

Transport Edinburgh Trams for Edinburgh Lothian Buses

DPD Sub-committee January Report Papers for Meeting 13th March

09:30am - 12:30pm

Distribution:-

Willie Gallagher (DPD Chair)
Damian Sharp
Duncan Fraser
Neil Renilson
Matthew Crosse
Bill Campbell
Graeme Bissett
Stewart McGarrity
Steven Bell

Alastair Richards Geoff Gilbert Susan Clark Trudi Craggs Jim Harries James Papps Keith Rimmer Miriam Thorne Tony Glazebrook

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Agenda

Design, Procurement and Delivery Sub-Committee

tie Boardroom

13 March 2006 - 9.30am to 12.30pm

Attendees:

Willie Gallagher (DPD Chair) Alastair Richards Damian Sharp Geoff Gilbert Duncan Fraser Susan Clark Neil Renilson Trudi Craggs Matthew Crosse Jim Harries Bill Campbell James Papps Graeme Bissett Miriam Thorne Stewart McGarrity Keith Rimmer Steven Bell Tony Glazebrook

Agenda Items

- 1 Actions from Previous Meeting
- 2 Project Director's Monthly Progress Report for January
 - a) Programme & Progress
 - b) Feedback from TPB
 - c) Key issues & concerns
 - d) Safety Report
 - e) Risk and Opportunities
 - f) Financial and Change control
 - g) Matters for Approval or Support
- 3 Procurement update: Tramco / Infraco
- 4 Infraco / Tramco negotiation & evaluation sub-committee TOR
- 5 Value Engineering process update
- 6 TRO update
- 7 Project Delivery Strategy update
 - Organisation and Culture
 - Design programme and prioritisation
 - Review process
 - Critical Issues resolution + Critical Issues Map
- 8 Forth Ports interface
- 9 Stakeholder reporting
- 10 OCIP Insurance update
- **11** AOB

Edinburgh Tram Network

Minutes

Design, Procurement and Delivery Sub-Committee

13 February 2007

tie offices - Verity House, Boardroom

Directors Present:	In Attendance:
Willie Gallagher (DPD Chair) – WG	Matthew Crosse – MC
Bill Campbell – BC	Stewart McGarrity - SMcG
	Graeme Bissett –GB
	Steven Bell – SB
	Alastair Richards – AR
	Trudi Craggs – TC
	Susan Clark – SC
	Jim Harries - JH
	Andy Conway – AC
	Steve Reynolds - SR
	Keith Rimmer – KR
	James Papps – JP
	Miriam Thorne – MT
	Matthew Spence - MS

Apologies: Geoff Gilbert, Damian Sharp, Neil Renilson, Duncan Fraser, Mark Bourke

1.0	ACTIONS FROM PREVIOUS MEETING	Action
1.1	Previous minutes were accepted as read	
1.2	Previous actions were accepted as completed - verbal updates and exceptions are listed below:	
1.3	Infraco – DS stated that the bidders' request for an indemnity letter from TS cannot be provided without ministerial approval to the Business Case. Further, DS noted that this would take the form of a comfort letter rather than indemnifying the bidders. TS does however accept the principle that a comfort letter which states that funding is available, can be provided via CEC to the bidders, following ministerial approval in February 07. The letter will be provided	DS
1.4	TC confirmed that verbal update had been provided to TS on the latest date by which GVD can be issued (2 nd March) to ensure spend can be included in 2006/07.	
1.5	Invasive species – issue on funding by CEC for the eradication / treatment of invasive species on CEC land is still outstanding. Indicative prices are being obtained by tie.	

2.0	Improving Design and Engineering – presentation	
2.1	MC and SR presented the plans for improving design matters and the	
	changed approach to engineering. The presentation was accepted by	
	the attendees and recommended for inclusion in the TPB papers. Key	
	highlights and points discussed at the meeting are listed below:	
2.2	WG requested the views of a number of attendees on the proposed	
	plans. The general feeling was that improvements arising from greater	
	collaboration were already noticable.	
2.3	AR raised the question how sensitive the new risk based design	
	review process would be to errors experienced. JH assured that	
	process would be self-assuring and margin of actual error would be	
	used to revise the process where required.	
2.4	BC requested that TEL would fully involved in the review process –	
	MC assured that full involvement of CEC & TEL, plus AR's role as	
	O&M director would safeguard TEL's interests.	
2.5	JP asked whether the new approach signified a change in risk attitude	GG - done,
	by TS and CEC and whether the SDS novation would still be required.	verbal update
	MC confirmed that non-novation may signify a material change in the	at Mar DPD
	procurement strategy thus falling foul of procurement rules. To be	
	ascertained.	
2.6	GB raised the question whether any changes are required to the SDS	
	contract. MC/TC confirmed that no change is required, although the	
	team would consider changes to deliverables, particularly risk items,	
	where advantageous for the project.	
120	DD report	
3.0	PD report	
3.1	SC presented the PD report – key items are outlined below:	
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3.9	Tramco – MC explained that a review of the current strategy was	
	ongoing which meant reduction to 2 bidders at this point was no	
0.40	longer a certainty. A meeting was to be held to discuss on 14 Feb 07.	
3.10	Key issues and concerns	TO -11
3.11	Network Rail: TC confirmed that Network Rail had now received the	TC – done at
	draft lease, however actual engagement by the legal team was slow –	TPB by SB
0.40	TC to update WG by end of the week on progress.	
3.12	Missed Possessions: TC/ SB confirmed that a mitigation plan was	
0.40	being worked through to deal with any issues arising.	
3.13	JRC change request: TC raised concerns about implications for the	
	JRC-SDS contract under the proposal to task JRC with the wider area	
3.14	modelling	CD dono
3.14	HSQE: SB confirmed he will agree level of detail to be included in the	SB - done
	report. WG requested that all future reports will contain positive	
3.15	confirmation that any issues have been dealt with	
3.13	Risk Register: The register was reviewed – key points are outlined below:	
3.16	Risk 139/164: SC confirmed that discussions were progressing with	
3.10	AMIS and any opportunities identified were include in the VE exercise.	
3.17	Risk 279: TC explained that progress was being made in achieving	
0.17	approvals and more meetings had been scheduled.	
3.18	Risk 282: JP questioned current status. MC explained that contract	
0.10	mark-ups were currently with DLA and the procurement team. AR	
	confirmed that meetings were held to ensure alignment of Tramco and	
	DPOFA. Additionally, MC stated that a highlevel exercise was planned	
	to review the risk allocation across all contracts – this had been	
	discussed with James Stewart from PUK.	
3.19	Risk 349: SC confirmed that fortnightly meetings were held with SGN	
	to review progress	
4.0	TRO & TTRO	
4.1	KR presented the TRO update paper. Although QC opinion had not	
	been received at time of the meeting (expected 16 th Feb), feedback on	
	the new strategy to use TTRO's to start construction had been	
4.0	positive.	
4.2	The new strategy would remove the risk of "mirroring" from the TRO	
	process by e.g. inclusion of temporary design features in the TRO's	
4.0	and fast-tracking of hearing for mandatory items.	
4.3	KR confirmed that a detailed programme including time and resource	
	requirements for drafting TRO's was currently being constructed. Key issue was the lack of SDS resource for area-wide items. The DPD	
	agreed that the TRO paper should be updated for the items discussed	
	& presented to the TPB.	
4.4	TC questioned what risk impact the TRO process would have on the	
	Infraco bid process and how the "de-mirroring" would be reflected in	
	the Infraco costs. KR confirmed that this work would low-cost, and MC	
	confirmed Infraco bidders would be asked for indicative costs at the	
	2 nd stage of the bid process.	
	·	·

5.0	Interchange update	
5.1	BC presented the update paper on the Foot of Leith Walk Interchange. He confirmed that good progress had been made over the last month and that the concept drawing was currently being designed by SDS. TC confirmed that this work was part of the change request on interchanges and had been previously approved by the TPB.	
<u> </u>	Desire issues undete	
6.0 6.1	Design issues update	MC dono
0.1	TC presented the paper on the current status. She confirmed that the existing side-agreements and LOD offer little opportunity for savings on these structures. However, a number of options were included in the current VE exercise. WG requested that the paper on VE would cover structures as well.	MC – done, see paper below
6.2	WG requested that SDS "critical issues" map would be included as a standing item on the DPD agenda	MC – done, see paper below
7.0	Depot Advance Works	
7.1	SC presented the paper seeking approval to tender for stage 1 of the advance works. Costs are anticipated within a range up to £3m, these are included in 07/08 funding. Further, the project is looking at number of spoil disposal opportunities in collaboration with the EARL project. SC to provide a verbal update at the Mar DPD.	SC
7.2	SC also confirmed that due to the simple nature of the proposed strategy, no change to the risk profile was anticipated. The paper, once updated, was recommended for approval by the TPB	
8.0	ROGS	
8.1	The paper on new regulation for railway and other guided transport systems was presented by SC. The paper outlines the requirements of the new approval process from 2010 to employ a competent person, provide a safety verification plan and implement safety management systems.	
8.2	SC explained that the "competent person" would consist of a number of responsibilities and that TSS would be approached to provide a package of services to cover these. Alternatives to TSS were also to be considered.	SC – done, Tom Condie discussing opportunities with Transdev
8.3	SMcG requested to understand how the costs were included in the Tram total budget. WG requested that details of the approach would be included in the paper to the TPB.	SC - done
9.0	Network Rail – Immunisation	
9.1	SB explained that meetings had been held with DS/SB/TC/MS. Although a technical solution was still outstanding, an agreement had been reached that TS would enter into the contract with Network Rail for immunisation works. A number of proposal for cost and risk	

	allocation was included in the paper for approval by the TPB.	
9.2	GB requested that the matter would be progressed outside the wider CEC/TS funding discussion. WG requested that end of March 07 would be included as target date to carve out necessary contract to meet programme deadlines. SB/MC/TC are to assess the likely programme impact and SB to provide a risk analysis on the issue.	SB/MC/TC March 07 date included in TPB paper. Programme impact and risk analysis underway.
40.0	FADL /TDAM Hititian and Advance Medic Strategy	
10.0	EARL /TRAM Utilities and Advance Works Strategy	
10.1	The paper was noted and approved to the EARL project board	
44.0		
11.0	Ingliston Park & Ride	
11.1	The paper was noted and approved for information	
11.2	TC requested information on how the programme for Ingliston P&R temporary car park would impact on the MUDFA programme. SC confirmed that different section of McAlpine would deal with Ingliston, therefore no programme impact was expected	
12.0	Infrao update	
12.1	WG updated the DPD on the receipt of 2 initial proposals from Infraco bidders. He confirmed that the analysis team had followed due process in assessment of the proposals and a report had been sent to TS. This report confirmed that the bid were consistent with the expectation of the DFBC.	
12.2	MC stated that no actual numbers could be released due to commercial sensitivity and requested that all involved in the analysis and subsequent evaluation would maintain confidentiality.	
12.3	The DPD agreed that a proposal to a Infraco / Tramco subcommittee would be presented to the TPB to allow informed discussion at the Board.	

Prepared by: Miriam Thorne **Date:** 25 Feb 07

EDINBURGH TRAM PROJECT MONTHLY PROGRESS REPORT – FEBRUARY 2007

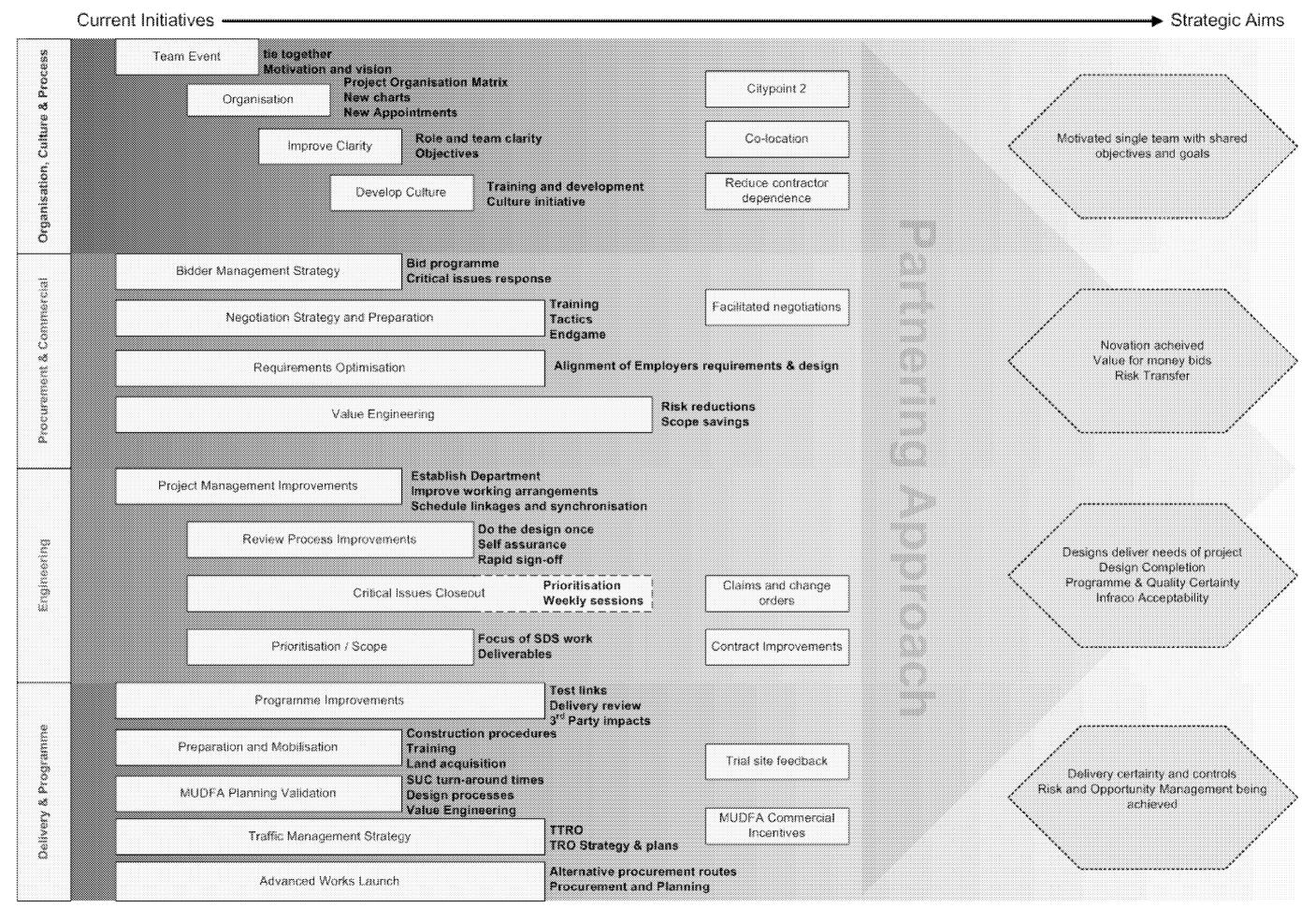
1.0 High Level Delivery Strategy

The paper approved at the February TPB set out a number of areas where the Tram Project Team was seeking to improve its approach. The four areas to benefit from these changes are:

- Organisation and culture changes to deliver clarity, singleness of purpose and rapid decision making (under the **tie** together band).
- Engineering and design improvement initiatives to ensure smarter review processes, close out of critical issues and prioritisation of work programme and scope.
- Procurement and commercial to deliver strong competitive bids that are value engineering, de-risked, and capable of novation.
- Construction mobilisation and delivery that minimises disruption and maximises opportunities for efficiency and partnership working with our contractors.

The following diagram shows the strategic map we are following. It illustrates the current initiatives for each of the principal project work streams and establishes the steps ahead.

2007 Project Delivery - Strategic Map



2.0 **Programme and Progress**

2.1 Achievements in previous period

2.2 Organisation and culture

- The tietogether event was held on 15th February 07.
- The new organisation chart for the Tram project was established on 1st March 07.
- The lease on floor 2 of Citypoint is now secure and a programme is underway for the fit-out and co-location.

