

STRICTLY CONFIDENTIAL AND FOISA EXEMPT

Title: Tram Project Improvements

Purpose: To set out the potential improvements needed within the Tram Project as a whole (tie, tss, SDS) to overcome the issues and to enhance the prospects of delivering a successful Tram Project. This will include potential improvements to all operational areas of the Tram Project.

Report to: Mathew Crosse, Tram Project Director and other Tram Directors

Report Prepared by: Ailsa McGregor, tie Project Manager for SDS Contract

Date: 17th January 2007

1. Introduction

The purpose of this Report is to provide the Mathew Crosse and the other Directors of the Edinburgh Tram Project with a summary of the current and historical organisational and operational issues hampering the effective deliver of the Edinburgh Tram Project, at its current procurement stage and for the future construction and operational stages. The recommendations are collated at the back of the report.

2. Background:

Tie entered into the System Design Contract in September 2005 and both parties commenced the Requirements Definition Phase (RDP). This was due to be complete by December 2005 and was extended to April 2006 apparently due to a slow start from SDS and little proactive assistance in interpreting the relevant and irrelevant information from tie.

When I joined the Project part time in August 2006, the relationship between tie and the System Design Services Provider SDS¹ was strained due to a number of events and issues:

Events

- ❖ Delays and Cost Overruns on the Tram Project exposed in April 2006
- ❖ Leadership changes -Ian Kendall, Mike Howell and a number of other tie leadership/ director changes
- ❖ Charette Workshops held in June 2006
- ❖ Preliminary Design Submitted on the 30th June 2006

Issues:

- ❖ Inadequate SDS resources at start of Project in September 2005
- ❖ Ineffective communications at tie operational level, following leadership changes, due to the previous Project Director controlling management style which led to individuals unwilling to communicate issues, take responsibility or make decisions
- ❖ Timing of the Charette Process
- ❖ Lack of Planning in design team; Tie did not expect PB to deliver the Preliminary Design on the 30th June 2006 and tie was not ready or prepared for it.
- ❖ Them and Us approach and "blame culture" between tie and SDS
- ❖ Quality Issues in relation to the submitted SDS
- ❖ Inability to follow contract or operational processes or deal with contract correspondence
- ❖ Commercial Payment Issues and backlog of SDS contract changes

¹ System Design Services (SDS) a consortia led by Parson Brinckerhoff (PB) with design support from Halcrows, commercial support from Cordoroy and environmental and landscape input from Ian White Associates)

STRICTLY CONFIDENTIAL AND FOISA EXEMPT

My initial responsibilities from September 2006 were:

- ❖ To set up and chair fortnightly Progress Meetings between **tie** and SDS
- ❖ To improve communications and the relationships between **tie** and SDS
- ❖ To Project Manage the resolution of the backlog of changes/variations between tie and SDS
- ❖ To manage the SDS contract, interfaces and issues, where known, between **tie** and SDS
- ❖ To migrate tie and SDS back to following the contract, processes and procedures
- ❖ To set up an issues log and get **tie** /SDS to deal with these issues
- ❖ To manage SDS to deliver the design elements for the Infraco ITN 1st and 2nd drops of information
- ❖ To manage the development and agreement of the **tie** / SDS programme
- ❖ To liaise with the procurement team on SDS requirements
- ❖ Manage the interface issues between the Mudfa team and SDS
- ❖ To assist in the identification of contract scope / alignment issues
- ❖ To respond to correspondence

3. Contract Issues:

The contracts are structured like PFI contracts except we are using PFI procurement. It is too late in the process to consider changing either procurement route or the types of contract. We can only tinker with the margins of these already constrained documents.

