

EDINBURGH TRAM PROJECT REPORT ON TERMS OF FINANCIAL CLOSE (“CLOSE REPORT”)

FOR THE ATTENTION OF THE TRAM PROJECT BOARD, TEL BOARD AND TIE BOARD

(8) Risk assessment of in-process and provisional arrangements

8.4 Responsibility for consents and approvals

As previously tie/CEC will retain the risk associated with the process of obtaining TROs and TTROs (some for TTROs post-Service Commencement which are Infraco's responsibility). Full provision has been made in the Risk Allowance for the possible costs associated with a legal challenge to the TRO process which it is not anticipated will include a formal public hearing.

As fully detailed in Appendix 1, for all other required consents and approvals (either design or construction related) the principles which apply are:

1. Infraco (including SDS) will bear any costs and programme consequences associated with design quality and constructability for all consented and/or approved design.
2. in respect of consents and approvals outstanding at Financial Close, tie/CEC will bear any incremental construction programme cost consequences of SDS failure to deliver design outputs in a timely and sufficient manner to the consenting or approving authority insofar as the cost is not recoverable by Infraco from SDS under a capped liquidated damages provision or can otherwise be mitigated by the Infraco.
3. tie/CEC will bear the incremental cost and programme consequences associated with a delay in granting consents or approval having received the required information in a timely and sufficient manner and/or the cost and programme consequences of changes to design principle shape form and outline specification (as per the Employers Requirements) required to obtain the consent or approval.

Taking due cognisance of all mitigations described in Appendix 1, the Risk Allowance (see 8.6 below) includes provisions totalling £3.3m for delays associated with outstanding design work at Financial Close in addition to a £6.7m provision for general programme delay.

To clearly delineate responsibility and therefore risk allocation the Infraco contract and associated schedules, including the SDS Novation Agreement, clearly defines in detail and in a manner agreed by Infraco, SDS and tie/CEC:

- The necessary consents and approvals already obtained at Financial Close
- The remaining consents and approvals and whether the information to obtain such rests with Infraco or SDS
- The expectations with regard to quality of information including compliance with relevant law and regulation
- The programmed dates for delivering information and obtaining the necessary consents and approvals consistent with achieving the overall programme for the project

The role of tie in this complex process is to carefully manage the programme of delivery and take mitigating action as necessary to avoid any cost or programme implications from slippage on individual items. tie also retains responsibility for obtaining specific items including obtaining NR possessions which align with the construction programme agreed with Infraco.

The Risk Allowance does not provide for the cost or programme consequences associated with a wholesale failure of this process – see QRA alignment & Risk Allowance below.

8.6 QRA and Risk Allowance

The risk allowance of £32m includes the following provisions for residual risks retained by the public sector during the construction phase of Infraco and Tramco.

- £3.3m in respect of post Financial Close consents and approvals risks which provides for the cost or programme consequences of imperfections which may arise in elements of the consents and approval risk transfer as described above.

tie has assessed these amounts as providing adequately for the residual risk retained by the public sector arising from the Infraco and Tramco works and the post Financial Close consents and approvals process. However the Risk Allowance does not provide for the costs of:

- Significant delays to the programme as a result of the consenting or approving authorities failing to adhere to the agreed programme (Infraco/SDS having met their own obligations) or any other tie/CEC initiated amendment to the construction programme which forms part of the Infraco contract.

All other things being equal any such changes falling into these categories would give rise to an increase in the cost estimate for Phase 1a of the project above of £508m.

APPENDIX 1

EDINBURGH TRAM PROJECT SDS – DELIVERY AND CONSENT RISK MANAGEMENT

Background

Negotiations have taken place over a lengthy period of time with the objective of defining a process and set of contractual terms which will enable tie and CEC to manage the risks arising from the overlapping design and construction periods. This problem was not anticipated when the SDS contract was concluded in 2005. The recent discussions have taken place under the umbrella of the SDS Novation Agreement, but it is important to distinguish two groups of issues:

Cost certainty : The primary objective of the novation approach was to ensure that design work could commence long before commitment to the construction contract suite generating maximum construction price certainty and transferring design risk to the construction partner.