2.3 Engineering

Design:

 Progress has been made in identifying the critical design issues and appropriate ways of achieving resolution of these. In the last period considerable progress has been made with 25 having been closed. Much of this progress is attributable to the critical issues meeting convened on a weekly basis and attended by tie, SDS, CEC and TEL.

Traffic Management:

- Positive responses have been received from QC on the proposed TRO/TTRO strategy which moves TRO off the critical path. See attached paper 'Traffic Regulation Orders Report'.
- A set of MUDFA traffic model tests have been completed and passed to CEC and other stakeholders to give an impression of likely wider area impact of the tram.
- Statutory TTRO notices were issued on 1st Mar 07.

2.4 Commercial and Procurement

Infraco:

- Positive responses have been received from Infraco bidders to close out some of the key price-sensitive contractual issues.
- The continued clarification with Infraco bidders enables them to revisit their programme for 2nd stage bid returns.

Tramco:

- Tramco bidders continue to work with tie's team. Updated financial
 offers have been received and evaluated.
- Visits to each bidder by tie/TEL senior management has been completed.

Advance works:

 Tender documentation has been issued for the removal of invasive species.

DRAFT

OCIP:

 8 Tender returns received – all 8 bidders within the affordability envelop as per the DFBC.

2.5 Delivery

- Significant progress has been made on agreeing the utility diversion design process between tie/AMIS/SDS.
- Good progress has been made on MUDFA works order process.
- Site investigation works was carried out for IPR 2 (temporary).
- The design commenced for IPR 2.

2.6 Finance & Business Case

- The updated project estimate and supporting documents, as provided to TS in Jan, was reviewed and discussed with TS in February. TS have indicated that they are satisfied with the reported update to the cost estimate for Phase 1a and 1b.
- A draft grant letter setting out the funding for the period from 1 April 07
 to Financial Close was received from TS. Principles of the letter were
 agreed between TS and CEC with input from the project team. The
 issue of the grant letter is anticipated following a ministerial
 announcement on funding / the DFBC which is expected imminently.
- TS have confirmed that funding for of £10.6m land purchases not incurred in 06/07 due to the delayed ministerial announcement will be rolled over into 07/08.

2.7 Update on key milestones outstanding

2.8 Delivery:

Land & Property:

• Issue of 2nd GVD notice pushed back from target date of 28th Feb due to late ministerial announcement on funding and the DFBC.

2.9 Finance & Business Case

 Ministerial announcement on funding and the DFBC anticipated before end of February still outstanding, now expected early March.

2.10 Key milestones – next period

2.11 Engineering

 Programme priorities and scope are currently under review. The revised, agreed dates will be advised when completed

2.12 Commercial and Procurement

Tramco

 09 MAR 2007 – reduction of Tramco bidders from 4 to 2. The current programme date for short listing will be delayed due to the delay in a ministerial announcement on funding and the DFBC.

Advance works

• 12 MAR 2007 – tender return for Invasive species.

2.13 Delivery

- Reference design on IPR 2 to be complete.
- Start work on construction of IPR2 (temporary).
- Set up activities for Depot Advanced Works to commence.
- Provision of revised MUDFA programme taking account of Phase 1b re-phasing, SU approvals

2.14 Finance & Business Case

 31 MAR 2007 – Receipt of comments on DFBC for update to Final Business case from TS

2.15 Future key milestones – 3 month look ahead

2.16 Programme priorities and scope are currently under review. The revised, agreed dates will be advised when completed.

2.17 Delivery

MUDFA

02 APR 2007 – Trial Dig for Utilities at Casino Square (Ocean Drive)

 reprogramming necessary to comply with statutory time
 requirements for TTRO/TRO notices. The issue of TTRO/TRO
 notices were delayed to 1 Mar to allow them to coincide with the
 anticipated ministerial announcement on funding and the DFBC.

Advance Works

- 19 APR 2007 Commence 1st cycle of invasive species treatment
- 25 APR 2007 Award contract for spoil disposal
- 30 APR 2007 Advance Works Phase 1 procurement contract award
- 30 APR 2007 Complete badger sett construction at Gogar/Ingliston

 08 MAY 2007 – Advance works Phase 1 depot site works start proper

Ingliston Park & Ride - Ph2

- 02 APR 2007 issue of ItN
- 28 MAY 2007 Contract award
- 01 JUN 2007 Commence mobilisation

3.0 Key Issues and Concerns

3.1 Engineering

Design:

- The programme and deliverables are currently under a detailed review and, until conclusion of these activities, remain an area of concern.
- In respect of the critical issues discussed in 2.3, these are being progressed but there are still many to close out. Refer to attached paper 'critical issues update'

Traffic Management:

JRC continues to undertake re-calibration and update of the transport model suite as covered under the existing contractual arrangements. This is expected to be complete by end of March 2007. There is an on-going concern about the lack of a clear and agreed process to assess the traffic impacts of the TTRO and TRO processes. A paper outlining the key issues and recommendation for resolution is attached. See paper 'Transport Model Requirements'.

3.2 Commercial and Procurement

OCIP:

 Due to the delay to the main works on MUDFA, the budget for OCIP for 06/07 has been moved into 07/08. The total project budget still stands, however an exercise is required to assess the financial impact. Confirmation is also required that AMIS will provide insurance cover on trial work prior to commencement of the OCIP.

3.3 Delivery

Advance works:

- Completeness and accuracy of the survey in respect of the extent of the treatment required for invasive species and the initial cost estimates remains a concern. Tender returns anticipated for 12 MAR will provide greater clarity and inform discussions with CEC and Network Rail on costs and programme. Key concerns remain on CEC ability to absorb costs.
- Costs of treatment are responsibility of land-owner. Proposed strategy to off-set treatment costs against compensation payments to landowners is to be tested against land values as assessed by the DV to achieve clarity on budget 07/08 impact.

Land & Property:

- Network Rail land: a draft lease received 07 FEB 2007 contained unacceptable irritancy provisions which require renegotiation. A series of meetings to address issues has been scheduled, however concerns remain about resolution within required time-frame.
- Asset ownership: under the propose strategy for assets ownership, all tram land will be owned by CEC. To facilitate that process it was proposed that CEC would become D&W's client for this work and letters have been sent to CEC as in this respect. No response has been received from CEC and no confirmation as to the reporting procedures to be applied has been received.

4.0 TPB Feedback

4.1 Papers approved

The recommendations of the following papers were formally approved by the TPB:

- Improving design & engineering presentation
- Advance works depot
- Network Rail immunisation including recommendation that cost & risk allocation should fall to TS (point 2.5 of Immunisation paper)
- ROGS approval process
- Proposed additional meeting requirements for Infraco approval process

The following papers for information were noted by the TPB:

- Foot of Leith Walk update
- Structure Charettes update

4.2 Decisions / Actions arising from the board

- The TPB approved recommendation of an Infraco/Tramco tender evaluation & negotiation sub-committee.
- The TPB agreed that following feedback from TS on project funding, the project should reprioritise work on Phase 1a only.

5.0 Safety Report

No issues to note – see appendix A

6.0 Risks and Opportunities

- 6.1 Risk Management Register
 - The Primary Risk Register is actively being updated. Active Risk Management (ARM) is now in use by all Project Managers and those who are termed risk Owners. Mitigation actions are being developed by risk owners, an update will be provided at the next DPD.
 - Risk Register see appendix B
- 6.2 Principal opportunities & output from VE exercise
 - A number of strands to identify and develop key opportunities for the project are being pursued. These include evaluation of Value Engineering suggestions by the Infraco bidder, outputs form the formal Value Engineering exercise and opportunities developed within the project team. The paper to TS will baseline the current thinking on principal opportunities – see attached 'VE Process Paper' and appendices.

7.0 Financial and Change control

7.1 Financial status

- The current financial year end VOWD forecast has reduced to £32.5m.
- The current AFC for the scheme is £592.4m as detailed in the Draft Final Business Case (DFBC). The project is currently updating its view of the Project AFC based on the return of the initial proposals from the Infraco bidders.
- The VOWD to the end of February is £225k higher than the corresponding forecast last month. The reason for the variance is contained in the attached appendix C.

Current Year position

Current Year position							
VOWD in current month 06/07							
Month £k (Incremental)	Current Actual £k (Cumulative)	Previous Forecast £k (Cumulative	Variance £k (Current minus previous)	Comment			
£3,162	£28,135	£27,910	£225	See appendix C			
AFC – Current Fir	nancial year positio	n to Mar 07	•				
Approved Budget £k	Current Forecast £k	Previous Forecast £k	Variance £k (Current minus previous)	Comment			
£44,041	£32,464	£44,041	(£11,577)	See appendix C			
AFC – Anticipated	d Final Cost						
Budget £k	Current Forecast £k	Previous Forecast £k	Variance £k (Current minus previous)	Comment			
£545,000	£592,400	£592,400	Ö	As approved Preliminary Design Stage Project Estimate			

^{*}Approved Budget to end Mar 07, reflecting new Approved Funding Paper (Nov06)

7.2 Early warnings of claims

No additions to last month's summary

7.3 Change Control Summary

- No additions to last month's summary

DRAFT

8.0 Matters for Approval or Support

- 8.1 Items for information
 - Value Engineering paper
 - Critical Issues resolution update
 - Foot of Leith Walk & Structures' Charettes update
- 8.2 Decisions required from TPB
 - Terms of Reference for Infraco/Tramco negotiation sub-committee
 - Final close out of Charette changes
 - Forth Ports interface issues
 - Design Review process
- 8.3 Decisions/ support required from TS
 - Issue of grant funding letter for Period April to Financial Close
 - Clarification of funding / process to achieve for funding for whole of 07/08
 - Letter of comfort to Infraco bidders
 - Confirmation of funding draw-down to permit confirmation of payment arrangements to bidders.
- 8.4 Decisions/ support required from CEC
- 8.5 Decisions / support required from others

Submitted by:- Matthew Crosse Project Director

Date:- 07 Mar 07

Appendix A

DRAFT

Paper to : Tram Project Board (DPD)

Subject : HSQE Performance Report for Period 12

Date : 7th March 2007

Safety Update, for information only

1.0 Safety

1.1 There have been **two** minor accidents reported this period. The Accident Frequency rate (AFR) for the project is **zero**. Summary table below;

Ref.	Accident/Incident Summary				
AIIR5	14/02/2007 No time lost.				
	SDS employees' trousers caught on broken key in protruding from locked				
	cupboard causing trousers to rip and gash to buttock.				
	Immediate Action: Key removed from cupboard.				
	Further Action: Review of all accidents to date and submit report.				
	Update: report received but revisions required.				
AIIR6	08/02/2007 No time lost.				
	SDS employee cut finger while looking through lever arch file on the metal				
	shutter part.				
	No further action.				

- 1.2 There have been **17,525** hours recorded for the period of which **977** were for site work.
- 1.3 There were no Safety Tours recorded for the period. Current status of previous actions are in the table below;

No.	Item Description	Actioned	Status
1	Campbell Skinner to be given HR induction – this includes H&S induction for Citypoint.	Geoff Gilbert	Closed
	Issue notification reminder to project management of the requirement for all new staff to receive HR induction.	Heather Manson	Open
	Ensure reception notifies visitors of fire safety arrangements.	Heather Manson	Closed
2	Tables stacked in kitchen area to be replaced.	Heather Manson	Open
3	Wires to be made safe.	Heather Manson	Closed
4	Desks in corridor (Fire escape route) to be removed.	Heather Manson	Closed
5	IT cables in McAdam Room to be secured/tidied.	Seamus Healy	Open
6	Brunel Room to contain only eight chairs (maximum number of persons for meeting).		Closed
7	Review storage of materials in SDS area.	Billy Johnston	Open

Appendix A

DRAFT

- 1.4 No Safety Alerts was issued this period.
- 1.5 A meeting with the HSE Inspector allocated to the Tram project took place. The purpose of the meeting was to discuss the current Construction (Design and Management) arrangements and the approach to the revised CDM 2007.
- 1.6 Notification has been sent to the HMRI confirming that the Edinburgh Tram Project shall follow the Railways and other Guided Transport Systems Regulations route for 'approval'.
- 1.7 Utility design hazard information has been provided by SDS for the MUDFA works. However, it is of a generic nature and is not site specific in terms of residual hazards. A workshop with SDS and AMIS chaired by the Planning Supervisor has been organised for Monday 12th March to address the issue.

2.0 Quality

- One quality system audit was planned for this period. It has not been undertaken this period due to other work and has been re-programmed for next period.
- 2.2 No non-conformance reports (NCRs) were raised in the period and there are no outstanding NCRs.
- 2.3 The Health, Safety and Quality Management Plan and Environmental Management Plan are ready for approval. Supporting procedures have been drafted and are under review.
- 2.4 An external audit is was undertaken on the 5th March to 9th March by Scott-Moncrieff. A report will be submitted in due course.

3.0 Environment

- 3.1 There were no environmental incidents in the period.
- 3.2 Concerns had been received from the CEC Archaeologist regarding the lack of archaeological management arrangements for the MUDFA works. This has been discussed with the CEC Archaeologist for the MUDFA works and areas of archaeological interest have been agreed and levels of archaeological watching brief defined. On-going meetings have been arranged with the CEC archaeologist.

Proposed	Tom Condie HSQE Manager - Tram	Date	07/03/07
Recommended	Susan Clark Delivery Director	Date	07/03/07
Approved	 David Mackay on behalf of the Tram Pro		 k

Edinburgh TRAM Project (Commercial In Confidence)

2.0 Risk Significance and Treatment Status Summary.

Paper to: Tram Project Board

Subject: Risk Management Paper for Primary Risk Register

Date: 6th March 2007

1.0 Introduction

- 1.1 The purpose of this document is to provide the monthly update to the Board with regard to the Primary Risk Register and the top risks facing the project.
- 1.2 The risks on the Primary Risk Register have been extracted from the Active Risk Manager (ARM) system and are those that are Black Flags and/or have a high risk significance and which also require treatment in the near future.

The system of producing the Primary Risk Register has changed this month. With ARM now having been fully implemented, the Primary Risk Register is "pulled" live from the system based on the logic contained in Section 1.2 above.

Reporting has not yet been automated although tie IT Services are currently developing a selection of reports to allow live reporting directly from the ARM database. The reporting process is still largely manual. However, the format of the report has been changed slightly in order to allow quicker production of the Primary Risk Register. The new report contains the same information as previously, plus some additional and relevant information.

The Risk Significance colour key has been removed as this is now self explanatory in the report. Treatment status has more appropriate reporting categories which better reflect data contained in the ARM system and specific treatment actions are shown with their owners.

- 2.1 Overall the significance of individual risks on the Primary Register has not changed.
 - 6 risks were removed and 7 risks were added.
 - All risks are ongoing and none are recommended for removal from the Primary Risk Register.
- 2.2 Last month five risk treatments were showing red status. Two of these were removed from the Primary Risk Register with Risk 269 which closed. One of these was split into two more detailed actions and remains red. An additional two actions remain behind programme and

Appdendix B

one has improved to being on programme. Three new treatment actions have been identified as immediately behind programme.

On the whole, the treatment status of the primary risks has remained neutral with several on programme actions now complete.

- 2.3 The Primary Register is attached as Appendix (i). This document contains a risk status summary showing the changes from last month.
- 3.0 Consultation
- 3.1 The DPD Sub Committee will review this register and their comments will be incorporated.
- 4.0 Recommendation.
- 4.1 The Board is asked to note this paper.