Tie has entered into a number of separate contracts on the Tram Project. These are as follows:

1. System Design Contract (SDS) signed September 2005
2. DPOF
3. Mudfa Contract signed September 2006
4. Tramco (Bid evaluation ongoing)
5. Infraco (Bid Evaluation ongoing)

There are interfaces between all these contract, some more than others. Scope gap and interface issues have already been identified between the Mudfa and SDS contracts and an exercise is currently ongoing to align these contracts and assess the impact of the scope gaps and interface issues. Geoff Gilbert is leading on these.

SDS contract:

The contract is a bespoke contract, based on transfer of risk to SDS for the cost effective design of the Tram Network and obtaining all approvals and consents. It is a key stage deliverables based contract with no visibility for partially completed deliverables and payment to SDS based on completed deliverables only. The contract is fairly onerous to SDS and there are a number of clauses which may be considered unfair terms due to the wording and restrictions on rights to appeal.

There are scoping issues with the Contract and two meetings have already been held. Further meetings needed to resolve these issues between tie and SDS.

Mudfa:

In relation to the Mudfa and SDS contract issues these relate to:

- ❖ the Schedule of SDS Services set out in the Mudfa contract, which are different to those set out in the SDS Contract.
- ❖ The obligations on SDS in the Mudfa contract are far greater than the obligations that tie has on SDS in the tie/ SDS contract and SDS are not a signatory to the Mudfa Contract. This issue was created by **tie** and led to the initial bad feelings and defensive culture among AMIS/ tie and SDS and the need to manage aspirations and expectations.

STRICTLY CONFIDENTIAL AND FOISA EXEMPT

- ❖ SDS were issued with the Schedule 1 of the Mudfa contract requirements post signature and requested to advise tie of the cost / programme implications to comply. SDS has refused to sign up to these additional requirements and decided to leave it to tie to manage the problem.

Tramco:

The interface issue relates to the Tram lengths, Dynamic Technical Envelope (DKE) and Rail Wheel Interfaces and the Pantograph.

- ❖ The Tram manual states "nominal Tram length 40m"; Tie are about to instruct SDS to design for a 43m Tram which will impact on physical detail design of Tram Stops, Depot etc.
- ❖ DKE for Detail design needs to be finalised now for detail design, Pantograph originally in Infraco ITN and excluded from Tramco now in Tramco revised Bids.
- ❖ Rail Wheel Interfaces needs to be finalised now for detail design, increased tie risk since this is before the Tram Vehicle is selected.

Infraco:

In relation to the Infraco and SDS contract issues, the terms and condition seem to be fairly aligned the issues relate to:

- ❖ Scope, risks, Employer's Requirements and Quality of Infraco ITN
- ❖ Infraco Negotiations issues

Scope, Risk, Employer's Requirements and Quality of ITN

The Infraco ITN was not perfect when it was issued and the design information from SDS was only Preliminary Design stage information and released in 2 drops (3.10.06 and 31.10.06). During the tender period a number of requirements changed and tie received hundreds of Bidder queries raised, mostly related to design issues. SDS has responded to these and tie has issued these to the Bidders. However in some cases tie has changed the SDS response in isolation and these changes are yet to be communicated to SDS.

Infraco Negotiation Issues

Further information is due to be released to Infraco soon and tie is still assessing the initial Bids to decide what further design information is required from SDS for issue to Infraco.

There are some detailed and due diligence concerns in relation to documents, version control, variations etc. The Infraco ITN included a copy of the SDS contract. There are schedules in the contract which have been changed or are not relevant now and these changes need to be captured and notified to Infraco Bidders or they will create problems and prolong the due diligence stage.

Recommendation 1: tie to issue Schedule 1 of the Mudfa contract requirements to SDS; tie to obtain SDS cost / programme implications to comply.

Recommendation 2: tie and tss need to understand the full impact of changes and amendments made to Infraco ITN documents including Employer's Requirements, Deliverables Schedules, scope of services, risks, programme etc and the connectivity to the SDS and Tramco contracts prior to issue to Infraco since at some stage in the process SDS and Tramco will be novated to Infraco.

Recommendation 3: Tie and SDS to set up scoping meeting and agree the issues relating to scope.