Outstanding design risk : SDS have resisted accepting liability to BBS for the timeliness of submission and approval of design packages after Financial Close. Their concern is that the risk is different from (and incremental to) the underlying risk arising from the quality of their work. A delay, they argue, could result in hefty exposure because of the linkage to construction programme delay. SDS did not anticipate this risk when committing to their contract - the expectation was that the majority of design scope and certainly all approvals would be complete prior to Financial Close.

The packages which have been delivered to BBS, with the requisite approvals, by Financial Close (“Approved Packages”) are subject to the Novation terms, which inter alia result in BBS accepting the design quality risk, with resort to SDS in the event of failure under the terms of the existing SDS agreement. The exposure to SDS could be potentially onerous, but was accepted when they entered into the existing contract and is not currently contentious.

This means that the primary objective above of cost certainty and risk transfer has been achieved relative to Approved Packages.

The problem relates to design packages which as at Financial Close are either :

- Submitted for Prior / Technical Approval but not yet approved (“Submitted Packages”); or
- Work in progress and not yet submitted (“Outstanding Packages”).

The rest of this paper provides an analysis of the residual risk to tie / CEC arising from these two groups of design packages. The paper does not address so-called “tie Consents” – TROs, TTROs and consents relating to statutory authority to implement the scheme - which have been accepted as out with the responsibility of SDS and BBS, except that BBS (and through them SDS) have an agreed contractual responsibility to assist in the process.

Risk overview

The risks which arise from the overlap of design and construction periods are summarised below :

- A. The Submitted packages are not of requisite standard, preventing CEC from providing consent timeously and creating delay to the construction programme.
- B. The Submitted packages are of requisite standard, but CEC fail to provide consent timeously, creating delay to the construction programme.
- C. SDS fail to provide the Outstanding packages on a timely basis relative to the agreed programme, preventing CEC from providing consent timeously and creating delay to the construction programme.
- D. SDS fail to provide the Outstanding packages to the requisite standard, requiring rework and delay, preventing CEC from providing consent timeously and creating delay to the construction programme.
- E. CEC provide consents and approvals timeously, but SDS then fails to provide IFC (“Issued For Construction”) drawings to BBS timeously creating delay to the construction programme.
- F. SDS provide the Outstanding packages on time and to the requisite standard, but CEC fail to provide consent timeously, creating delay to the construction programme.

It is not anticipated that the final Outstanding Packages will be delivered until Autumn 2008. The option of delaying Financial Close to eliminate the risk is therefore unattractive.

SDS has resisted accepting any liability in the event of any of these scenarios. Since the point of investing in a procurement of a design appointment in Autumn 2005 was to secure a completed approvals process with an advanced network design development, there was no allowance for the implications of a coincident design and construction process in the existing SDS agreement. Accordingly, tie / CEC’s leverage over SDS on the issue is limited.

BBS have similarly resisted accepting any liability for the consequences of delay arising from the Submitted or Outstanding packages. Their position was reserved (as was Tramlines' position) at preferred bidder, pending due diligence on SDS, as they were aware of the issue at the Preferred Bidder stage, but again we have only limited sanction over them.

There has been no sustained attempt by BBS to sidestep the transfer of design quality risk once the Submitted and Outstanding packages are eventually signed over to them with consent. In fact they have now explicitly accepted the design quality risk as part of the Agreement made on Friday 7 March for Contract Price adjustment. Accordingly, the remaining risk is focussed on construction programme delay as a result of late delivery of design and hence IFC drawings impacting construction.

Resolving this issue has been made more difficult because of concern built up over a long period about the quality and timeliness of SDS's work on the part of tie, CEC and BBS.

There is also a concern that performance against the agreed submission programme could be obfuscated with the intent (or at least result) that design packages fall outwith BBS / SDS responsibility because of claimed failure by CEC. This could happen in four ways:

1. Confusion about submission date if a package is returned by CEC for quality improvement
2. Swamping CEC with a high volume of design packages which cannot be processed within the 8-week period
3. BBS and SDS by some means acting in concert to subvert the process
4. Lack of clarity about the quality of submissions

In summary therefore, tie / CEC are exposed to risks relating to timeliness of submission and / or quality. The risk could be heightened by deliberate or inadvertent actions by BBS / SDS. The next section describes the primary means by which these risks can be contained, through an effective management process controlled by tie / CEC.