 Proposed:

 Prepared
 Nina Cuckow Risk Manager - Tram
 Date: 07/03/07

 Recommended
 Geoff Gilbert Commercial Director
 Date: 07/03/07

 Approved
 Date

David Mackay on behalf of the Tram Project Board

PRIMARY RISK STATUS	SUMMARY				
Risk Significance (No of Risks)			Treatment Status (No of Treatment	atments)	
	31-Jan-07	06-Mar-07		31-Jan-07	06-Mar-07
Black Flags ि	4	9 (including 4 with red significance)	Undefined	2	4
High	14	18 (including 4 Black Flags)	Beland Programme	5	7
Medium	1	-	On Programme	30	32
Low	-	-	Ahead of Programme	1	1
Risks Added	-	2 (Black Flag/NIL); 1 (Black Flag/Red); 4 (Red)	Complete	12	23
Risks Removed and No Longer on Primary Register	-	6	Pending	1	2
- J			Treatments Added	_	20
			Treatments Removed and No Longer on Register	-	13
			N/A as risk closing, treatment no longer appropriate or treatment plan not developed in ARM	-	2

ARM Risk		Risk Description		Risk	Signif-	Black	Treatment Strategy	Treatm	ent Status	Date Due	Action
ID .	Cause	Event	Effect	Owner*		Flag	7	Previous	Current		Owner
264	Political support is lost or political opposition to scheme increases due to lack/loss of confidence in business case (Infraco costs). failure to provide information, election campaigning etc	STAKEHOLDER PRIMARY Political risk to continued commitment of TS/CEC support for Tram scheme	Reversal of decisions by incoming administrations in either or both CEC and Holyrood; Project becomes key political issue during election campaign; Protracted decision making and unnecessary debate during consideration of Business Case	W Gallagher (A) M Crosse (B)		H	Monitor likely outcomes and do our best to brief all relevant parties about the project in a balanced way	Complete	Complete	21-Dec-06	W Gallagher
							Hearts and Minds campaign including Senior Executive Officer meetings with Councillors and MSPs and utilising the tram sounding board meeting with CEC and selected elected transport leads	Complete	Complete	21-Dec-06	S Waugh
							Regular briefings and discussions with senior CEC and TS officers particularly in relation to Full Council presentations	Complete	Complete	21-Dec-06	W Gallagher
							Provide confidence on Infraco costs in Business Case ensuring that 70% costs are firm	On Programm	e On Programme	31-Jan-07	M Crosse
							Make contact and engage with Senior SNP Leaders to address the effect of the project becoming a key political issue during election campaigning		On Programme	04-May-07	W Gallagher
							Continue to provide accurate information on status of project to address the effect that the incoming administration after the May 07 elections may reverse decision to proceed	Ţ.	On Programme	28-Sep-07	W Gallagher
268	Business case is not approved or is approved subject to the gaining of additional funding	STAKEHOLDER PRIMARY Funding not secured/agreements not finalised for total aggregate funding from TS and CEC including grant/indexation CEC contribution; risk sharing between parties; cashflow profile; financial covenant; public sector risk allocation.	Possible showstopper; Delays and increase in out-turn cost may affect affordability. Event: also decision on line 1B.	A Holmes (A) S McGarrity (B)	NIL	FD .	Acquire confidence in contingency figures	Complete	Complete	20-Nov-06	N Cuckow
							Ensure close and continual interactions with TS and CEC to establish funding delivery confidence and agreement between TS/CEC about how respective parties will deliver contributions	On Programm	e Gn: Programm	8-Sep-07	G Bissett

ARM Risk		Risk Description		Risk	Signif-	Black	Treatment Strategy	Treatm	ent Status	Date Due	Action
ID.	Cause	Event	Effect	Owner*		Flag	9,	Previous	Current		Owner
270	Scope of work not agree with CEC	STAKEHOLDER PRIMARY Uncertainty about requirements for wider areas modelling and need and extent of construction works required on road network	Increased construction cost; Delay while additional funding is found.			-	Provision of £500k in Draft Final Business Case estimate to deal with WAM requirements	Complete	Complete	31-Jan-07	G Gilbert
						8	Employ further traffic management expertise	Complete	Complete	31-Jan-07	C McLauchlan
							Clarify and agree boundaries of scope and funding provision between TS and CEC	On Programme	On Programme	28-Feb-07	T Craggs
273	Infraco returns do not adequately inform business case; Minister/TS do not approve business case.	STAKEHOLDER PRIMARY Business case is not approved during February 2007.	Delay until Summer 2007 (after elections and purdah period) due to lack of political commitment due to impending elections; Resultant cost impacts (inflation) on total cost; Political support may evaporate; Leads to Risk 264; 2006/07 budget is not achieve	S McGarrity (A) B Dawson (B)		Pi	Maintain procurement programme to deliver critical business case inputs	Os Programme	s Complete	31-Jan-07	B Dawson
							Manage expections on the part of TS and CEC as to the certainty with respect to coast which are reflected in the business case	On Programme	Complete	31-Jan-07	S McGarrity
							Onoging fortnightly reviews with bidders and mid term contractual mark up to inform above treatment			31-Jan-07	B Dawson
							Tram Project Board to monitor and discuss progress of decision	On Programme	o On Programme	20-Mar-07	D MacKay
915	Policy or operational decision	STAKEHOLDER PRIMARY Transport Scotland and CEC do not provide indemnities on payment	Bidders withdraw from negotiations and bid process	G Gilbert	NIL	H	Ensure Transport Scotland understand implication of not providing indemnities and obtain buy-in from them	NEW	On Programme	31-Aug-07	G Gilbert
916	CEC do not achieve capability to deliver	STAKEHOLDER PRIMARY CEC do not deliver contribution of £45m plus additional contribution relating to Line 1B		A Holmes (A) S McGarrity (B)	NIL	H	CEC to execute a process to deliver assurance that contributions can be made. This may include delivery of funding throuh third party contributions.	Undefined	Undefined	28-Sep-07	TS/CEC
							Tram Project Board to monitor progress towards gaining contributions	NEW	On Programme	28-Sep-07	D MacKay
							CEC to deliver necessary contributions	NEW	Undefined	31-Dec-10	TS/CEC
917	Transport Scotland and CEC have not agreed funding and risk allocation required from Tram budget for Tram elements of work; Immunisation Works on critical path and it is essential they are complete by October 2009.	STAKEHOLDER PRIMARY Source and level of funding and risk allocation for Network Rail Immunisation Works has not been established	Immunisation works unable to proceed due to lack of funding or works are delayed having a critica effect on programme	S Bell	NIL	À1	Undertake Immunisation Works Risk Workshop to produce key risks register	NEW	On Programme	16-Mar-07	N Cuckow
							Employ dedicated Project Manager to oversee works and provide liaison with TS and NR	NEW	Undefined	31-May-07	S Bell

ARM Risk ID		Risk Description		Risk Owner		Black	Treatment Strategy	Treatme	nt Status	Date Due	Action
	Cause	Event	Effect		icance	Flag		Previous	Current		Owner
139	Utilities diversion outline specification only from plans	PROJECT PRIMARY Uncertainty of Utilities location and consequently required diversion work/ unforeseen utility services	Increase in MUDFA costs or delays as a result of carrying out more diversions than estimated	M Hutchinson		-	Review design information and re- measure during design workshops with Utility Companies and MUDFA.		Designation	30-Nov-06	S Clark
164	Assets uncovered during construction that were not previously accounted for	PROJECT PRIMARY Unknown and abandoned assets affect scope of MUDFA and/or Infraco work	Re-design and delay as investigation takes place and solution implemented	M Hutchinson		-	Develop PC Sums into quantified estimates.	teres Proposition	Contraction	30-Nov-06	S Clark
RISKS 139 AI PLAN	ND 164 HAVE SAME TREATMENT						In conjunction with MUDFA, undertake trial excavations to confirm locations of Utilities		On Programme	16-Feb-07	S Clark
							Identify increase in services diversions. MUDFA to resource/re-programme to meet required timescales.	On Programme	On Programme	31-Aug-07	S Clark
172	Area of possible contamination and unstable ground (unlicensed tip) has been highlighted during desk study immediately to east of Gogar Burn - investigation for CERT project indicates that this consists of building rubble and domestic waste.	PROJECT PRIMARY Tramway runs through area of possible contamination and special foundation is required to cope with unstable ground	Increase in costs to provide special foundation solution	A McGregor		-	Obtain ground investigation information.	On Programme	Complete	09-Feb-07	A McGregor
					***************************************	8	Monitor design progress and include costs in base estimate.	On Programme	On Programme	28-Feb-07	A McGregor
							Include SI Report and Information in next issue of information to Infraco.	On Programme	On Programme	30-Mar-07	B Dawson
178	Procurement Strategy novates SDS to InfraCo after Detailed Design	PROJECT PRIMARY Limited input on buildability from InfraCo.	Design re-work at outset will result in higher bids	G Gilbert		-	Plan not available on ARM - to be updated.	NEW	n/a		
349	Diversion of HP Gas Main at Gogar Deport depends on construction of Turnhouse Pressure Reducing Station - land is not in LoD and there are no alternatives	PROJECT PRIMARY Turnhouse PRS requires private land purchase and planning approval	Due to land negotiation process there is a risk that Turnhouse PRS is not constructed at all or on time thus resulting in critical delay; also there is a risk that land purchase cost will be above face value (leads to Risk 191)	J Buchanan		-	Develop strategy to allow commencement of Depot earthworks without prior diversion of Gas Main	Complete	Complete	29-Dec-06	P Douglas
						8	Ensure Scottish Gas Networks understand the criticality of diversion programme	Complete	Complete	31-Jan-07	P Douglas
							Monitor Scottish Gas Networks progress with regard to land acquisition and adjust Tram programme accordingly	1 '	Complete	31-Jan-07	P Douglas
							Ensure Tram Project remains in background in order to prevent escalation of land price	On Programme	On Programme	31-Jan-07	P Douglas
							Develop additional strategy to account for other Utilities ancountered.	Complete	Complete	31-Jan-07	P Douglas
352	Some properties may result in higher land compensation claims than anticipated	PROJECT PRIMARY Land compensation for high risk properties	Additional uplift on compensation claims	G Duke		-	Initiate early negotiations between DV and landowners	On Programme	On Programme	28-Mar-07	A Rintoul

ARM Risk ID		Risk Description		Risk Owner*	Signif-	Black	Treatment Strategy	Treatme	ent Status	Date Due	Action
	Cause	Event	Effect		icance	Flag		Previous	Current		Owner
							Liaise with CEC Planning	On Programme	On Programme	28-Mar-07	R McMaster
							Close out	Pending	Pending	28-Mar-07	G Duke
214	Scope of Network Rail infrastructure alteration is not yet defined		Re-work and consequent delay to programme, increase in cost over and above base estimate	S Clark		-	Establish routine interface meetings	NEW	Complete	31-Jan-07	S Clark
							Appoint 3rd party rep.	NEW	Complete	31-Jan-07	S Clark
							Agree design with NR	NEW	On Programme	31-Dec-07	D Crawley
279		PROJECT PRIMARY Third party consents including Network Rail, CEC Planning, CEC Roads Department, Historic Scotland, Building Fixing Owner consent is denied or delayed	Delay to programme; Risk transfer response by bidders is to return risk to tie; Increased out-turn cost if transferred an also as a result of any delay due to inflation.	T Craggs		-	CEC Planning - mock application by SDS		Bernes Pittgeworth	31-Jan-07	T Craggs
						889	Engagement with third parties to discussed and obtain prior approvals to plans	On Programme	On Programme	31-Aug-07	T Craggs
							Identify fallback options	On Programme	On Programme	31-Aug-07	T Craggs
							Obtain critical consents prior to financial close	NEW		28-Sep-07	T Craggs
280		PROJECT PRIMARY SDS deliverables are considered to be below quality levels required or late in production	Delay in submission of information to Infraco; Delay in achieving consents and approvals; Dilution of effort to de-risk Infraco pricing	G Gilbert		-		On Programme	On Programme	31-Jul-07	G Gilbert
						~	Apply micromanagement to SDS delivery. Weekly reviews to press for deliverables.	Undefined	Undefined	31-Jul-07	M Crosse
281		PROJECT PRIMARY Insufficient planning of procurements and controls on management and contract costs	Weak procurement plan; scope/cost creep; damage to reputation	G Gilbert		Ъ	Improve robustness of procurement plan	Complete	Complete	29-Dec-06	G Gilbert
						***	Finalise project estimate and functional specification and apply change control	Complete	Complete	29-Dec-06	G Gilbert
							Undertake further Value Engineering	On Programme	On Programme	31-Jan-07	G Gilbert
282	Procurement has high level of risk transfer to contractors	PROJECT PRIMARY Failure to sustain negotiating position and/or suitable interest from the market throughout bid process.	Leverage in negotiation is lost; Required risk transfer is not achieved; Increased price of bids; Withdrawal of bidders during bid process.	B Dawson		Þ	Review contract mark-ups and draft amaendments	On Programme	On Programme	29-Jun-07	B Dawson
							Settle all major contractual issues prior to return of consolidated proposals	On Programme	On Programme	31-Jul-07	G Gilbert
							Keep 2 bidders in competition for as long as possible	On Programme	On Programme	31-Jul-07	G Gilbert
							Identify feasible alternatives to risk allocation and allow negotiation of risk allocation	Ahead of Programme	Ahead of Programme	28-Sep-07	B Dawson

ARM Risk ID		Risk Description		Risk Owner*	Signif-	Black	Treatment Strategy	Treatme	ent Status	Date Due	Action
	Cause	Event	Effect		icance	Flag		Previous	Current		Owner
284	Acceleration of programme. (Current programme has no contingency and shows depot works commencement November 2007.)	PROJECT PRIMARY Requirement for early commencement of depot works is not able to be met.	Potential delay and increased cost	S Clark		-	Gain Transport Scotland agreement for early commencement of depot works including earthworks.	On Programme	On Programme	29-Dec-06	S Clark
						8	Develop procurement strategy and cost to obtain funding and present to DPD	On Programme	Complete	16-Jan-07	S Clark
							Develop scope paper	NEW	Complete	05-Feb-07	J Buchanan
							Present Scope paper to DPD	NEW	Complete	17-Feb-07	J Buchanan
							Prepare Depot Early Works tender documents and requirements	NEW	Complete	26-Feb-07	J Buchanan
							ACTION NO LONGER APPROPRIATE Invitation to Tender process	NEW	n/a	26-Feb-07	J Buchanan
							ACTION NO LONGER APPROPRIATE Award Depot Early Works Contract	NEW	n/a	27-Feb-07	J Buchanan
							AMIS to price up works	NEW	On Programme	31-Mar-07	J Buchanan
							Undertake Depot Early Works	NEW	On Programme	23-Apr-07	J Buchanan
286			Significant delay to delivery of Tram; Loss of reputation; Significant extra costs	B Dawson		-	Consult with legal on options relating to due diligence to be carried out on design and availability of consents	On Programme	On Programme	28-Feb-07	B Dawson
						8	Introduce and engage Infraco bidders to SDS as early as possible	On Programme	Complete	28-Feb-07	B Dawson
							Complete designs and allow due dilligence to be undertaken by bidders	On Programme	On Programme	31-May-07	B Dawson
271		RISK - Failure to reach agreement with CEC on various approvals	Delay to project while agreement with CEC is reached. Sacrifices being made to ensure agreement is concluded.	T Craggs		-	Finalise alignments and gain agreement from CEC	Parameter Communication	Property.	29-Dec-06	T Craggs
						32	Final agreement to be approved by Roads Authority, CEC Promoter, CEC inhouse legal and tie	On Programme	On Programme	28-Feb-07	T Craggs
866	NB: THIS RISK REQUIRES TO BE RE- VISITED	reach agreement with CEC on roads maintenance responsibility	Delay to project while agreement with CEC is reached. Sacrifices being made to ensure agreement is concluded.	K Rimmer		-	Final agreement negotiations to be informed by the Tram final design details and agreed by Roads Authority, CEC Promoter, CEC in-house legal and tie	On Programme	On Programme	28-Feb-07	T Craggs
870	SDS Designs are late and do not provide detail Infraco requires	not have detail to achieve contract	Delay to due diligence and start on site and need to appoint aditional design consultants	D Crawley		h	Review AIPs for Structural Information	NEW		02-Feb-07	G Easton