STRICTLY CONFIDENTIAL AND FOISA EXEMPT

4. Procurement

There are a number of issues in and around the procurement process and these are:

- ❖ Constraints of the original procurement strategy set in 2005
- ❖ Reactive approach leading to dynamic procurement strategy and confusion
- ❖ Lack of understanding of the impact of changes to ITN Infraco documents and connectivity with the rest of the Tram Project
- ❖ Operating in isolation, changing requirements and communicating after changes issued to Infraco; i.e programme priorities
- ❖ Document control and version control inconsistent
- ❖ Poor recording of issues during development of ITN giving rise to stakeholder issues

Recommendations 4: tie to agree and fix the procurement strategy for the remainder of the Tram Project and decide when clarifications, evaluation and negotiation start/ end; agree points of principle and strategy for Infraco negotiations, adopt a cohesive approach to negotiation through collation and recording of issues and active management and agreement of issues with Stakeholders prior to negotiating with Infraco Bidders, improve diligence in the procurement procedural compliance and with the EEC Procurement Regulations to prevent any challenges later in the process.

5. SDS:

System Design Services (SDS) consists of Parsons Brinckerhoff (PB) and Halcrows. PB has a core team based in Edinburgh and remote teams across the rest of the UK, adding an extra complication to the Project. Halcrow are supporting PB on the Utilities.

Strengths:

- ❖ Experience of Tram Projects
- ❖ Depth of resource worldwide
- ❖ Talented designers in areas of the organisation
- ❖ Team co-located at City Point and been working together for 12months+
- ❖ Delivered Preliminary Design and in detail design stage
- ❖ Hummingbird Document Control System and management and control of document issuing
- ❖ Sustainability and receptiveness to criticism

Weaknesses:

- ❖ Passive leadership of the SDS team and minimal interaction with **tie** leadership team
- ❖ Reactive Project Management rather than proactive project management; lack of adherence to key dates in the programme and programme slippages with no advance communication to **tie**.
- ❖ SDS often agrees dates at meetings to provide information, documents etc and then ignores them and sometimes SDS when chased for the information deny they ever agreed to provide information by the given date.
- ❖ Remote management of design staff in other PB and Halcrow offices adds an extra complexity to the Project and a segregation to which tie has no visibility.
- ❖ SDS Detached and lacking in connectivity from **tie** but co-located in the same offices
- ❖ Constraints of a deliverables based contract mean tie only see completed deliverables and SDS only receive payment for completed deliverables.
- ❖ Communications could be improved
- ❖ Programme Management is reactive and always in arrears, looking back, rather than looking forward and always late with no advance warning or commentary on amendments.
- ❖ Reporting on progress is late and quality varies
- ❖ Recording and management of issues is non existent within SDS

STRICTLY CONFIDENTIAL AND FOISA EXEMPT

- ❖ SDS are currently slow to respond to **tie** requests
- ❖ SDS currently in Delay on the Tram Project, some delays due to SDS some due to charettes and lack of resolution of design issues from CEC.
- ❖ Resourcing, co-ordination, quality and completeness of Utilities design information; issues with Utilities resulting in late submissions to the Statutory Undertaking Companies (SUC's) and delays to AMIS.
- ❖ Quality Management and co-ordination of design issues and Interdisciplinary Checks(IDC) Lack of commercial management resources, lack of time to address commercial issues, weak on contract issues, slow to respond, quality of commercial information needs to improve rarely right first time, appear detached from the Project
- ❖ Historical commercial changes claim issues which are resurrected by SDS every time **tie** changes the Project Director; this is frustrating as SDS just seems to prolong these issues and never seem to accept closure of them and at the same time, despite numerous requests, never manage to provide any further information to support their claims.
- ❖ Deliverables based contract
- ❖ Risk averse

Recommendations 5: SDS to increase the resources on the Project and supplement their team with additional dedicated managers rather than "Player Managers". The PM should be concentrating on managing the Project not off delivering all the design presentation which could easily be done by the detail design manager or the design team leaders at operational level. Additional programme management resources to provide the programme updates that tie needs and the forward forecast. Additional utilities designer, cad operators and dedicated managers resources to improve the timeously delivery of the Utilities and overcome the backlog. Additional commercial manager and commercial assistants to improve the commercial management. Additional Document Controller to cope with the peaks in the detail design deliverables.