Development of the design submission and approval management process

Recent process improvements

The process of managing SDS has not been smooth. The performance of SDS has been consistently disappointing on a number of levels and it is fair to say that weaknesses have also existed in execution by tie and CEC.

More recently, building on the existing Tram and Roads Design Working Groups, a number of important initiatives have been implemented to improve all-round performance. These have together improved both the rate of design production and the quality of those designs.

(1) Co-location of staff

The co-location of tie, CEC and SDS staff in Citypoint shortened lines of communication and promoted a healthy working relationship that has led to quicker resolution of issues. This has been strengthened further by location of SDS approvals team in Citypoint.

(2) Improved contract management arrangements

tie has increased the number and calibre of resource devoted to managing the design contract, strengthening both its capability to deal with engineering issues and to manage the overall relationship including commercial management and issues resolution.

(3) Focus on resolution of outstanding design issues

By instituting the weekly critical issues meeting with attendance from tie, CEC and SDS aimed at clearing critical issues so that they did not hold up design production, tie brought together the relevant individuals, assigned clear responsibility for securing resolution and monitored progress. In recent weeks that has resolved almost all issues that are holding up SDS design and allowed a number of designs that were almost complete to take the critical final step to full completion and submission for approval. This has now evolved to weekly meetings chaired by the tie Executive Chairman to ensure rapid resolution as design progresses to and through the approval process. Actions from this meeting are carried out by a joint CEC, tie, SDS task force.

(4) Closing out third party agreements

Many of the outstanding design issues involved reaching final agreement with third parties. Although steady progress had been made with many third parties a small number of third party negotiations were not moving to a satisfactory conclusion. tie devoted additional resources to closing out these issues and worked closely with CEC and SDS to ensure final agreements were reached.

Documentation of process and execution

The management process is captured in the Design Management Plan (“DMP”) This, along with the review procedure forms Schedule 14 of the Infraco Contract. In recent months, SDS has had much greater clarity over the reasonable expectations of the approvals bodies. All of SDS’s design packages are clearly defined. A programme has been agreed for the submission of each and the quality of information to be provided with the submissions has been defined. In this context, “quality” relates to an objective assessment of the fitness for purpose of the package, not a subjective assessment of the aesthetic character of the content. A well-defined process of informal consultation prior to submission with relevant CEC people is in effective operation. Once submitted, CEC have an agreed period of 8 weeks to deliver Prior and / or Technical Approval as necessary (“consent”) for each package.

Following novation of SDS to Infraco at Financial Close, tie will continue to use the DMP, working with CEC and InfraCo, to manage the design and consent process and maintain the improved performance in design production and approval. The DMP has been updated to incorporate the role of Infraco in managing SDS following novation but the key principles and initiatives remain in place. This process will be applied to complete the consent process for Submitted and Outstanding Packages as defined above.

Arrangements have been agreed with BBS, SDS and CEC to ensure that all key individuals and constituencies are working very closely together.

CEC's involvement in the approvals task force ensures that there is timely and effective feedback from the approval body of progress with Submitted Packages. It also allows CEC to raise any issues that need to be resolved before a submission can be made.

Whilst some of the Outstanding Packages lie on the critical path for construction, many do not. This means that there is still some flexibility in the agreed approvals programme. Management of that flexibility lies with tie and CEC and BBS/SDS can only take advantage of the flexibility with tie's consent.

There will be some changes to the design that SDS submits/has already submitted. Mainly these are necessary refinement of the detail of items where the detailed design will be completed by BBS and these have been allowed for within the programme. Where BBS is proposing an alternative design to that already submitted by SDS, BBS will be responsible for securing approval of that alternative design. In these cases BBS will draw on the experience of SDS to manage that consultation and approval programme.