Project Owned Risks

ARM Risk ID		Risk Description		Risk Owner*	Signif-	Black	Treatment Strategy	Treatm	nent Status	Date Due Action
	Cause	Event	Effect		icance	Flag		Previous	Current	Owner
	Scottish Power own and maintain a cable tunnel in the vicinity of Leith Walk that may or may not interfere with Tram construction and operation; exact location and depth of tunnel is unknown; condition of tunnel is unknown.	requires radical solution		J Low		-	Scottish Power to establish exact location of tunnel	NEW	On Programme	05-Mar-07 J Low
							Scottish Power to undertake engineering feasibility study	NEW		30-Mar-07 J Low
							Solution to be engineered - ACTION PLAN TO BE DEVELOPED ON COMPLETION OF FEASIBILITY	NEW	Pending	03-Mar-08 D Craw

Appendix A

Cumulative Approved Budget

Cumulative Current Forecast Value to expend Budget

Figures in '£000s	Approved Budget	Cumulative Approved Budget vs Forecast		Value of	Work Done (VOWD) Review			Apr - Mar 07 Review
	Apr 06 - Mar 07	Spend/Bud to date (Feb) Mar-07 07/08	Previous	Variance (current minus previous)	Comment	Previous	Variance (current minus previous)	Comment
IMPLEMENTATION								
1 tie RESOURCES	5,706	5,155 5,706 5,436 6,953	5,305	131	Accrual corrected for direct commercial resources	5,933	120	per VOWD comment
2 DPOF	389	358 389 158 389	358			389		
3 LEGALS	2,634	i	2,083		TRO's advice down reflecting design slippage	2,336		per VOWD comment
4 SDS	13,002		2,000	(114)	The Station down renewing design supplies	2,000	(123)	
		11,962 13,412	11,702	260	per Apr-Mar07 Review comment	13,002	410	VOWD review undertaken generating increased Year End adjustment. Under continual review.
5 JRC	902	702 902						
6 TSS	4,296	940 1,038 3,886 4,296	940			1,020		
0 133	4,290	3,000 4,625						
		3,377 4,316	3,917	(40)		4,358	(40)	
7 UTILITIES 8 DESIGN SUPPORT								
9 3RD PARTY NEGOT	280	255 280 128 156	138			156		
10 LAND & PROP	10,713		20			10,701		Land Purchase for 1a moved to 2007/08 per ministerial comment
11 TROs			20	(2)		10,701	(10,070)	Land 1 dichase for 1a moved to 2007/00 per ministerial comment
12 COMMS / MKTG	638	609 638 596 62 6	599	(4)		629	(4)	
13 TEL	620	570 520 576 520	570			620		
14 SERV INTEG PLANNING	58	lJ	58			58		
15 PUK	80	74 80 74 80	74			80		
16 FINANCIAL ADVISORS	38	38 38						
17 INSURANCE	1,024	l I	38			38		
		57 64	55	2		1,008	(944)	OCIP initial payment moved to 2007/08 to align with latest MUDFA Programme
18 CONSTRUCTION Utilities incl MUDFA	3,235	1,850 3,235						
		1,937 3,282	1,922	15		3,273	15	BT Initial stage remains in Mar 07, but subject to Ministerial approval
19 Infraco	282	262 282						
		0 6				20	(20)	
20 Tramco 99 OTHER	145							
SPECIFIED CONTINGENCY		136 111 0	130	(24)		135 285		Contingency Removed
BUDGET TOTAL	44,041							
CURRENT FORECAST		28,135 32,464	27,910	225		44.941	[11,577	

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Paper to : DPD

Subject: Infraco / Tramco Tender Evaluation sub-committee

Date: 8th March 2007

Approval sought to establish a Infraco / Tramco Tender Evaluation subcommittee to the Board

1.0 Background

1.1 The Infraco and Tramco Evaluation Methodologies were approved by the Tram Project Board prior to the return of the initial Infraco bid proposal on 20th November 2006 and 12 January 07 (via delegation of authority to the DPD sub-committee) respectively. These methodologies are being used to evaluate the tender submission from the bidders.

The principal stakeholders, TS, CEC and TEL, were consulted on the methodologies and their comments were incorporated in the final papers.

2.0 Consultation

- 2.1 The Methodologies set out that dialogue with the Project Stakeholders will be maintained via individuals designated from CEC, TS and TEL through regular briefing sessions. These were anticipated to be held on a monthly basis or as required depending on prevailing activities.
- 2.2 In addition to regular sessions, key gateway meetings will be organised to coincide with the following stages of the Infraco evaluation process:
 - Selection of the preferred Infraco and Tramco bidders
 - Completion of the detailed negotiations with the preferred Infraco and Tramco bidders

3.0 Reporting to the Tram Project Board

- 3.1 There is a need to keep the Board informed of the status and progress of the Infraco and Tramco procurements whilst maintaining the appropriate level of probity and compliance with the approved evaluation methodology.
- 3.2 To achieve this, it is proposed that a board sub-committee to the Tram Project Board is established to which the project will report. The remit of the committee will be to:
 - Review, support and drive the progress of the bidder evaluations and negotiations
 - Provide guidance on issues arising out of the negotiations

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- Receive presentations on the evaluation conclusions
- Advise on which issues require referral to the DPD and/or Tram Project Board

4.0 Membership

- 4.1 The membership of the Infraco / Tramco Evaluation and Negotiation subcommittee necessarily needs to be small yet endeavour to reflect the broad spectrum of interests on the TPB. The members envisaged are:
 - Willie Gallagher
 - Neil Renilson
 - Stewart McGarrity
- 4.2 The Tram Project Director and Commercial Director will report to the subcommittee on an ad hoc basis to enable it to fulfil its remit. The timing of the meetings will be aligned to the evaluation programme, and as required to address issues emerging from the Infraco and Tramco Evaluations.
- 4.3 Key guests and experts may be invited to attend meetings to support the objectives of the sub-committee.

5.0 Objectives

- 5.1 To give senior support and confidence to the Tram Project Director and Commercial Director as they lead and close the Tram / Infraco deals.
- 5.2 To ensure TPB governance objectives are met whilst maintaining commercial confidentiality within a strong decision making framework.

6.0 Recommendation

6.1 The Board is asked to approve the establishment of a sub-committee for the Infraco and Tramco Evaluation and Negotiations and delegate to the sub committee in the manner set out above.

Proposed	Commercial Director	Date: 19 Feb. 07
Recommended	Matthew Crosse Project Director	Date:- 19 Feb. 07
Approved	David Mackay on behalf of the Tra	Date:am Project Board

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Paper to : Tram Project Board

Subject : Project Value Engineering Process and Status

Date: 7 March 2007

The DPD is asked to note this paper and to confirm the principals and objectives set out in this paper

1.0 Background

- 1.1 Value engineering has been undertaken at a number of stages through the project. Certain savings were identified prior to the finalisation of the Preliminary Design Stage Project Estimate and taken into account in it. Shortly thereafter recognising the need to achieve savings (as noted in the Tram Project Board minutes) the Project implemented a value engineering exercise in early December with an ambitious target of identifying £50m of savings.
- 1.2 The target for value engineering savings is a minimum of £14m, manifested in the current Infraco adjusted prices to achieve the DBFC targets and Updated Project Estimate.

2.0 Process

- 2.1 Building on the work commenced before Christmas the process for the development and implementation of VE Savings is:-
 - 1. Identify all potential savings from the Project's Value Engineering initiative and each bidders proposals and categorise into easy, medium and difficult in terms of realisation and implementation.
 - 2. Assess the potential cost saving impact together with the impacts on design, consents, programme and stakeholder approvals. Stakeholders in this context are CEC, TEL and Transport Scotland.
 - 3. Agree the list of potential savings within the Project and allocate responsibilities for developing and implementing.
 - 4. For those savings ideas that are common to the Project and both bidders we will agree scope and programme for developing and implementing now e.g. raising the level of depot, trackform solution (agree Project proposals with bidders and gain their input and ideas). These items form VE Package 1.
 - 5. These proposals will be validated for
 - Validate bidders proposals for value engineering proposals within the Consolidated Proposals for deliverability (construction, planning & approvals) and impact on the Business Case including:-
 - Impact on Programme and cost is it deliverable?
 - Impact on Maintenance
 - Impact on Operations

- 6. Consult stakeholders and gain agreement on potential savings list.
- 7. Require bidders to submit more developed proposals for value engineering with their consolidated proposals. This will form VE Package 2. (These will not be part of the formal evaluation but bidders will be encouraged to submit on the expectation that this will improve their chances). We will then validate the proposals as outlined for VE Package 1.
- 8. Before appointing preferred bidder, agree Value Engineering proposals to be taken forward and write into deal and agree the formula for firming up prices for adjustment of the contract price together with contractual mechanism for adjusting price for any remaining Value Engineering proposals that are not fully incorporated into the designs.
- 9. Once the Preferred Bidder is appointed they will be required to work with the designers (SDS and their own) during due diligence period to develop designs incorporating value engineering proposals.
- 10. Firm up savings where possible before award of contract.
- 11. As part of the planning and evaluation of proposals, the project will secure stakeholder and third party agreement and approval to proposals prior to contract close and approval. Change control will be applied when necessary.
- 2.2 The responsibilities for developing and implementing Value Engineering savings are:-
 - Martin Donohoe Leads the implementation of savings proposals and manages the overall savings delivery programme.
 - Mike Jeffereys supported by Andie Harper Lead the identification and scoping of savings via the value engineering process already underway. Both the TEL and Transdev stakeholders are represented in the team delivering this process. CEC will be brought into the team once the proposals are more refined and have been fully assessed. They are expected to participate in late February.
 - Responsibility for delivering individual savings rests with the project manager for the area of the works within which the relevant saving is implemented. Implementation will be monitored as part of the project management process.
- 2.3 The programme for delivering the process is to deliver a recommendation on proposed Package 1 value engineering savings to be adopted by the end of March to be endorsed by the April Tram Project Board and implemented thereafter. A recommendation for Package 2 savings will be delivered following receipt of consolidated proposals by Bidders.
- 2.4 Further details of the programme for both VE Packages 1 and Package 2 are shown in Appendix A.

3.0 Current Status

3.1 Both bidders have stated that they see opportunities to value engineer the scheme to reduce costs and both have to a greater or lesser extent put ideas to us. In addition the Project has identified a number of savings proposals from the Value Engineering initiative currently underway.

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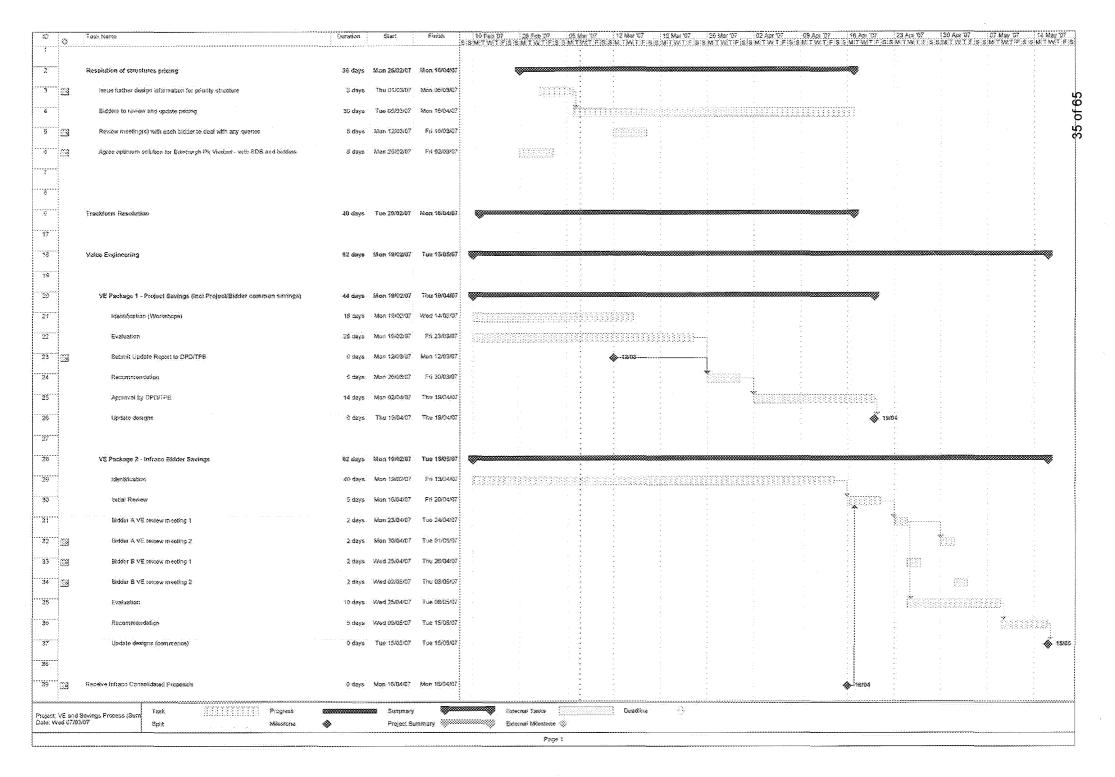
- From the work done to date proposals identified by the project and those proposed by the bidders, as endorsed by the Project, amount to around £30m after factoring for the level of difficulty in implementation.
- 3.3 One significant area of opportunity is in structures (bridges and retaining walls). Review of bids has highlighted significantly higher cost than
- 3.4 Details of the value engineering savings proposed to be taken forward are listed in Appendix B (Value Engineering Schedule). These have been agreed within the Project as realistic areas for development. You should note that the table in Appendix B to this paper is not fully populated as it represents work in progress.
- 4.0 Consultation
- 4.1 The following have been consulted in preparation of this paper:-
 - TBA
- 5.0 Recommendation
- 5.1 The Board is asked to note this paper and to confirm the principles and objectives set out in this paper

Prepared by:	Geoff Gilbert, Project Commercial Director	
Recommended by:	Matthew Crosse, Project Director	
Date: 7 March 2007		
Approved	David Mackay on behalf of the Tram Project	Date: : Board

