the design at a very early stage and what has proved to be high costs in the pre construction stages of the scheme. The disadvantages are a reduced level of price competitiveness and a target cost reimbursable form of construction contract that provides a lower level of cost certainty than is potentially achievable with an ECC option A. there is also risk of delay should agreement be terminated at the end of Phase 1.

3.3 Preferred Option

The outcome of the procurement workshop concluded that the primary objectives in terms of cost and programme are most likely to be achieved by progressing the scheme on the basis of the construction phase being executed through an NEC/ECC Option A contract with employer design. The project programme has been developed on this basis but also taking into account the need to actively pursue the mitigation of project risk with the aim of minimising any risk premium or negative reaction from the market. This approach will also ensure the application of robust change control, cost control and value management procedures.

The programme reflects this procurement strategy and has included sufficient time in the design stages, prior to inviting tender quotations, to maximise the detail design and mitigate the level of risk transfer which could adversely impact on cost and hence value for money.

Whilst there are perceived benefits from some form of early contractor involvement, the restrictions on alignment imposed by the two rail crossings and the connection to the A1(M) grade separated junction, together with the need to obtain Network Rail approvals and possible aesthetic requirements imposed by planning, suggests that construction cost benefits would be limited and could potentially be outweighed by increased scheme development costs. Early contractor involvement inevitably requires some form of target cost

construction contract with its inherently lower certainty of outturn price and reduction of commercial tension.

An NEC/ECC Option A contract with employer design provides value for money and cost efficiencies. This approach may carry a price premium or, in the ultimate, refusal of contractors to bid due to the perception of the degree of risk required to be accepted. The price premium / bid reluctance can be reduced or removed by mitigating the occurrence or impact of identified risks through the design development process. Examples would be developing the design of the rail crossing structures to the level required to obtain Network Rail approvals prior to going to tender, pre ordering required statutory undertakers diversions, and generally identifying and addressing known risks through the development period.

The procurement approach will be reviewed as the project progresses to ensure that value for money and cost efficiency is maximised.

3.4 Sourcing Options

The Official Journal of the European Union (OJEU) is the publication in which all tenders from the public sector which are valued above a certain financial threshold according to EU legislation must be published. It is likely that following a successful funding application that interested contractors would be engaged through the OJEU process.

It is proposed that further detailed design will be undertaken by NYCC's partner consultant, Jacobs who are appointed under the current contract until 2016.

4 The Commercial Case – Contracting

4.1 Introduction

This section sets out the contracting aspect of the Commercial Case.

The chapter is structured as follows:

- **Payment Mechanisms;**
- **Pricing Framework and Contract Management;**
- **Risk Allocation and Transfer;**
- **Contract Length;** and
- **Contract Management.**

4.2 Payment Mechanisms

Payment timing will be adopted to maximise the value from the contract through minimising financing and transaction costs. Prompt and fair payment mechanisms will be applied throughout the supply chain. This will be covered through the procurement process, and monitored during the contract, to ensure full value is delivered.

4.3 Pricing Framework and Charging Mechanisms

Under the preferred procurement approach the Contractor offers to provide the works described in the contract for a sum of money. The contract provides for certain risks to be carried by the Employer which will result in the lump sum being adjusted if the compensation events occur.

Due to the procurement approach adopted there is negligible potential for incentivisation and cost deductions once the project has been procured.

4.4 Risk Allocation and Transfer

Risks and associated cost items will be specifically assessed and assigned in relation to which partner is best placed to manage them. The activity schedule is normally written by the Contractor since he is the one who knows what activities will be carried out. Each activity is priced as a lump sum by the Contractor which is the amount paid when he has completed the activity. In pricing an activity, the Contractor takes responsibility for estimating quantities and resources, and assessing and pricing risks that are his.

Economic conditions remain uncertain; the prevailing economic conditions at the time will be taken into consideration to ensure correct risk assignment and to help maximise value

4.5 Contract Length

It is envisaged that the contract will be of a 2 year duration; due to the proposed contract type and length there is no potential for indexation of payments.

4.6 Contract Management

The contract will be procured and managed through the NYCC Contract Management Unit which has considerable experience in dealing with this type of contract and activity.

5**Summary**

This document has presented the Commercial Case for the A684 Bedale, Aiskew, Leeming Bar Bypass (BALB) Best and Final Funding Bid (BAFFB).

It has set out evidence on the commercial viability of the proposal and the procurement strategy that will be used, taking into account the financial implications. Evidence has also been provided on risk allocation and transfer, contract timescales and implementation timescales.