Contractual underpinning

The contractual terms which capture these arrangements reflect:

- The contractual responsibility for managing SDS design and development work supporting Submitted and Outstanding Packages sits with BBS;
- BBS are contractually obliged to follow the regime under the Review Process and Design Management Plan, as are SDS;
- SDS agree to liquidated damages to be applied by Infracore regarding late or deficient submissions to CEC;
- Contractual clarity as to primary responsibility for categories of Consents
- Excusable delay in failure to obtain CEC Consent entails evidence of full compliance by SDS/BBS with agreed regime: timing, sequence, quality, notification;
- The absolute nature of SDS contractual responsibility to obtain all Consents has been adjusted to reduce tension surrounding interface with CEC;
- The risk of prolongation cost as a result of SDS failings in terms of causing delay (through not obtaining Consent) is to be taken by tie.
- the risk to programme (and generally) of SDS consented design containing a quality deficiency is ultimately taken by SDS and, in the first instance, by BBS. BBS have now explicitly accepted this as part of the Contract Price. tie will hold a collateral warranty from SDS.

Finally and critically, the overall programme for consents is not only embedded in the SDS Novation agreement to which SDS and BBS are parties, but the programme has been interfaced in detail with the construction programme.

In summary, there is confidence among the tie and CEC managers involved that the management process can be executed rigorously after Financial Close.

Focussed risk analysis

In addition to executing effective management control across all design packages, it is useful to identify those packages which carry the greatest risk. This facilitates prioritisation and

mitigation action and also creates a clearer view of the residual risk arising from the overlapping design consent and construction programmes.

On 15th February 2008, CEC and tie jointly reviewed the status and risk profile of every Submitted and Outstanding Package relating to Phase 1a, allowing for anticipated progress to Financial Close. The review has been updated through the period to Financial Close, allowing a fresh assessment of risk at both point of Notification of Award and at Financial Close.

The best estimate of progress by end-April will be that 8 Prior Approvals and 7 Technical approvals will have been achieved, making a total of 15 Approved Packages.

The review of the Submitted and Outstanding Packages assessed for each design package seeking Prior and / or Technical Approval :

1. The risk arising from the criticality of the package relative to the construction programme ; and
2. The risk arising from the quality and complexity of the package, which could affect timely consent

A graduated risk measurement was applied to each package for each of the two risk criteria : those packages which were required for the earliest stages of the construction programme having a higher risk rating than those required for later stages ; and more complex or sensitive packages or those with known quality issues were given a higher risk rating than those of a simpler character. The two risk ratings were multiplied together to give a risk rating tabulation across the whole population of Submitted and Outstanding Packages. The tabulation was then stratified into Critical, High, Medium and Low categories based on the risk ratings.

The people who contributed to this process and who have confirmed they are comfortable that the results are properly presented were Susan Clark (tie Programme Director), Andy Conway (CEC Tram Coordinator), Damian Sharp (tie Design Project Manager i/c of the SDS design and approval process), Tom Hickman (tie Programme Manager) and Mark Hamill (tie Risk Manager).

87 individual packages were reviewed, of which 82 were assessed as medium or low risk. The remaining 5 packages in each category were :

| <u>Submitted Packages</u> | <u>Critical</u> | <u>High</u> |
|-----------------------------|-----------------|-------------|
| Prior Approval | 0 | 0 |
| Technical Approval | 0 | 0 |
| <u>Outstanding Packages</u> | <u>Critical</u> | <u>High</u> |
| Prior Approval | 1 | 2 |
| Technical Approval | 1 | 1 |

Appendix 1 lists these Critical and High risk packages with a brief summary of their risk profile and the mitigating factors which can be deployed to manage the risk

A report is available which provides a detailed breakdown of the entire population of 87 packages. For each package, the issue is well understood and mitigation plans have been

identified to ensure that the risk is being managed on an ongoing basis. Appendix 1 contains full details of these.

In overall terms, the limited number of Critical / High risk packages is no surprise given the short anticipated time to finalise the consent process relative to the overall construction programme and the extent of work done to date to meet the needs of the approval authority.

Third party approval risk

In addition to approvals by CEC a number of the Submitted and Outstanding Packages also require approval by third parties. The most frequent and significant third party approval body is Network Rail. There has been substantial informal consultation with Network Rail throughout the development of the design and Network Rail has expressed satisfaction with many of the designs in principle. Network Rail has agreed to review Submitted Packages for technical approval in parallel with the CEC consideration of those packages. This means that Network Rail will be in a position to confirm approval very soon after CEC approval is granted. This is a significant concession by Network Rail and reflects their confidence in the design following the consultation to date.