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APPENDIX A

PROGRAMME



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APPENDIX B

VALUE ENGINEERING SCHEDULE

	RGH TRAM NETWORK NGINEERING REGISTER				WOF	RK IN PRO	GRESS													08/03/2007	VERSION 30
Item	Opportunity	Filter	Proposal Origin	Opportunit y Champion	Cost of Project Element	Min	oportunity Val	ue Max	SDS Design Programme	Construction Programme	System Performance	Impact on Project Constraints	Stakeholders	Maintenance Costs	Business Case	Work Stream affected	Current Status	Probability of	Medium (#10%)	0.20	Comments
1	Depot reorientation (External works)	Depot	Scoop	SDS	£5,443,555	£2,000,000		£3,500,000)							Infraco - advance works	OPEN		£1,375,000		SDS Depot Feasibility Study. Note: estimate 23% reduction in excavation programme duration
3	·	Depot Depot	Project, Scoop Project	SDS	£19,640,560	0 £0		£1,000,000								Infraco - advance works Infraco - advance works	OPEN		£		Connected to "Depot reorientation" See 1 above This has been considered before and PARKED. Affected by LCC. Therefore no saving taken
5	Track bed construction details - reduce track slab thickness with structurally efficient members Track form - specific application of types - adopt ballasted track wherever possible		Scoop Scoop	SDS	£63,783,325	£3,100,000 £750,000		£6,000,000								Infraco	OPEN OPEN	£3,640,000			Reduced excavation and concrete within track bed Exchange precast rail beam with ballast track in Roseburn corridor (NOT GLUED). Not priced as is an
7	Track geometry at the Ocean Terminal - rationalise layout to reduce complexity/amount of trackwork whilst maintaining operational Track geometry at the Depot - rationalise layout	Trackform Depot	Scoop	SDS												Infraco Infraco	OPEN OPEN		£	£O	alternative to item 8
8	Xi Track for stabilized ballast as an alternative to directly fixed track - glued ballast (Roseburn Corridor) Vertical alignment optimization - minimise	Trackform Highways	Scoop Scoop	SDS	See 4 above	£1,140,000		£2,640,000	0							Infraco	HOLD			100	Exchange precast rail beam with ballast track in Rosebum corridor (GLUED) - Phase 1b issue - not priced - NOW DEEMED UNLIKELY TO BE REALISED
10	highway reconstruction	Trackform			£16,825,591	£2,000,000		£3,000,000	0							Infraco	OPEN				Reduction in track only - no savings taken at this point for reduced embankment works or structures savings (Reduced loadings). Run times will be
11	Gogar Roundabout - redesign - implementation of traffic light controlled at-grade tramway crossing Soil stabilisation - sub grade - stabilise with lime		Scoop Scoop	SDS												Infraco	OPEN OPEN				adversely affected - relates to Phase 1b so not
13	and cement Soil stabilisation - retaining slopes - use of gunite, block and crib walling, soil nailing, gabions etc in lieu of retaining walls	S Structure s		SDS												Infraco	OPEN				
	Material recovery and reprocessing Value Engineering developed for the final designs for all structures, particularly substructures and foundations Optimise the work site lengths wherever practical	s	Scoop, Roley, Project	SDS	£52,740,000	£5,000,000		£15,000,000								Infraco Infraco	OPEN OPEN	£8,000,000			Limited range of materials to recycle coupled to track form largely replacing the volume of material originally excavated Initial bids based on Prelim Design. Both bidders have stated that they anticipate savings will be generated through co-operative detailed design
17	to ensure efficient construction outputs Delete depot pumping station/storm tanks by utilising existing gravity system which has been confirmed to be at a suitable level where diversion.	Wide Depot		PD	£350,000	£350,000		£400,000								Infraco Infraco	OPEN	£300,000			Further impact on operating costs to be investigated
19	Omit OCT to Newhaven section, create turn back facilities at OCT Thinner track slab impact on MUDFA (linked to 4 above)			GG	£6,060,160	£4,000,000 £3,940,000		£5,396,682	0							Infraco	OPEN		£2,462,500		Potentially add back as part of future phase to link Granton to OCT Allow 10% to 15% reduction in required diversions
20	Edinburgh Park Bridge – utilise steel beams in lieu of concrete Murrayfield Pitch Relocation – mods only to Waranders Club House TBC	Structure s Third Party	Project, Scoop, Roley Project		£3,355,000	£2,684,000		£3,355,000								Infraco	OPEN	£2,415,600			Higher initial construction cost but through use of weathering steel can achieve lifetime savings in not maintaining paint system. Cost estimated as part of Comments made by various individuals suggests that a compromise has been reached with SRU. Await final confirmation from?
22	Second hand Tram vehicles Reduction in extent of road reinstatement. Max 25%, Min 10%	Trams Highways	Project Project	DP	£5,210,041	£10,000,000		£20,000,000	0							Infraco Infraco	OPEN OPEN			£3,000,000	Await final confirmation from? Generated from high level discussions
24 25	Information from SDS. ETN requirement approx 6,000 tonnes)	Track form Traction Power	Project Project	AD TK	£3,635,934	£900,000		£1,400,000	3							Infraco Infraco	OPEN OPEN	£920,000 £1,468,742			Allowance made for cleaning and transportation SDS allowance £302k per feed. Discussions suggest that £130k per feed more appropriate
	Network Reinforcement - not to be paid for by ETN	Traction Power Depot	Project Project	AD/BE	£2,647,958	£2,647,958		£2,647,958	3							Infraco	OPEN OPEN	£2,118,366	£500,000		Argument that ETN alone should not be penalised for upgrading SP network when there are significant other developments ongoing in the City
28	the future/reduce size of car park facilities Depot Building - reduce cost of depot building. Perception that current estimate too high	Depot	Project	SDS	£14,063,521	£2,812,704		£4,219,056	5							Infraco	OPEN	£2,812,704			£2,344/m2 .
30	Depot equipment - lease rather than purchase Tram mock-up - use an existing mock-up rather than purchasing new	Depot	Project Project	AR/DP DP		60		£250,000								Infraco	REJECTED	60	£C	£O	Pending scope development Unlikely to procure a UK tram without major re- work. Not easy to find, would not meet all required objectives
31	Reduce fleet size - run 8+8 on 1a only (26 trams) or 6+6 on 1a and 1b (26 trams)(build in option to buy additional trams in the future) Buy 26 tram units, lease extra when needed	Trams Trams	Project Project	AR AR		£0 £750,000		£10,000,000								Tramco Tramco	OPEN			£1,075,000	See 33 below
33	capacity and accept risk to lower performance Trams - purchase without seats or luggage racks -	Trams Trams	Project Project	AR DP		60	£O	£2,000,000								Tramco	OPEN REJECTED	60	£500,000	03	No CAPEX saving to claim
35 36	fit out under sep. order Trams - place passenger counters on only 20% of fleet - not whole fleet. Counters deemed inaccurate OLE - reduce height of Overhead Power Line	Trams	Project Project	AR SDS		60		£250,000	0							Tramco	OPEN HOLD	£100,000			Pantograph scope removed from Tram Suppliers
	reduces cost of pantograph OLE - reduce height of Overhead Power Line reduced cost of support poles etc?	OLE	Project	SDS/TSS												Infraco	HOLD	£0			Reducing height of OLE decreases pole spacing and therefore increases number of poles required
39	OLE - reduce height of Overhead Power Line may allow depot to be raised further out of the ground Reduced noise mitigation measures - use "quieter trams"	Trams	Project	SDS/TSS/DP		03		£1,000,000	0							Infraco	OPEN				Potential higher tram capital costs as a consequence to be considered. Phase 1b issue - not priced
41	Delete 4 tram stops (Ocean Drive, Roseburn,	System Wide Tram Stops	Project Project	GG tie/Tel		£0		£400,000								Infraco/Tramc o Infraco	HOLD	£160,000		£O	Awaite tie/TEL decision
42	Delete fending at sub stations and accept security risk		Project Project	GG	£26,000	£0		£26,000								Infraco	REJECTED REJECTED				If 1b deleted, "13th" sub station will still be required to provide sufficient power on 1a
44	Gogarbum)	Tram Stops System Wide	Project, Scoop,	AR GG		03	£0	EC								Infraco Infraco	CLOSED	03	£C	60	No future opportunity Hold pending TRAMCO/Infraco negotiations
46	Install cable route along Section 4 linking 1a to 1b (eliminates need to dual route elsewhere) Prefab drop-in tram stops and other items		Project, Scoop	tie GG		£150,000		£150,000								Infraco	OPEN HOLD	£120,000	£		Perdeved wrong image
48	Tramco - discount for earlier stage payments	Stops Trams	Project	DP/GG												Tramco	OPEN		£0		
50	Tramco - to provide some of the depot equipment (might gain advantage from Tramco procurement knowledge 8/or buying power Tramco - Value Engineering with top 2 bidders	Trams	Project Project	DP/GG												Infraco/Tramc 0 Tramco	OPEN	£O	£		Not priced - currently known ideas captured above
51 52	grants available?) Transdev - accept more disruption in short term to	Traction Power System Wide	Project Project	DP SC/AH/KR												Tramco Infraco/Tramc	OPEN OPEN			£0	
	Aligning SDS and the employers Requirements – make best use of the design already completed. Accept that there are scope miss-matches Omit all customising of cab exterior – is base	System Wide Trams	Project Project	GG DP/AH												Infraco	OPEN				
	appearance OK? OLE - minimise building fixings Review size of pre-packaged Traction Power Units	OLE	Project Project	SDS/GD/JP SDS/Transde												Infraco	REJECTED OPEN			£O	
57	to make smaller Reconfirm the necessity for each of the subsystems comprising Supervisory Control and Communications	Power Superviso ry & Comms	Project	SB/Tel/Trans dev												Infraco	REJECTED				
58 59	throughout Depot - sale of top soil	Tram stops Depot	Project Project	GG GG	£300,000	£44,349		£172,145	5							Infraco	OPEN	£86,598		20	Percieved wrong image Only top 250mm as quality top soil. See separate opportunity for disposal of bulk material below
61	Savings in management through integrated teams Signalling & Comms -De-spec some requirements off EBIScreen eg the requirement for making	Wide	Project S∞op	GG		£100,000		£300,000								tie Infraco	OPEN OPEN	£160,000			Based on reduction in shadowing engineering staff Mar to Sep 07
	the radio system	Comms Superviso ry & Comms Superviso ry &	Scoop Scoop													Infraco Infraco	OPEN OPEN				
64	Signalling & Comms - Delete Mimic Display Panel in the CTC Signalling & Comms - fewer CCTV cameras	Comms Superviso ry & Comms Superviso	Scoop Scoop													Infraco	OPEN OPEN				
	Signalling & Comms - Dual feed the Tramstop Equipment Panels from adjacent substations instead of having a separate UPS in each cabinet Signalling & Comms - rationalise fibre optic rings -	ry & Comms Superviso ry & Comms Superviso	Scoop													Infraco	OPEN OPEN				
68	are 3 really necessary? More economic architecture that performs the same function could Signalling 8. Comms - Provide separate pieces of Control Equipment on each Operators desk instead of integrating them on a touch screen console	ry & Comms Superviso ry & Comms	Scoop													Infraco	OPEN				
70	(Also fewer operators - OPEX) Signalling & Comms - No fallback position in case of CTC evacuation	Superviso ry & Comms Superviso ry & Comms	Scoop													Infraco Infraco	OPEN				
	location and interface of the SCADA and Points controllers etc is unnecessarily complex. A solution based on Nottingham Tram would provide a less complex and user friendly option	Superviso ry & Comms	Scoop Scoop													Infraco Infraco	OPEN OPEN				
73	by combining some loop functions Signalling 8. Comms - Remove ambient noise sensing on the passenger announcement system	ry & Comms Superviso ry & Comms	Scoop													Infraco	OPEN				
74		Superviso ry & Comms	Scoop									T				Infraco	OPEN				

Part	DINBURGH TRAM NETWORK ALUE ENGINEERING REGISTER					RK IN PRO]											08/03/2007	VERSION 30
1	Item Opportunity	Filte	r Proposal C	rigin Opportui y Champi	Project				SDS Design Programme	Construction Programme	System Performance	Project	Stakeholders	Maintenance Costs	Business Case	Stream	Current Status		3 Medium	hase 1a only)	Comments
March Marc	75 Power supply - AC switchboards / DNO supply -	If Tractio	n Scoop													Infraco	OPEN	0.80	0.50	0.20	
The content of the	realised in both space in the substation and	Power																			
Company Comp	76 Power supply - Rationalise layout of modular	Buildin	gs Scoop													Infraco	OPEN				
Marches Marc	77 Power supply - Track / Bypass isolators - switch-	es Tractio e Power	n Scoop													Infraco	OPEN				
Company	78 Power supply - Russell Rd TPH - could equipmen	nt Tractio	n Scoop													Infraco	OPEN				
Mathematical Math	79 Overhead Contact system - Switchgear -		Scoop													Infraco	OPEN	8			
Mathematical Content	onerous"	Denot	Scoop													Infraco	OPEN				
Control Cont	mobile jacks																				
Martin	B1 Depot - delete Windscreen remover - not require at Nottingham Tram	ed Depot	Scoop													Infraco	OPEN				
Company	B2 Depot - split vehicle accommodation system - requirement dependant on tram vehicle selection	Depot n	Scoop													Infraco	OPEN				
Marche M	B3 Depot - Track Maintenance Equipment - rational scope requirement	lise Depot	Scoop													Infraco	OPEN				
Mathematical Control		Depot	Scoop	DL		£80,00	0	£90,000								Infraco	OPEN	£68,000	0		DL email 19-01-07 refers
Mathematical Control	B5 Noise attenuation (outside of Roseburn Corridor)) Trackfo	rm Project			£	0	£0								Infraco	CLOSED	8	£C)	Noise barriers - opportunity already reflected in
Property		3 Depot	Project													Infraco	OPEN	£	0		estimate Agreed - estimate to be updated
Part	tonne (max lift 5 tonne bogies)					860.00		675.000										054.00			
Market M						£60,00	0	£75,000										£54,000			
The content of the	grade from P6 / P5 to N2 (reduced cost of parap	Struct.	re Project	SDS (TK)												Infraco	OPEN				Requirement for N2 protection - bids to be ched to establish if P6/P5 costed
Martin Care Processes 1968 1969	89 Structures - A8 Underpass - over sized?	Structu	re Project	SDS												Infraco	OPEN				Key issue is precise location and depth of a ban ducts containing fibre optic cables
10 10 10 10 10 10 10 10		NR.	Project			£	0	£3,000,000								Infraco	OPEN			£300,000	
1	91 NR Immunisation - TS to pay for all upgrading	NR.	Project	+	+	£	0	£3,500,000								Infraco	OPEN			£350,000	
Mathematical Continues Mathematical Contin	off set £3m in 91 above) 92 NR Immunisation - Condition survey existing NR		Project			-										Infraco	OPEN			£0	
Market M	assets, agree betterment with NR					6361 (0	9	6494 170										ADEL CO	4		Impact on OPEY requires investigation
Mathematic Mat	purchase	propert	У			£201,48		±436,170										8			Impact on OPEX requires investigation. Anticipa that annual lease cost £1 consideration only.
Mathematical Continue		Highwa	ys Project			£	0 £0	£0								Infraco	REJECTED	£	0 £0	£O	Insignificant allowances for this - no great opportunities for Savings
Market M		Trackfo	rm Project			£	0 £0	£0								Infraco	REJECTED	£	O £C	£0	OPEX impact on Line 1b - Not evaluated
Manual Anti-American Continues	96 Land & Property - Part 1 claims - understand		v .			£	0 £0	£0								Infraco	CLOSED	£	0 £0	£0	Part 1 claims already "value engineered" by transferring to Risk and applying probabilities
10 10 10 10 10 10 10 10	against experience on other projects and reduce 97 System Wide - reprogramme to reduce impact	System	,													Infraco	OPEN				dansiering to resk and applying probabilities
Manual																Infraco	OPEN				
Mary Control Mary		propert	У																		
Market M	mitigations	RISK														Inmaco	OPEN				
Marie Control Contro																Infraco	OPEN				
Mark Property of Company Property of C	works - ensure no over scoping, betterment or	Structu s	re													Infraco	OPEN	1			
Manual Personant Control Per	over funding	ts System														Infraco	OPEN				
14 15 15 15 15 15 15 15	103 System Wide - reduce cost of approvals - reduce	e System														Infraco	OPEN				
State of the first and the f																Infraco	OPEN				
Marie Mari																					
Marchan Marc		Wide																			
Mary	106 Trackform - Amend requirements at Roseburn Delta Junction	Trackfo	rm Project			£	0	£350,000								Infraco	OPEN		£87,500		
100 The Project of the Code From 1960	107 System Wide - remove Guided Busway Programme Constraints	System Wide	Project			£	0 £0	£0								Infraco	REJECTED	£	03 00	£0	Current programme ignores constraint and represents most efficient programme. Introduct
Company Comp	108 Tram Stops - delete cycle racks	Tram	Project			E	0 £0	£0								Infraco	REJECTED	£C	0 £0	£0	of constraint should be recognised as a potentia Negligible saving and reduced functionality
Control of the cont	109 Structures - reduce slab(?) thickness by 25mm		re													Infraco	OPEN				Redesign costs will impact on any potential savi
Control of the cont	110 OLE - advance purchase of cabling to avoid future	re OLE														Infraco	OPEN				
Age	cost escalation															Infraco					
Priest D	adjacent farmland. Avoid transportation costs ar landfill costs?	nd																			
statistics Section Sec	112 Trams - Reduce service to 4 trams per hour on	Trams														Tramco	OPEN				
Infraco OPEN In	113 Structures - EARL Structure S33 - remove from estimate	Struct.	re Project			£1,097,31	7	£1,186,289								Infraco	OPEN	£913,44	2		tie to confirm which budget is to carry cost of S
110 Dept - site of parent accepted material (See Seportury DR above for topport aller) 110 Dept - site of parent accepted material (See Seportury DR above for topport aller) 1110 Dept - site of parent accepted material (See Seportury DR above for topport aller) 1111 Dept - site of parent accepted material (See Seportury DR above for topport aller) 1117 Dept - see man diversion - Excavation delayed of the total of Party - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee required value (Losdon to total farty - move fee feeded value (Losdon to total farty - move feeded from 7 total farty - move feeded from	114 Structures - Gyle Stop retaining wall - excessive structure - delete from design	Structu	re Project													Infraco	REJECTED	E	O £0	£0	Retaining wall requirement can't be deleted or modified in such a way as to realise a significan
116 Depot - deleter requirement for concrete agreen to Depot SDS Infraco OPEN SDS Infraco OPEN SDS Infraco OPEN SDS SDS SDS SDS SDS SDS SDS SDS SDS SD	115 Depot - sale of general excavated material (See	Depot	Project	+		£868,88	4	£1,524,399						<u> </u>		Infraco	OPEN		£598,321		
security fence security fence for Capacity as man diversion - Exceptation delayed of project or specifies executed valve (catasion to specifies executed valve) (catasion to specifies) (catasion to specifie	116 Depot - delete requirement for concrete apron to	o Depot	SDS	_		+										Infraco	OPEN	8			
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NOTE: Financial Impact calculated on
average Max/Min impact multiplied by the
probability of success

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Paper to : DPD

Subject : Traffic Regulation Orders (TRO)

Date : 13 March 2007

For information

1.0 Introduction

1.1 The Paper reviews progress on the work taking place to persuade the Scottish Executive to commence a public consultation on the desired changes to the legal process, why that is critical to the project and, the development of a strategy for the TRO(s).