6. Tie:

Strengths:

- ❖ Communications and Stakeholder Management Team
- ❖ Land Assembly Team and management of land issues, GVD's etc.
- ❖ Business Case Development Team
- ❖ Finance Team
- ❖ Risk Management
- ❖ Administration teams
- ❖ ICT
- ❖ Traffic Modelling

Weaknesses:

- ❖ Lack of cohesive team approach on the Project, mostly silo culture wrong type of resources for a complex Project; Complex Projects demand the best resources to ensure success. The Tram Project currently does not have sufficient results driven, focussed Project resources. It has too many weak ineffective resources.
- ❖ Them and us" and "blame" culture between **tie** and SDS rather than proactive and partnering approach
- ❖ Poor at record keeping and tie staff don't understand the importance of good record keeping to an organisation
- ❖ Quality of information from tie

STRICTLY CONFIDENTIAL AND FOISA EXEMPT

- ❖ Ineffective and indecisive Design Management team who do not follow processes, procedures and contract timescales
- ❖ Ineffective management of CEC, deadlines are lack of basic management skills and understanding of the complex Tram Project and it's interdependencies
- ❖ Organisation ineffective in managing information; too many areas
- ❖ Organisationally poor at adhering to contracts and following processes and procedures
- ❖ Slow to document and deal with design issues
- ❖ lack clarity, lack ability to make decisions, avoid responsibility, unable to make decisions or understand commercial or contractual issues
- ❖ Tie treat TSS and SDS like subcontractors and not as the Client Technical Adviser and Client Design Partner
- ❖ Project Roles and responsibilities are not clearly defined
- ❖ Lack of compliance with basic H&S, Fire and Security. Tie has no records of who is in the building at any time. In the case of a fire tie, SDS and tss would not know whether everyone was accounted for or not.
- ❖ Lack of Security anyone could get in the lift and enter our office

Recommendation 6: Replace the existing tie Design Management Team with competent, experienced, results driven, focused resources or risk the ineffective management and delivery of the detail design reviews with delays, disruption and cost overruns to the Tram Project

Recommendation 7: Tie needs to undertake a skills audit and establish that there are adequate competent levels of skills and experienced resources available within the Tram Project Team to deliver the next stages of the Project and if not then get the right resources. Include supplementing the administrative teams.

Recommendation 8: Implement a structured training and development programme for all staff, focussed on individual and organisational improvement for the benefit of the Tram Project. Including tie inductions, training and development of staff on new document control system.

Recommendation 9: Improve the control and management of documents and enforce the tie policies and the use of the document control system to record and manage the flow of information to and from tie in all circumstances. Prioritise and migrate the data from the old system to the new shared portal in January to ensure that the relevant data is in place in time before the peaks of the detail design stage.

7. TSS:

Strengths:

- ❖ Some exceptionally talented individuals and some inappropriate expensive inexperienced graduate resources
- ❖ Strengths risk management, programme management, H&S, infraco cost analysis /management
- ❖ TSS depth of resource

Weaknesses:

- ❖ Detached culture; detached from the Project, Client and SDS but sharing the same project office location. Probably due to our use of TSS as a "bodyshop" and at individual level rather than at organisational level
- ❖ Lack of management and control from **tie**; new tss staff appear in the office unannounced and without any introduction or management or control or knowledge of their roles or responsibilities
- ❖ No financial control, poor quality control, timesheets are incomplete and late and tie sign; poor Value for money

STRICTLY CONFIDENTIAL AND FOISA EXEMPT

- ❖ Poor quality of service, slow to respond and they seem to take forever to produce documents, reactive and not proactive
- ❖ Lack of communications between TSS and **tie** and within TSS
- ❖ TSS use Tram as a training ground
- ❖ Security of information; Tss have their own ICT system and copy and store tie information on it; tie do not have visibility or control or security of this information
- ❖ Tie pay for all the photocopying and scanning of consultants in City Point
- ❖ TSS commercial support is under resourced
- ❖ TSS acting on verbal instructions from tie.