The other significant third party in this context is BAA. Within the EAL Licence, Schedule 3 allows EAL to review tram works data – primarily design & construction related method statements. There is a 30 day review period, and EAL could object to this data, but only on the basis of adverse impact on airport operations or safety. There is also a DRP set out in the licence if an agreed position on design change (both acting reasonably) cannot be resolved.

We are taking EAL through the design and the MUDFA works in a scheduled process of meetings (held 4 weekly, but also in the case of MUDFA, more regularly), there is nothing to suggest that the risk of designs not being accepted is low.

Forth Ports is another player, but the agreement scheduled to be signed with them, and the generally constructive working relationship on these issues, creates a good level of comfort.

No serious issues are anticipated with the other third parties, with whom the approval process is fairly commonplace. Overall, it is considered that the third party arrangements create no material risk to the construction programme.

Higher-level mitigations

In addition to the mitigation arising from control of the well-defined management and approval process and the limited number of Critical / High risk locations, there are a number of higher-level mitigations which are relevant to the overall evaluation.

SDS Liability

In relation to the Submitted and Approved Packages, one contractual feature of importance in assessing the overall risk is the reward / penalty mechanisms to be applied to keep the design process on track after Financial Close. These mechanisms relate to what can reasonably be defined as SDS's performance. SDS will however accept no liability arising from CEC delay (risks B and F above). The effect of these arrangements has been incorporated into the assessment of risk contingency described below.

A general legal protection exists whereby SDS is exposed to claims from BBS following novation for “culpable failure” which could supersede the cap.

Funding support

Any uncapped exposure will carry no financial protection to tie / CEC. However, should this result in increased project cost, assuming legitimately incurred, the terms of the grant funding from Transport Scotland mean that the cost will be substantially covered by grant, to the extent that there remains headroom beneath the aggregate funding of £545m. It must be borne in mind that this factor cushions risk to tie / CEC but not to the project as a whole.

Existing risk contingency

The project cost contains risk contingency amounting to £3.3m linked to the consent risks described in this paper.

Conclusion

The overlap of continuing design and approval processes with the construction programme has created a risk. Experience in the early years of managing the design and approval process was not happy, but recent initiatives have successfully developed a well-defined and effective management process, led and directed by tie / CEC. This management process will continue following Financial Close with minimum risk of interference.

A thorough risk-focussed review of the consents has been performed by competent people from tie and CEC. This has concluded that the residual risk is contained in a small number of design packages. These have been the subject of prioritisation to mitigate their risk profile.

The combination of controlling the management process and focus on the key elements of the residual risk, constitute an effective risk mitigation framework. There are other higher-level mitigations which provide further help, notably the funding arrangements and the existence of a risk contingency in the project budget.

It is the view of the tie and CEC project team that these factors can be relied upon to manage the exposure successfully.

Prior & Technical Approvals

APPENDIX 1

| Critical Risks >21 | Description | Risk | Issue | Mitigations |
|-----------------------|--------------------|------|--|---|
| Technical Outstanding | A8 underpass | 25 | Underpass – sewer conflict | Technical solution now agreed and requires sewer to be diverted |
| Prior Outstanding | Haymarket | 25 | Prior approval for this batch has been problematic | Revised submission made and CEC will aim to approve as soon as possible |
| High Risks 11 - 20 | | Risk | Issue | Mitigations |
| Technical Outstanding | Section 6 Drainage | 15 | VE solution changes | SDS are reducing the time taken to make final comments on board and |

| | | | | |
|--------------------------|---------------------------|-----------|---|--|
| | | | design | complete IFC drawings |
| Prior Outstanding | Russell Road Bridge | 20 | | CEC will provide prior approval in time for piling works to commence |
| Prior Outstanding | Murrayfield Stadium batch | 15 | Batch has been on hold pending decision on Roseburn Viaduct | Batch now taken off hold. CEC advised that revised Roseburn viaduct solution will be re-submitted. |