2.0 Proposed Amendment to the Local Authorities Traffic Orders (Procedure) (Scotland) Regulations 1999

- 2.1 The Scottish Executive replied on 15 February to a letter from Andrew Holmes, Director of City Development, CEC, which had formally requested that the Executive consider initiating a public consultation on the requested changes to the existing Traffic Regulations. The Scottish Executive reply concludes that on balance they are not convinced that an amendment to the Regulations is necessary or warranted.
- 2.2 The 20 February meeting of the TPB agreed that the initial rejection of the request by the Scottish Executive should not be accepted. There were particular concerns about a number of points in the response and the fact that it was not considered that the main point at issue had been fully appreciated or addressed.
- 2.3 Since then a further meeting has taken place with the Scottish Executive officials and a Legal Note has also been circulated to them which works through in great detail our concerns, particularly in the context of their 15 February response.
- A formal response has now been made by Andrew Holmes to the Executive consolidating the points already put to them in the Legal Note and which paves the way for the fullest and most informed discussion at an escalated level. To that end Andrew Holmes reply also seeks an urgent meeting with John Ewing, Head of Transport and Planning Group and which will also be attended by tie, D&W and Transport Scotland. An analysis of why this issue is so critical is given in Section 3 below.

3.0 Analysis of the Risks and Issues Relating To the Making of the TRO's for the Tram

- 3.1 The key issue referred to in Section 2 above is the mandatory public hearing of objections under the current Regulations. A public hearing adds around one year to the statutory process for making the TRO's.
- 3.2 The vast majority of objectors are not entitled to a public hearing. There is only one kind of measure that triggers a mandatory public hearing for members of the public (prohibiting loading/unloading at all times or for periods of time, unless the period falls within 0700 and 1000 or 1600 and 1900, ie peak periods). If a member of the public objects to a TRO with this measure in it, then that person is entitled to a public hearing; otherwise, it is for the Council to decide whether or not to hold a discretionary hearing.
- 3.3 At first glance, a public hearing of objections appears very persuasive and compliant with policy. All things being equal, there is no difficulty with a mandatory hearing. The difficulty arises in this case because the TRO's are necessary to implement a project that has already been approved by Parliament. That prior-approval creates a legal risk. Although counter-intuitive, the holding of a hearing could be construed as a breach of natural justice because the objector could reasonably conclude that no Reporter is going to risk a major public project to address a private objection about loading times. This perception of a fait accompli or pre-judgement creates a real legal risk. Apart from anything else, it does not seem fair to raise the expectations of the objector or to put him to the time, trouble and expense of participating in a public hearing.
- 3.4 It must be emphasised that this is not about removing the right to object to TRO's. It is about ensuring that there is a fair and consistent process for dealing with all objections. Given the legal risk inherent in a mandatory hearing, it is proposed that all objections to tram TRO's are dealt with in the same way. All objections would have to be answered with a clear justification for rebutting any objection. The Council would then consider the objections and the responses and would retain the power to decide to hold a hearing, if appropriate in the circumstances not because the need for a hearing was set down in Regulations irrespective of the circumstances.
- 3.5 Ideally, the TRO detail would have been approved by Parliament. However, it is inconceivable that the level of detailed design necessary to prepare a TRO would be available before any major project received approval in principle. That would risk significant public funds and could not possibly represent best value.
- 3.6 For these reasons, the Executive has been asked to promote an amendment to the Regulations to modify the mandatory hearing provision. It would take 9 to 12 months to make such an amendment.

- 3.7 Apart from the legal risk inherent in a mandatory hearing, this matter raises another important issue. If there was no requirement for a mandatory hearing, the core TRO's could be promoted in Spring 08 and made by Autumn 08. If there is a mandatory hearing, this 6 month period would have to be extended by at least 12 months. So, to make the TRO's in Autumn 08, the TRO's must be promoted during March 07. For each month delay in promoting the TRO's, a month would be added post Autumn 08. The design is not yet at a stage to permit the TRO's to be promoted during March 07.
- 3.8 One of the hidden costs of having to comply with the mandatory hearing process is that the design process is being artificially compressed to suit a legal process. If the target date for making the TRO's is Autumn 08, would it not be better to use the period from Spring 07 to Spring 08 to work up the best possible design for the project? This would confer important benefits to the project. It is clearly better value to devote the available time and resources to achieving the optimum design for the Tram rather then spending that time and money on a legal process that has in it an inherent legal risk for the project. By focussing resources in this way better tailored solutions will be determined that minimise adverse impacts and which in turn reduces project risk and cost.
- 3.9 Moreover, that period to Autumn 08 could be used to work up the consequential TRO's so that the report to the Council could address both the core TRO's necessary for the project and the proposed consequential TRO's to address the impact of the core TRO's. It is assumed that the Council will wish to have a voluntary public hearing of objections to the consequential TRO's as there is no risk of any perception of pre-judgement of those measures.
- 3.10 The removal of this legal risk to the core TRO process and the opportunity to divert time and money to project design from legal process depends upon the amendment to the Regulations, which would have to be in place by Spring 08.

4.0 Development of a TRO Strategy

- 4.1 Section 3 above describes the issues and in so doing describes an outline preferred strategy. If the Scottish Executive can be persuaded to amend the Regulations then the core measure orders can be made by October 2008 (based upon the sought changes to the Regulations being made by March 08).
- 4.2 On that timescale the construction of INFRACO would pre-date the TRO(s) by 3 or 4 months. This however fits comfortably within previous Senior Counsel opinion especially as in such a short period of time there will be no requirement for a revocation of any part of the TTRO (due to works completion) and therefore there are unlikely to be any "mirroring" issues (Refer to the Feb 07 TPB Paper for an explanation).
- 4.3 The fall back or default strategy (where the core measures require to go through a mandatory public hearing process) adds a year to the time required

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to make the TRO(s). If commenced at the same time as the outline preferred strategy the Orders would be made in October 2009, or some 15 months after the commencement of INFRACO. This is an uncomfortably long period and would undoubtedly raise "mirroring" issues which would have to be dealt with by temporarily omitting certain design features as discussed in the February TPB Paper.

- In reality to reduce the time gap and achieve a better balance of project risk we would under the default option seek to place the Orders on public deposit by the Autumn of this year. However, bearing in mind that we still do not have a date for the sign off of the Tram detailed design (which is a prerequisite for populating the TRO's) and with particular regard to the issue raised in 3.8 above this would mean that we are potentially going into a Public Hearing with a less than optimum design and we are putting a greater concentration of our resource into legal process rather than design.
- 4.5 The development of the TRO strategy is now entering a critical stage and seeking a favourable outcome from the Scottish Executive remains the current priority. Detailed work is now however taking place with SDS, CEC and D&W to draw together a proposed suite of Orders that builds upon Senior Counsel's opinion and seeks to identify logical groupings of Order features that can be brought forward in a way that minimises risk. Progress does however critically depend upon the availability signed off design to at least PD2 stage.

5.0 Recommendations

The DPD is requested to note the report.

Proposed	Keith Rimmer Traffic Management Director	Date: 07/03/07
Recommended	Matthew Crosse Project Director	Date: 07/03/07
Approved	David Mackay on behalf of the Tra	Date: am Project Board

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Paper to : DPD

Subject: TRANSPORT MODEL DELIVERABLES & PROJECT IMPLICATIONS

Date : 1ST March 2007

DPD to requested to approve recommendation that the JRC team be contracted directly by tie to undertake work package discussed (see section 7)

1.0 Background

- 1.1 Following the successful development of the JRC Transport Model and the subsequent use of this tool in the DFBC, it has become clear that there are other work areas within the scope of the tram project that will require the transport model to be deployed and its outputs interpreted.
- 1.2 The following note has been prepared by the JRC Project Manager to provide the decision makers within the project with sufficient information to confirm that either; the JRC be appointed under a change to their contract to undertake the transport modelling necessary to support the above, or that some other mechanism is employed to ensure this work is undertaken by a third party (most likely SDS).

2.0 Existing JRC Contract

2.1 Under the existing contractual arrangements, the JRC (Steer Davies Gleave and Colin Buchanan & Partners) and the SDS (Parsons Brinckerhoff) are jointly and severally liable for:

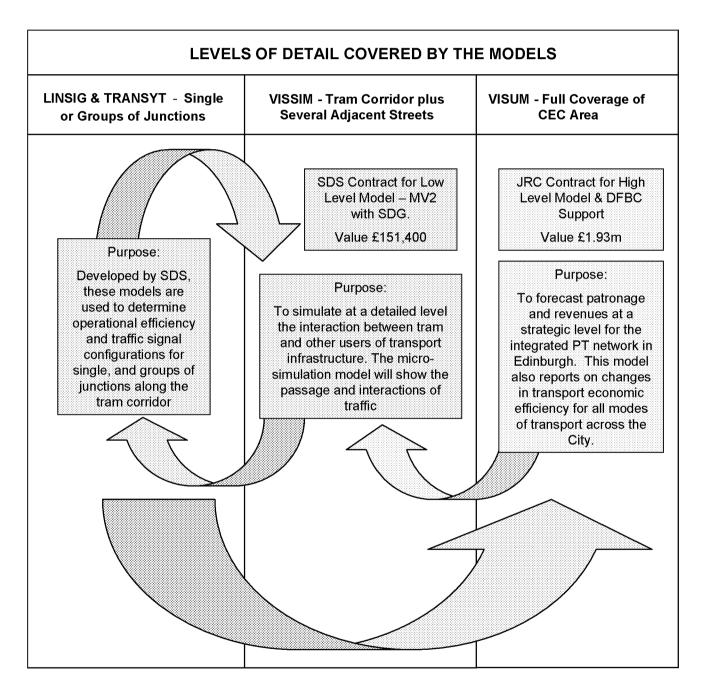
'the planning, production and fitness for purpose of the Modelling Suite which shall meet all of the JRC's requirements and the SDS Provider's requirements (in respect of the SDS Provider, both pre and post novation of the SDS Agreement) under their respective contractual agreements with **tie**'

2.2 In simple terms:

- The JRC contract covers the development of the High Level Model (the VISUM model which covers the full City of Edinburgh Council boundary;
- Whereas the development of the Low Level (VISSIM) Models is an SDS deliverable – this work being undertaken under the MV2 sub-contract between the SDS Provider and Steer Davies Gleave.

 At the junction level, SDS have developed a set of LINSIG and TRANSYT Models to support the detail design process.

The interaction between these three sets of transport models is shown in the following graphic.



2.3 Note that in order to fulfil the requirements of the wider area impacts assessment and TRO process, it is likely that all three levels of modelling may be required (to a greater of lesser degree). For this reason, it would seem likely that **tie** can expect a Change

Request from SDS for additional LINGSIG/TRANSYT and design input for off-line junctions, although at the time of writing, no such request has been received.

2.4 The existing JRC contract does not specifically cover several elements of work that are required in order to support the TTRO and TRO deliverables; areas in which **tie**, CEC and the SDS are involved.

3.0 JRC Scope of Services

- 3.1 In terms of the JRC Scope of Services as defined within Schedule One of the JRC Contract, there are several clauses which have particular relevance to this note; these are:
 - Clause 2.3.4 The JRC shall ensure that the Modelling Suite is configured to include the following applications, in addition to any application the JRC considers necessary to answer its own, the SDS Provider's or tie's requirements:
 - detailed traffic junction design recognition and evaluation and wider area affect assessment; and
 - temporary traffic diversion and traffic regulation order impact analysis
 - Clause 2.3.6 The JRC shall ensure that the Modelling Suite shall be sensitive to the interaction of the SDS Provider's detailed tram line design with vehicular traffic, pedestrians and other urban infrastructure users and capable of generating responses relevant for designing countermeasures to alleviate adverse knock on effects in the wider area transport network.
- 3.2 It is important to recognise that the JRC (under their current contractual arrangement) is tasked with ensuring that the model is capable of delivering certain outputs, and not to undertake analysis in order to achieve those same outputs.
- 3.3 The SDS Contract states in Clause 5.1.1:
 - The SDS Provider shall (at its own cost and expenses) obtain and maintain in effect all consents which may be required for the construction, installation, commissioning, completion and opening of the Edinburgh Tram Network as is consistent with, required by or contained within the Services.
- 3.4 Temporary Traffic Regulation Orders (TTRO) and Traffic Regulation Orders (TRO) are two of the consents that are required by the project, and as such, are covered under Clause 5.1.1.
- 3.5 Summarising the above; the JRC are charged with producing the tools in order to support the securing of consents, and the SDS are responsible to obtaining these consents.

3.6 The problem is that whilst the JRC have the skills and knowledge of running the transport models and interpreting the outputs, their contract does not cover them actually doing this work. Strictly speaking, this would be an SDS responsibility under Clause 5.1.1, but ultimately SDS would (most likely) sub-contract JRC (as they have under the MV2 contract for development of the Low Level VISSIM models).

4.0 Engaging JRC directly vs SDS to cover costs

4.1 There are advantages and disadvantages associated with either engaging the JRC directly, or for **tie** to insist that SDS cover the cost of this work under the terms of Clause 5.1.1. This is summarised below:

Issue	Extension to JRC Contract	SDS Responsibility	Implication
Cost	JRC to provide cost estimate	SDS would most likely, but	There would be a cost to this
	directly to tie	not necessarily, approach	work either way. In insisting
		JRC to undertake the work.	SDS take responsibility under
		If SDS chose not to use JRC,	their existing contract, there
		but to do the work internally,	is the risk of a contractual
		there is a quality risk	(cost) dispute over the broad
		associated with lack of	scope of works definition.
		knowledge of the model.	Ultimately this could cost the
			project more in the long run.
Programme	The JRC are geared up to	If JRC are sub-contracted,	The TRO programme is
	start this work as soon as the	this may take some time to	critical to the project
	PD2 is approved.	negotiate with SDS. If not,	programme. Delay in
		there would be a programme	obtaining the approval of
		risk to attain familiarity with	TROs could impact upon the
		the models and their	construction schedule.
		applications.	
Quality	The JRC know the model,	If JRC do the work under a	tie would have less direct
	they have done a good job so	sub-contract with SDS, then	input into the modelling work
	far. The JRC team have	no problem. If not then I	without a dedicated PM
	demonstrated a good level of	would have concerns about	managing this specialist
	local knowledge of	the quality and interpretation	process.
	Edinburgh, essential for	of results from a team with	
	some of the wider area	less experience of the	
	effects which would need to	modelling suite.	
	be understood prior to a TRO		
	public hearing process.		

