

SDS Options Paper

Purpose of paper

The Tram project appointed Parsons Brinckerhoff as System Design Services (SDS) Provider in the last third of 2005. SDS, as well as being responsible for designing the tram system, was required to provide specific services to **tie** relating to the management of risk.

This paper sets out to evaluate the performance of the SDS team in relation to their risk remit that was detailed within their final contract. SDS have been providing **tie** with risk procedures for approximately a year and this paper shall primarily review the next stage in the process. SDS have produced certain aspects of their risk remit, notably the Risk Management Plan, Risk Register (based on web-software Active Risk Manager), Assumptions Register and Progress Reports, however the majority of these documents have not been produced accordingly.

tie's requirements

Within SDS's final contract a risk remit was designed to outline what was required of them with regards risk documentation. Their remit included the production of a Risk Management Plan, Risk Register, Assumptions Register plus other risk based documents, as stated above, that were deemed of substantial importance to **tie**. The full risk remit is attached as an appendix to this document. **tie** required these documents to meet detailed specifications and after a year of working closely with SDS the decision has been taken to evaluate the validity of SDS providing some of these services. It is felt that **tie's** requirements, although repeatedly stated to SDS were not met.

The documents produced by SDS were planned to be used as future benchmarks for forthcoming contracts. However, several of their documents never reached the desired level of quality requested.

Possible Options

There are several options that can be taken for this issue to progress accordingly, those of which are to be considered are detailed within this section.

Option 1

SDS could continue working towards achieving their risk remit. This would require further consultation with SDS to raise the standard of documents that they are producing. However, this option seems to have been exhausted as SDS has had countless opportunities to improve their documents, but for several varying reasons they have not produced nor provided **tie** with adequate documents.

Option 2

In stark contrast to the above option there is the consideration that SDS can be completely removed from their duties to produce and manage the risk procedures set out in their risk remit. This would involve **tie** internalising these activities through the likely help of TSS support. This option is worthy of serious consideration, but is likely to have a significant impact on both the resources and the cost of the project.

Option 3

In between the spectrum of both these options are more reasonable options, which would include variances of the above options. For example, an option may be that **tie** would be confident in taking the Tram Risk Management Plan and Risk and Assumption Register back internally and manage them from there. However, **tie** may still require SDS to report back to them on a monthly basis, as indicated in the risk remit, on specific risks to the project concerning SDS. SDS shall also be required to continue producing cost and programme contingency reports, as well design construction and operation reports. The emphasis on these reports is that they shall primarily focus on design issues, which SDS are likely to have a far superior knowledge than **tie** or **tie's** advisors at present. SDS could also continue to produce their monthly progress report and include a section dedicated to risk. The risks reported could be either SDS specific or SDS's view on project-wide risks.

This option would be suitable to **tie**, as firstly they would be able to bring the documents that SDS have not been able to appropriately produce back internally and improve the standard of these documents accordingly. Furthermore, by allowing SDS to produce specific reports connected to their field of discipline, **tie** is not distancing itself from SDS's contract from a risk perspective.

There is however a significant disadvantage that this may cause. SDS may be unwilling to continue to work towards certain aspects of their risk remit, if the main parts of this remit i.e. the RMP etc are removed from their activities. This would raise contractual issues and could cause a breakdown in cooperation between **tie** and SDS.

Option 4

Similar to Option 3 SDS could still be required to produce their monthly progress report but without reporting on risk every month. This option would still involve **tie** taking the Plan and the two Registers off of SDS, however the design specific reports (design operation risk and design construction risk) would still be a requirement of SDS. This option could also include **tie** removing the need for SDS to produce a cost and programme contingency report. This report could actually be done by **tie** with the assistance of TSS again.

Conclusion

In conclusion, **tie** has several options, each with advantages and disadvantages. Preferably, **tie** would be looking to take the Risk Management Plan, Risk Register and Assumptions Register back in-house. The reasoning behind this is that **tie** have constantly asked SDS to raise the standard of these documents but to no avail. It is therefore seen as saving time and effort if **tie** remove these documents from SDS's responsibilities. **tie** shall however require SDS to continue their requirements of producing design specific reports. Therefore it is recommended that *Option 3* is the preferred option for **tie**. This option allows **tie** to take back on board the three main risk documents, but shall also allow **tie** to request that SDS provide them with relevant information relating to risk. However, this option shall require both sides to be fully committed to striving towards the same goal, effective risk management.