Recommendation 10: Amend the TSS "bodyshop" contract and change them to the more typical consultancy provider Service Level Agreement (SLA's), set priorities and quality standards and agree a fixed price fee for the SLA's to deliver value for money, improve management and control of TSS and issue instructions to TSS in writing;

STRICTLY CONFIDENTIAL AND FOISA EXEMPT

Summary of recommendations: Potential Improvements Tram Project, January 2007

Ref No:	Recommendation	Status
1.	Recommendation 1: tie to instruct SDS to comply with the Schedule 1 of the Mudfa contract requirements; tie to obtain SDS cost / programme implications to comply.	
2.	Recommendation 2: tie and tss need to understand the full impact of changes and amendments made to Infraco ITN documents including Employer's Requirements, Deliverables Schedules, scope of services, risks, programme etc on the SDS and Tramco contracts prior to issue to Infraco; SDS and Tramco will be novated to Infraco.	
3.	Recommendation 3: Tie and SDS to set up scoping meeting and agree the issues relating to scope.	
4.	Recommendations 4: tie to agree and fix the procurement strategy for the remainder of the Tram Project and decide when clarifications, evaluation and negotiation start/ end; agree points of principle and strategy for Infraco negotiations, adopt a cohesive approach to negotiation through collation and recording of issues and active management and agreement of issues with Stakeholders prior to negotiating with Infraco Bidders, improve diligence in the procurement procedural compliance and with the EEC Procurement Regulations to prevent any challenges later in the process.	
5.	Recommendations 5: SDS to increase the resources on the Project and supplement their team with additional dedicated managers rather than "Player Managers". The PM should be concentrating on managing the Project not off delivering all the design presentation which could easily be done by the detail design manager or the design team leaders at operational level. Additional programme management resources to provide the programme updates that tie needs and the forward forecast. Additional utilities designer, cad operators and dedicated managers resources to improve the timeously delivery of the Utilities and overcome the backlog. Additional commercial manager and commercial assistants to improve the commercial management. Additional Document Controller to cope with the peaks in the detail design deliverables.	
6.	Recommendation 6: Replace the existing tie Design Management Team with competent, experienced, results driven, focused resources or risk the ineffective management and delivery of the detail design reviews with delays, disruption and cost overruns to the Tram Project.	

STRICTLY CONFIDENTIAL AND FOISA EXEMPT

Ref No:	Recommendation	Status
7.	Recommendation 7: Tie needs to undertake a skills audit and establish that there are adequate competent levels of skills and experienced resources available within the Tram Project Team to deliver the next stages of the Project and if not then get the right resources. Include supplementing the administrative teams.	
8.	Recommendation 8: Implement a structured training and development programme for all staff, focussed on individual and organisational improvement for the benefit of the Tram Project	
9.	Recommendation 9: Improve the control and management of documents and enforce the tie policies and the use of the document control system to record and manage the flow of information to and from tie in all circumstances. Prioritise and migrate the data from the old system to the new shared portal in January to ensure that the relevant data is in place in time before the peaks of the detail design stage.	
10.	Recommendation 10: Amend the TSS "bodyshop" contract and change them to the more typical consultancy provider Service Level Agreement (SLA's), set priorities and quality standards and agree a fixed price fee for the SLA's to deliver value for money, improve management and control of TSS and issue instructions to TSS in writing;	