5.0 Cost Implications

5.1 In order to establish the potential cost implications of this transport modelling support activity, the JRC Project Manager requested the JRC to provide a cost

- and resource proposal. This was subsequently provided to **tie** in a letter dated 24 January 2007.
- 5.2 The fee estimate was for £385,400 to cover traffic management support for the TRO and the wider area impacts assessment, (including a budget of £28,850 to undertake a review of the economic case for the system, based on the current design PD2 recognising that the design as evaluated in the DFBC was based upon the PD1 design).
- In addition to this under a separate cover, an estimate for the modelling the impacts of the Utilities diversion works (for the TTRO) was submitted by JRC (£27,138). Given the critical timeframe and the approaching commencement of the MUDFA works, this request was put through the change order process (JRC Change Order No 7) and was approved on 12 February 2007.
- 5.4 It should be noted that in September 2006, in anticipation of potential future requirements under the JRC contract, an additional budget allowance of £500K was included in the DFBC.

6.0 Financial Position of JRC Contract

6.1 At the time of writing (20/02/07), the financial position of the JRC Contract is as follows:

	<u>Contract</u> <u>Budget</u>	<u>AFC</u>	Expenditure to date	Remaining Expenditure (to end March 07)	Total Expenditure to end March 07)	Remainin Expenditur Post Marc 07)
Management Fee	£109,500	£109,500	£109,500	£0	£109,500	£0
Surveys	£236,500	£236,500	£171,500	£0	£171,500	£65,000
Advisory Services and Annual Updates	£230,000	£230,000	£90,000	£20,000	£110,000	£120,00
Model Development Deliverables (Milestones)						
' Within 30 Days '	£28,000	£28,000	£28,000	£0	£28,000	£0
' Within 50 Days '	£23,000	£23,000	£23,000	£0	£23,000	£0
' By end of Sept 2005 '	£47,000	£47,000	£47,000	£0	£47,000	£0
' By end of Nov 2005 '	£33,000	£33,000	£33,000	£0	£33,000	£0
' By 31st March 2006 '	£65,000	£65,000	£65,000	£0	£65,000	£0
' By 30th June 2006 '	£47,000	£47,000	£47,000	£0	£47,000	£0
' Ref Doc and Risk Report '	£17,000	£17,000	£17,000	£0	£17,000	£0
' All Other Deliverables '	£12,625	£12,625	£12,625	£0	£12,625	£0
Ongoing Modelling Services	£290,000	£290,000	£50,000	£0	£50,000	£240,00
Provisional Additional Work	£295,240	see changes				
Additional Budget Provision (Sept 06)	£500,000	see changes				
Changes						
Change Order COJ001 Interim Mgt Costs for Jan 06		£15,000	£15,000	£0	£15,000	£0
Change Order COJ002 Project Darwin		£17,788	£17,788	£0	£17,788	£0
Change Order COJ003 Economic Evaluation (TEE Appraisal)		£30,625	£30,625	£0	£30,625	£0
Change Order COJ004 Stag Appraisal		£45,169	£45,169	£0	£45,169	£0
Change Order COJ005 Additional Unforeseen Costs		£219,250	£219,250	£0	£219,250	£0
Change Order COJ006 Additional Modelling and Appraisal Work		£204,013	£155,302	£48,711	£204,013	£0
Change Order COJ007 Modelling of TTRO's for MUDFA		£27,138	£0	£27,138	£27,138	
Anticipated Changes						
Proposal received from JRC - Modelling to Support Traffic Management Plans (Letter of 24th Jan 2007)		£385,400				£385,40
Totals	£1,933,865	£2,083,008	£1,176,759	£95,849	£1,272,608	£810,40
	Budget Shortfall	£149,143				

6.2 As will be seen from the above, should the request for the modelling to support the Traffic Management Plans, which includes all modelling relevant to the TRO, be approved and included in the existing financial provisions of the JRC contract, then there will be budget shortfall of £149,143 to address.

7.0 Recommendations

- 7.1 On the basis of the discussion presented herein, it is my recommendation that the JRC team be contracted directly by **tie** to undertake this work package. Whilst there may still be a discussion to be had with SDS regarding contractual responsibilities (and the cost thereof), in the short term there is a TRO to be secured, which will be critical to the successful delivery of the tram project. The JRC model is the best tool to advise this process, and the JRC are the team best placed to provide this input.
- 7.2 It is therefore requested that the additional budget provision of £149,143 be approved, and the necessary steps be taken to prepare a Change Order for the sum of £385,400 to enable this work to proceed.
- 7.3 The JRC Project Manager will closely monitor costs gong forward and ensure delivery of this work within the available budget and timeframe.
- 7.4 JRC are currently working on recalibrating the transport models in advance of the detail design commencement. This activity is scheduled for completion at the end of March 2007, at which time the transport modelling to support the wider area assessment and TRO submission would need to get underway.

Prepared by:-	Alasdair Sim JRC Project Manager	Date:- 20 th February 2007
Recommended by:-	Matthew Crosse, Project Director	Date:- 13 th March 2007
Approved:-	David Mackay on behalf of the Trar	

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Paper to : DPD

Subject : Design Assurance

Date : 7 March 2007

For information only

1.0 Background

- 1.1 Since its inception the Tram Project has delivered reviews of designs produced by SDS through the TSS contract. This was felt necessary at an early stage because of the lack of **tie** technical/engineering expertise. In practice, this has meant review and comments on the majority of designs within 20 working days of receipt. This arrangement has applied throughout the Preliminary Design stage. A TSS report issued in December 2006 indicated no fundamental problems with the Preliminary Designs at that point.
- 1.2 The recent change in Tram Project organisation has been accompanied by a strategy of 'Do the Design Once'. This refers to the fact that SDS are contracted to produce designs competently and hold Professional Indemnity insurance of a type and level which supports their ability to do this. This being the case, the need for **tie** to review all designs (through TSS or otherwise) is questionable in terms of the value that it can add given that SDS are operating competently. Now that the project has moved to the Detailed Design phase there will be programme pressure generated by a greater volume of designs and additional focus on producing designs which will be the subject of build contracts through InfraCo.
- 1.3 This paper proposes a process which allows tie to be confident in reviewing a reduced number of designs and so ensure that the design review process adds value and contributes effectively to meeting the project programme.
- 1.4 The process will be the cornerstone of a paper to be submitted to the next TPB, defining the review process and arrangements.

2.0 Progress to date

- 2.1 Progress has been made in defining the two key elements of the proposed process Design Assurance and the categories of designs for review.
- 2.2 Design Assurance consists of the provision of information which allows reviewers to understand why a particular course of action has been chosen over others, why a design is fit for purpose, how the design is compliant with its various requirements, and how the design has been integrated with other system elements. The lack of this explicit information leaves reviewers unguided by this useful knowledge and so takes them longer to conclude on the acceptability of designs. The provision of this information is the equivalent

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of having the answer to the question "what was in your mind" from the designer.

2.3 The categories of design for review (which would be accompanied by Design Assurance information) are: Any engineering issue which has significant technical, programme or commercial impact, any issue of importance to Stakeholders, and all system interfaces. An audit programme would be instituted to check on design quality outside these categories.

The critical engineering issues are kept on a log by the Tram Project Engineering Director advised by key staff from SDS, TSS, **tie** and TransDev)

3.0 Current position

- 3.1 SDS are aware of the definition of Design Assurance in 2.1 above as information being sought to accompany their designs and "agree in principle" (Steve Reynolds). It remains to engage on the detail to ensure that delivery of this information is achieved. Competent design should in any event include the production of this information internally to the design process and so it is not believed that this represents a burden or overhead which is unacceptable. It is also the case that SDS internal processes include design assurance.
- 3.2 A design review process definition will be produced against these principles, and in consultation with SDS, agreement reached on the practical arrangements to deliver Design Assurance. It is expected that the adoption of this process will allow fast-tracking of critical engineering issues as they emerge because of the reduction in volume of formal reviews being undertaken.

Proposed	David Crawley Engineering, Assurance and Approvals	Date:- 07/03/2007 Director
Recommended	Matthew Crosse Project Director	Date:- 01/03/07
Approved	 David Mackay on behalf of the Tram Pro	Date: oject Board

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Paper to : DPD

Subject : Critical issues - progress

Date: 1st March 2007

For Information only

1.0 Background

- 1.1 At the last DPD Matthew Crosse presented a paper on the way the **tie** team and SDS team would work together going forward for the benefit of the project. It was agreed that the SDS "critical issues maps" would be presented and discussed at future DPD meetings.
- 1.2 Given that substantial progress has been made since the last DPD meeting and to demonstrate that there have been real results from the new way of working, it was considered that, as well as presenting the critical issues it was important to report on the approach taken and the progress achieved.

2.0 Approach

- 2.1 SDS are monitoring critical programme issues using an annotated route drawing and an associated spreadsheet. These are updated fortnightly and are used to track progress on the resolution of critical design issues.
- 2.2 The drawing reflects all critical issues relating to the design being produced by SDS including SDS owned issues for resolution, whereas the spreadsheet identifies the issues and provides and assessment on the priority of the issue which is based upon the time taken to produce the design, the impact on approvals and consents and also the impact on the CAPEX figures, as well as dates notified and cleared.
- 2.3 The latest version of the spreadsheet indicates that there are 53 outstanding critical design issues. Of these, there are 24 that agreement has been reached on the proposed solution and these will be cleared once the official response has been issued to SDS in the form of an RFI, a change notice or a response to a letter.

3.0 Progress

3.1 In the last period considerable progress has been made in the resolution of the critical issues with 25 having been closed and these are indicated at the bottom of the spreadsheet, highlighted in grey. Much of this progress is attributable to the critical issues meeting convened on a weekly basis and attended by tie, SDS, CEC and TEL.

3.2 Notable issues that have been resolved in the last period include agreement between tie, TEL, CEC and SDS on the Technical resolution of Charette issues Foot of the Walk, Leith Walk, Picardy Place, St Andrew Square and Princes Street all of which have been under consideration for several months further to the Charettes held in the third quarter of 2006. An acceptable design concept for Edinburgh Park Viaduct has also been agreed between SDS tie and CEC and is being developed to preliminary design status. The Formal confirmation of the resolution of these issues is to be agreed with CEC by tie and issued to SDS. These are detailed below

Design issue	Resolution
Coltbridge Viaduct	There was a separate meeting on this structure and the way forward was agreed with lan Spence, CEC planning. We await confirmation that this has moved from red to amber following a meeting with lan Spence and the city design champion, Riccardo Marini.
Carrick Knowe Bridge	There was a separate meeting on this structure and a change request has been issued to SDS. The instruction is to future proof the bridge by incorporating a footway/cycleway in the design. Any increase in cost will require to be assessed. We await confirmation that this has moved from red to amber
Edinburgh Park Viaduct	There was a separate meeting on this structure and the way forward was agreed with Ian Spence. We await confirmation that this has moved from red to amber following a meeting with Ian Spence and the city design champion, Riccardo Marini
St Andrew Square - alignment	It has been agreed that there will be island platform only. In addition as part of the detailed design, SDS will seek to maximise loading outside Harvey Nichols. This moved from a red to an amber.
St Andrew Square - OLE	SDS are to design the OLE on the assumption that they will be located with in the gardens as part of the Capital Streets project.
Haymarket	A way forward was agreed regarding the bus pull in allowing SDS to progress the design subject to modelling outputs
Leith Walk	A solution has been agreed for the bottom of Leith Walk – there is space for tram, 2 lanes of traffic, parking and loading has been

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	maximised and there is a 2.1m footway. SDS are to look at increasing parking in other
Fact of the Malla Internal areas	areas. This moved from a red to an amber.
Foot of the Walk Interchange	See separate paper
Constitution Street	TEL changed the baseline assumptions
	regarding bus movements and confirmed
	what should be assumed to allow the design
	to progress. SDS progressing the design.
Princes Street	The alignment moved from red to green
Picardy Place	The concept was agreed and SDS were
	instructed to work up the concept to
	preliminary design stage.
Building fixings	A way forward with the prior approval
	applications was discussed with the planning
	authority. This would allow SDS to apply for
	consent for a fixing and a temporary pole
	location – this is still be considered but gave
	SDS comfort regarding the process
RFIs	Various RFIs have now been responded to
	and this has helped to unblock various issues
	including the requirements for the bridges at
	Ocean Drive, the requirements for shared
	running for tram and bus and the
	development of the design for the A8
	underpass.

Proposed	Trudi Craggs and Jason Chandler	Date:- 01/03/07
Recommended	Matthew Crosse Project Director	Date:- 01/03/07
Approved	David Mackay on behalf of the Tram Project	Date:t Board

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Paper	to	:	DPD						
Subject :		:	Update in relation to the design of the Foot of the Wa interchange						
Date		:	1 st March 2007						
For In	formati	on onl	у						
1.0	Backg	round							
1.1	At the last DPD sub-committee a paper was presented for information only on the design of the Foot of the Walk interchange. Given the criticality of this interchange, the DPD sub-committee requested that a further update be presented at the next DPD sub-committee in March.								
2.0	Progr	ess to	date						
2.1	The City of Edinburgh Council (CEC) and Transport Edinburgh Limited (TEL) have been meeting regularly to assess and narrow down the options from the two SDS proposal and the CEC concept. It was agreed that the SDS Proposal A be disregarded as it did not maximise the interchange opportunities in this area.								
2.2	SDS F	Proposa I also b	d that SDS should progress the preliminary al B and the CEC concept. Modelling and e considered as part of the preliminary design	road safety issues					
3.0	Curre	nt posi	tion						
3.1	At the CEC / TEL / SDS / tie issues meeting on 2 March, SDS reported the their designers are still finalising the details of the options which they propos to table at the following meeting on 9 March.								
Proposed			Trudi Craggs Development and Approvals Director	Date:- 01/03/07					
Recor	mmend	ed	Matthew Crosse Project Director	Date:- 01/03/07					
Approved			David Mackay on behalf of the Tram Project	Date: t Board					

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For Information only						
Date	:	1 March 2007				
Subject	:	Update in relation to the charette structures				
raper to	•	DFD				

1.0 Background

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1.1 At the last DPD sub-committee a paper was presented for information only on the charette structures, namely Edinburgh Park Viaduct, Carrick Knowe Bridge and the Coltbridge Viaduct. The DPD sub-committee requested that a further update be presented at the next DPD sub-committee in March.

2.0 Progress to date

- 2.1 The City of Edinburgh Council (CEC), **tie** and SDS met on 23 February 2007 to review the latest designs. Unfortunately Riccardo Marini did not attend despite the meeting having been arranged two weeks in advance.
- 2.2 There was a constructive discussion and in general the design was acceptable. However a further meeting was arranged with Riccardo for final sign off.

3.0 Current position

Ongoing liaison is continuing between SDS structures and CEC (Ian Spence and Riccardo Marini) and has agreed the concept of each of these structures. Specific details regarding parapet details to achieve relevant Network Rail containment requirements (Edinburgh Park Viaduct and Carrick Knowe Bridge) are still being reviewed as they potentially have a large impact on the width and visual aspects of the structures. Alternatives are being considered by SDS who will maintain close contact with CEC to achieve an appropriate solution. In relation to the Coltbridge Viaduct, whilst the concept is agreed queries have been raised as to the need to maintain 3m width for the span of this structure.

Proposed	Trudi Craggs Development and Approvals Director	Date:- 01/03/07
Recommended	Matthew Crosse Project Director	Date:- 01/03/07
Approved	Da David Mackay on behalf of the Tram Proje	te:ect Board

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Paper to : DPD

Subject : Forth Ports Interface Issues

Date: 6th March 2007

DPD to approve recommendations as per s.5

1.0 Background

1.1 There are ongoing discussion with Forth Ports at a number of levels associated with Tram as follows:

Financial contribution CECDesign tie/SDS

MUDFA programme tie/SDS/AMIS

MUDFA legal agreements tie

- 1.2 The discussions on design have temporarily stalled because of opportunities that Forth Ports see to incorporate some of the current Forth Ports masterplan thinking into the tram design. This issue is on the critical issues list.
- 1.3 Forth Ports may see the opportunity to use these aspirations to stall agreements on MUDFA etc unless we can move these discussions in a constructive direction.
- 1.4 There are 2 particular locations that are impacted by these discussions as follows:
 - Alignment outside Ocean Terminal which impacts on roads
 - Lindsay Road

Drawings will be available at the meeting to explain these issues.