Appendix- SDS Risk Remit

Required Action from the SDS Provider	Timing/Frequency
<p>Prepare and maintain a project risk management plan which shall confirm the objectives of the plan, the roles and responsibilities of the SDS Provider, the definitions of risk categorisation and impact, the risk management process and how the plan will be applied throughout the scheme development, design, procurement and construction phases of the Edinburgh Tram Network.</p> <p>This plan should indicate the critical success factors, key areas of focus and individuals involved.</p>	<p>To be delivered by the SDS Provider to the Client within 1-month of the Effective Date and shall be maintained by the SDS Provider throughout the term of the Agreement</p>
<p>Prepare and maintain an assumptions register to record all capex, opex, lifecycle, revenue, programme, quality, functionality and approvability assumptions and consequent risks to the Edinburgh Tram Network throughout scheme development, design, procurement and construction phases.</p> <p>The SDS Provider shall ensure that the assumptions register contributes to the project risk register referred to below.</p>	<p>Agree format with the Client's designated risk manager (as notified to the SDS Provider from time to time) within 1-month of the Effective Date. The register shall be maintained by the SDS Provider throughout the term of the Agreement</p>
<p>Maintain close liaison with the tie project team, the Operator, stakeholders, the Tram Supplier and tie's technical, legal, financial and other advisors, regarding risk matters. The SDS Provider shall facilitate risk management meetings to support the scheme development, design, procurement and construction phases of the Edinburgh Tram Network.</p> <p>Liaison to include assistance with the risk identification procedure which is being carried out by the Client and attendance at management workshops which shall be facilitated by the SDS Provider to allow a sharing of previous experience.</p>	<p>Monthly meeting with the Client and tie's project team (as notified to the SDS Provider from time to time) and ongoing liaison with tie's project team, the Operator, stakeholders, the Tram Supplier and the tie's technical, legal, financial and other advisers throughout the term of the Agreement</p>
<p>Prepare and maintain a project risk register to summarise all capex, opex, lifecycle, revenue, programme, quality, functionality and approvability risks to the Edinburgh Tram Network and their proposed mitigation. The project risk register should include analysis of each risk in terms of 'likelihood' and 'impact' prior to and following mitigation, responsible owner of each risk and graphical summaries of risk profile. The risks to be addressed should</p>	<p>Agree format of the project risk register with the Client's designated risk manager (as notified to the SDS Provider from time to time within 1-month of the Effective Date. The SDS Provider shall maintain, update and circulate the project risk register to parties designated by the Client from time to time on a bi-monthly basis throughout the term of the Agreement</p>

<p>include strategic, commercial, economic, legal and regulatory, organisational, environmental, technical, operational and infrastructure risks.</p>	
<p>Prepare and submit a risk progress report to the Client on the status of risk management and mitigation giving a summary of new risks identified, new assumptions, key matters to be resolved and achievements.</p> <p>This report should indicate "Red-Amber-Green" (RAG) status on key components including planning permissions, specification compliance, incomplete design, programme for outstanding work, adequacy of investigations and surveys, constructability, compliance with CDM Regulations, Design Manual compliance, optimisation of run-time, interface design, Parliamentary objector concession, approvals which require to be obtained from the Client or the Client's Representative (for example approvals required in accordance with the Review Procedure), Consents and certification</p>	<p>Agree format with the Client's designated risk manager (as notified to the SDS Provider from time to time) within 1-month of the Effective Date and submit monthly report to the Client's said risk manager throughout the term of the Agreement</p>
<p>Prepare and maintain a cost and programme contingency report indicating the recommended capital cost and programme contingency allowances to be considered.</p> <p>Report should also summarise the recommended mitigation for the construction and installation phase, the commissioning and defects resolution phase under the Infraco Contract (as such terms are defined in the Infraco Contract) and operational phase, including details of any residual development risks.</p> <p>Report should include a detailed quantitative risk analysis using the Monte Carlo simulation (<i>@RISK4.5 and Pertmaster Project Risk or equivalents</i>) for both cost and programme components.</p>	<p>Submit final report to the Client within 1-month prior to publication of OJEU Notice (as notified by the Client to the SDS Provider) for the Infraco Contract. Report to be updated on quarterly basis thereafter throughout the term of the Agreement and submitted to the Client's designated risk manager (as notified to the SDS Provider from time to time)</p>
<p>Prepare and maintain a design construction risk report, indicating the risks to be considered by Infraco during remaining scheme development and construction including construction sequence, construction methodologies, access, quality, approvals, security, safety, public relations and compliance with Parliamentary Bill and objector requirements.</p>	<p>Submit final report to the Client's designated risk manager (as notified to the SDS Provider from time to time) within 1-month prior to the appointment of Infraco.</p>
<p>Prepare and maintain a design operation risk report indicating the risks to be considered by the Operator during remaining scheme development, the construction and installation phase under the Infraco Contract, the commissioning and defects resolution phase under the Infraco Contract and operational phase including maintenance, lifecycle</p>	<p>Submit final report to the Client's designated risk manager (as notified to the SDS Provider from time to time) within 3-months prior to start of commissioning and defects resolution phase under the Infraco Contract.</p>

replacement, quality, approvals including HMRI, security, safety, public relations and compliance with Parliamentary Bill and objector requirements.

Report to include HAZOP risk assessment for the scheme and detail contingency plans.