- 1.5 At both of these locations, Forth Ports would like Tram to incorporate modifications in both design and construction to meet with future aspirations for development of the area. This can be pragmatic a approach if we agree on these principle now as it avoids redesign and construction impacts later on by both Tram and Forth Ports.
- 1.6 This paper provides an overview in relation to the two locations along with benefits and risk associated with the proposals and seeks approval to present this paper to TPB.

2.0 Ocean Terminal

2.1 The current alignment of the tram is alongside the Ocean Terminal building. Forth Ports wish an alignment closer to the centre of the road to be adopted as this fits with their aspiration to develop this site. This would result in additional design costs and additional construction costs.

- 2.2 A commercial agreement would need to be reached with Forth Ports in relation to funding any additional costs to Tram as a result of these changes.
- 2.3 CEC Planning would be required to buy into these changes as they may preempt some of the decision required in terms of the overall Forth Ports masterplan.
- 2.4 If agreed, Forth Ports would need to commit to working within the Tram timescales and ensure that their consultants etc do likewise.

3.0 Lindsay Road

- 3.1 Forth Ports have a future road that is part of their masterplan and referred to in the Forth Ports tram agreement. The current design does not preclude this. However, Forth Ports see an opportunity to advance this and integrate the solution with tram now.
- 3.2 To progress this, the same issues as for Ocean Terminal would need to be addressed.

4.0 Risks/Benefits

Risks	Benefits
3 rd party agreement impacts	Greater acceptance of concept by FP/CEC
LOD issues	Construction costs could reduce – particularly at Lindsay Road
Impact on MUDFA	Resolves design and stops further impact on programme
Programme impact	
Impact on Tram operations	

5.0 Recommendation

- 5.1 The DPD is asked to recommend to the TPB board to:
 - 5.1.1 Agree that discussion about alterations to the tram alignment and the sharing of costs for these works;
 - 5.1.2 Agree that CEC should work closely with **tie** to ensure that concerns over the overall masterplan for the area are resolved to allow those decisions on design to be progressed;
 - 5.1.3 Agree that TPB should recommend that these discussions on commercial arrangements should be divorced from the overall financial contribution discussions on Tram;

Prepared by :-	Susan Clark, Delivery and Programme Director
Recommended by:-	Matthew Crosse, Project Director
Date:-	13 th March 2007
Approved:-	David Mackay on behalf of the Tram Project Board

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Paper to : Tram Project Board

Subject : Owner Controlled Insurance Programme - Update

Date: 7th March 2007

DPD requested to approve recommendations as set out in section 7 Decision required as to whether to extend deadline dates for OCIP procurement

1.0 Introduction

- 1.1 The purpose of this document is to update progress on placement of **tie**'s Owner Controlled Insurance Programme and build on the previous paper on Evaluation of Insurance Prequalifications, dated 15 December 2006, that outlined our proposals to invite nine Insurers to bid.
- 1.2 The intention is that **tie** will effect an Owner-Controlled Insurance Programme (OCIP) to cover Construction "All Risks" (CAR), Delay in Start Up (DSU) and Public & Products Liability (PPL). In addition to naming **tie** as an insured party, the OCIP will include the Contractors involved in the construction phase of the Edinburgh Tram Network, including AMIS.

2.0 Procurement Activities

- 2.1 Following issue of our Invitation to Negotiate document on 3 January 2007 we have presented to Underwriters on Governance, Technical proposals, Procurement Strategy, Timetable and Risk in Edinburgh (including tour of the site) on 9 January 2007. This was supplemented by issue of an underwriting pack to Candidates on 12 January 2007.
- 2.2 We consequently received eight responses from Insurers on time by 5pm on 9 February 2007. One Candidate (Bobcat) missed the deadline for submission without giving a reason for the delay. An extension of time was not granted.
- 2.3 It appears that the CAR, DSU and PPL policies for the Construction Phase will come in below the budgeted figure.
- 2.4 We have commenced the clarification and negotiation stage with the Candidates. We have received a number of queries from Insurers that have highlighted their information requirements (necessary to effect cover) across a range of areas including the following.
 - **Programme** details of critical path including testing and commissioning and progress on dilapidation and condition surveys.
 - **Cost** comprehensive values of the works under the different contracts year on year (e.g. Mudfa, Tramco, Infraco, Maintenance); Compensation fund; and compensation fund details.
 - Quality details of processes with regard to the control and assessment of contractors in
 particular with regard to quality of work, adherence with safety plan, housekeeping etc. and
 liaison with Edinburgh Council claims reported to the Council arising out of the Project.

- Technical information on the proposed Tunnel under A8; existing tunnel along Leith Walk; geotechnical report for route and structures; flood history along route; systems in place for monitoring of high risk structures for movement; and outline method statements utilities protection, public protection and removal of site debris/street cleaning.
- Risk detailed risk register; hazard assessments and contingency plans (e.g. supply of substitute trams in event of depot fire or alternative power supply in the event of substation damage); and structures have been identified as being either at potential risk or are particularly high value/listed.
- 2.5 We have experienced difficulties in responding to some queries due to a variety of reasons including SDS PU works design development delays influencing uncertainty in MUDFA anticipated final account; uncertainty regarding the detailed methodologies to be adopted by individual contractors; and crucially the potential to compromise the commercial position for ongoing Infraco/Tramco procurements.
- 2.6 Heath Lambert Group are currently in the clarification and negotiation stage with the Candidates, the deadline for the expiry of this stage being 9th March 2007. The current indicative terms obtained from the Candidates are set out in the table in the accompanying spreadsheet in Appendix 1 to this paper.

3.0 Background Assumptions

- 3.1 The following principal underlying assumptions were made when embarking on the OCIP procurement on 27 October 2006.
 - Effective Date 27 March 2007 to commence in advance of MUDFA Main Works with any trial works in advance of this date covered under AMIS insurances. This date is currently under review (and subject to Scottish Ministers decisions) with it currently anticipated that MUDFA will start in earnest by June 2007 at latest.
 - Clarity of Works The timing and scope of works for service providers has changed. We
 are currently embarking on a number of planned and potential variations to the assumed
 scope of the Main Works including MUDFA variations to undertake advance works; TS
 procurement of D&B solution for immunisation works; and lack of clarity of on timing of
 Phase 1B works.
 - Initial Deposit We assumed that this would be made in FY06/07. This is now to be in FY07/08.
 - **Bidder Briefing** We assumed that we would be in a clear position to brief and negotiate Infraco & Tramco Bidders regarding the content and management arrangements early April 2007. We aim to commence this following Easter 2007.

4.0 Current Insurance Arrangements with AMIS

- 4.1 AMIS are currently carrying out mobilisation activities associated with the utilities diversion for the Edinburgh Tram Network Project. Prior to effecting the OCIP, AMIS are insuring the CAR and PPL exposures associated with their activities on the Project under their own annual insurance policies. AMIS carry PPL cover with a limit of indemnity of £100m.
- 4.2 The current arrangement for claims reporting is that incidents are reported to both the AMIS and **tie** Contract managers. As part of the OCIP insurance negotiations, a process for claims reporting and handling is to be agreed between **tie** and the selected insurer(s) which will be distributed among the Contractors involved in the Project.

4.3 Losses arising from incidents which occur prior to the effecting of the OCIP will be covered under the AMIS insurances, whilst those resulting from incidents occurring after the effecting of the OCIP will be covered under the OCIP.

5.0 Risks & Opportunities

- 5.1 The following risks and opportunities are acknowledged to the OCIP procurement.
 - Market conditions could change over the 'medium' term.
 - Without the OCIP being effected, **tie** would not be able to effect Delay in Start Up as this cover is not available in isolation from CAR.
 - The timetable should be adhered to where possible as Candidates are currently very keen to participate in the programme. Any delays should be kept to a minimum. In addition, there are potential additional AMIS costs.
 - Inability to reach close with Insurers could have significant impact on the project. The bidders for the MUDFA, Tramco and Infraco have costed their bids on the basis of there being an OCIP in place. Should this not happen, bidders would have to re-price their bid, resulting in additional work on their part and a loss of tie credibility.
 - Greater project gestation will allow us to furnish reliable information to reduce potential risk pricing by Insurers and allow development of claims handling procedures.

6.0 Current Position with Candidates

6.1 Heath Lambert Group's recommendation on the basis of the current terms is that the Construction Phase Insurance be effected on the following basis.

Construction "All Risks" and Delay in Start Up

- 6.2 A programme can be put together on a co-insurance basis, whereby several Candidates participate in the same insurance policy on a percentage basis. This is necessary due to the size and complexity of the risk, which means that any one of the Candidates could not insure the risk 100%.
- 6.3 Our proposal is that the programme consists of a joint lead between Snow Leopard and Lynx. As lead insurers, these two Candidates would be responsible for policy issuing and claims negotiation, although the approval of the other Candidates who participate in the insurance programme would be required during claims negotiations.
- 6.4 In addition to the two Candidates mentioned, other Candidates would need to be involved on a percentage basis. By using this method we currently have indicative terms to provide 96% of the insurance and expect to obtain indicative terms to provide the full 100% within the next few days. The current proposal is to use Puma for this purpose, although discussions continue with the other Candidates.

Public & Products Liability

- 6.5 After reviewing the limits carried by Insureds for similar projects, we have obtained indicative terms for a limit of £100M. Our proposed structure is -
 - Primary £5M with Jaguar 100%

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- Excess Layer £45M in excess of £5M with lead by Jaguar of 50%
- Excess Layer £50M in excess of £50M with lead by Jaguar of 45%
- 6.6 We continue to discuss terms with the Candidates and expect to have support for 100% of the Excess Layer programme by the deadline date of 9th March.

Reasons for Recommendation

- 6.7 The Candidates proposed for the Construction "All Risks" and Delay In Start Up have indicated terms with the most competitive rates and deductibles. However, terms are indicative at present and are subject to the provision of the requested outstanding information. Once this information is received and reviewed by the Candidates, we will then be in a position to set out the full terms of cover and rates, including the policy wording to apply where this differs from the proposed policy wording.
- 6.8 We are proposing a separate Public & Products Liability policy as one of the Candidates on the Construction "All Risks" and Delay in Start Up cover, Puma, are unable to provide unlimited liability cover in respect of road traffic accidents as required by the Road Traffic Acts. The Candidates proposed for the Public & Products Liability policy are able to provide unlimited liability for bodily injury claims as required by the Road Traffic Acts.

7.0 Recommendations

Effective Date of OCIP and MUDFA

7.1 A decision is to be made as to whether we are to continue on the existing timetable for the procurement of the OCIP or to extend the deadline dates in view of the information required for finalising terms. In the latter case, discussions are to be held with AMIS to establish whether their annual insurance policies can continue to cover the MUDFA activities pending the effecting of the OCIP by tie, in the event that any delays in obtaining the outstanding information results in our not being able to finalise terms with the Candidates. To date, AMIS have confirmed that their annual CAR and PPL policies cover activities associated with MUDFA, and their commitment to continue this arrangement would need to be obtained in the event of a delay occurring in the effecting of the OCIP.

Infraco/Tramco

7.2 The intention is to include these parties within the scope of the OCIP. At present, a delay in the effecting of the OCIP should not affect these parties as their activities are scheduled to start several months beyond AMIS main diversionary works, but Infraco and Tramco should be informed of the progress in the effecting of the OCIP should they be planning to include any activities within the OCIP at an earlier date than anticipated.

Proposed Mark Bourke Date:- 07/03/07

Risk Manager

Recommended Geoff Gilbert Date:-

Project Commercial Director

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Date:-

Approved Matthew Crosse

Project Director

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Appendix 1: Current Indicative Terms Obtained from the Candidates

tie LTD - OWNER CONTROLLED INSURANCE PROGRAMME CONSTRUCTION PHASE - EDINBURGH TRAM NETWORK INDICATIVE PREMIUM AND TERMS AS AT 7TH MARCH 2007

					С	ONSTRUCTION "ALL RISKS"			
Insurer	Participation	Rate per cent	Sum Insured	Period of Cover	Deductibles	Maintenance Cover and Period	Design Cover	Information Needed/Queries	Scope of Cover
Snow Leopard	40%	0.49% CAR only 0.65% CAR and Primary £5M PPL			£250,000 DE5; £50,000 major perils (storm, tempest, flood, water damage, subsidence, collapse, landslip, frost; £20,000 all other claims. If DE3 option selected DE3 deductible is £50,000	Limited maintenance for trams	DES, option for DE3 at lower deductible	Estimated works turnover in first 12 month split between EH1 and EH2 and outside those areas for terrorism buyback quote.	Temporary accommodation - values to be a dvised; contractors' plant subject to maximum limit aoo debris limit £5M; infation 15%; free issue materials covered subject to their inclusion in ECV; local authorities limit £1M' loss prevention limit £250,000 aoo and £500,000 in aggregate; existing property terms and limits to be agreed. Other requested extensions to be agreed. In respect of trams-excluding manufacturers'suppliers and excluding manufacturing defects, limited maintenance cover only (ie site defects only), excluding breakdown. Testing and commissioning subject to 3 months time period or as otherwise negotiated at terms to be agreed. Excludes terrorism buy-back (need estimated works turnover in first 12 months split between EH1 and £H2 and outside those areas.)
Puma		Quoted on CAR/PPL package basis. 0.65. Can't do RTA. Awaiting CAR only rate			£250,000 LEG 3 and maintenance; £75,000 major perils; £20,000 all other losses	24 months (12 months guarantee plus 12 months extended)		See sheet 2.	Misui standard wording or bespoke wording to be agreed. Terms for existing structures to be agreed. Series loss clause. Wish to be engaged in risk management and sub- contractor assessment.
Lynx		0.65%; existing structures 0.2 per annum; rate for plant and temporary buildings TBA.			As per slip other than £40,00 testing and commissioning	12 months guarantee maintenance but no cover on trams, 12 months extended	LEG 3/06	DSU information	debris removal 15% of loss maximum £5M; expediting expenses 115% maximum £2.5M; inflation on incomplete works and unbuilt portion both £500K any one loss and £2h in the aggregate with 20% co-insurance minimum £20K, maximum £40K. Limit for offsite storage to be agreed; continuing hire charges 48 time excess and £1M limit; testing and commissioning period maximum 3 months. Ris management fees 2% of gross premium. Wording to be agreed prior to inception.
						DELAY IN START UP			
Insurer	Participation	Rate per cent	Sum Insured	Indemnity Period	Time Excess	Scape of Cover		Information Needed/Queries	
Snow Leopard	40%	0.842			60 days	To be agreed. Extensions to be discussed with limits to be imposed		Need sum insured; need details of risk assessments and contingency plans (eg supply of substitute trams in event of dep fire, alternative power supply in the event of sub-station damage)	
Puma	to be agreed							Ĭ,	
Lynx	40%	0.842		Check if 12 or 24 months	60 days				
					PRI	MARY THIRD PARTY LIABILIT	Υ		
Insurer	Participation	Rate per cent	Limit	Period of Cover	Deductibles	Notes	Wording	Information Needed/Coverage	
Jaguar	100%	0.16%	£5M		TBC	£100,000 discount if loss ratio less than 25% but wouldn't share this on a primary layer		Excluding asbestos; excluding PVdesign; subject to sight/approval of primary wording; excluding financial loss. Details contractual relationships required. Based on ECV of 5592M. Excluding operational risks at this stage. Excluding explosives of cover for explosives to be agreed.	
EXCESS LAYER THIRD PARTY LIABILITY									
Insurer	Participation	Rate per cent	Limit £45M in excess	Period of Cover	Deductibles	Notes	Coverage and Subjectivities	Wording	Information Needed/Queries
Jaguar	50%	0.121	of £5m £50M in excess						
Jaguar	45%	0.060	of £50M						