TRANSPORT SCOTLAND

memorandum

to:	Bill Reeve		
copy:	Jerry Morrissey, Ken Davis		
from:	Nadia Savage		
ref:	**Audit Scotland Report** Edinburgh Transport Project Review	**date:**	21st June 2007

Bill

Having now had sight of the published Audit Scotland report, Edinburgh Transport Project Review, I consider it necessary to draw your attention to the following information and concerns related to the Edinburgh Tram Project as represented in the document.

Some key discrepancies:

COST ESTIMATE:
The DFBC submitted by tie in November 2006 presented an updated estimate for Phase 1 as £592m split £512m Phase 1a and £80m Phase 1b. In subsequent financial reporting tie has documented £593.8m split as £501.8m for Phase 1a and £92m for Phase 1b. This is a change of £12m for Phase 1a. The Audit Scotland report states that £501.8m is the *current* anticipated final cost of Phase 1a.

However the initial tender returns from the Infraco Bid in January 2007 are different to these figures. Information was presented to Transport Scotland by tie in correspondence of 26th January 2007 and this raised questions that were communicated to tie by email on 29th January 07. Additionally tie made a limited presentation to Transport Scotland on 30th January and subsequently D. Sharp instructed a review by TS in tie's premises, of the process surrounding the letter of 26th January 2007. A response was received from tie that was reviewed by TS and enabled advice to be presented to Ministers to decide on the next funding stage. As you will recall this information was treated discreetly, at the request of tie, as it was commercial in confidence with only a limited circulation.

In broad terms the normalised bids resulted in a Phase 1a cost estimate of £545.5m. tie introduced proposals for savings to be negotiated during bidding (£14m) and also value engineering savings (£14m) which proposed to secure a £517m Phase 1a cost at out turn. They also tabled proposals for further savings which would have required an extremely aggressive approach to negotiation and extremely robust value engineering processes. Tie suggested this could result in a Phase 1a cost outturn of £477.5m.

Transport Scotland questioned the robustness of the proposed savings and the processes to quantify exposure and quantum of risk amongst many other items such as tender qualifications on bespoke contract terms, transfer of risk, time schedule certainty and current progress (refer minutes of the review of 31st January circulated 12th February 2007).

Tie responded to the questions raised and provided some evidence to substantiate their responses. Based on this return, Transport Scotland prepared advice to the Minister which stated that the latest cost estimate for Phase 1a had increased to £545.5m with new savings proposed by tie ranging from £28m - £68m reducing the estimate down to a cautious view of £517m. It was stated that there was not sufficient evidence to support such a positive view of tie's savings range. Transport Scotland therefore concluded that a more prudent assessment of £15-20m should be applied to the £545.5 figure giving an overall cost estimate for Phase 1a as £525m with a range of £510-545m. This was against a funding of £490m from SE and £45m from CEC for Phase 1a, totalling £535m.

Therefore, whilst tie continues to report £501.8m, against £545m (to Tram Project Board, TS and as repeated in the Audit Scotland report) there is other information in circulation which does not substantiate this. To secure the current cost estimate tie would have to secure £43.7m of savings. TS has not been provided with evidence to demonstrate that savings of that magnitude are being secured. Tie's latest period report informs Transport Scotland of a possible £4.95m savings – the delta has still to be quantified. Nor does the Audit Scotland report make reference to robust processes for identification of opportunities and savings in its key message – yet tie's project cost estimate of £501.8m is very much dependant on those vital processes to secure almost 10% reduction of the normalised bids.

Page 3, paragraph 10 of the report states that costs have been subjected to robust testing – also that 79% of estimates are based on firm bid rates and prices. In correspondence and at the review in January 07 TS challenged these categories and percentages and questioned the robustness. These percentages are open to different interpretation.

However, ignoring the 79% statistic, the ultimate test of an estimate is the market place and the Infraco test has demonstrated that the bidder's returns are higher than the initial tie estimates. Pg 13 paragraph 51 acknowledges that the initial bids have been opened. It states that tie's confidence in its cost estimates have grown as a result, and that the current estimate (£501.8m) is 'based on firm bids'. This may be the case, but if so, Transport Scotland has not been updated by tie on the build up to the latest cost estimate or the secured savings, either through routine reporting or through updated correspondence such as that received in January 2007. Further it is Transport Scotland's understanding that bids are not yet firm, they are still initial. This lack of clarity may not support the audit report statements surrounding sound financial management and reporting, clear governance or robust cost estimating.

FUNDING :

Page 12 paragraph 46 - Funding is stated in the report as between £450m and £500m from SE at out turn and £45m from CEC, for Phase 1a. Funding for Phase 1b is not yet confirmed.

TS confirmed to tie in March 07 via it's comments on the DFBC that SE will contribute £490m funding based on tie's DFBC programme of works for Phase 1a, with a service date of December 2010. This is reflected in current reporting, however tie's financial reporting to Transport Scotland records £33m funding contribution for Phase 1a from CEC, not £45m.

7X
7/08 [illegible]
[illegible] £58m

The discrepancy between £45m and £33m needs to be clarified by tie and CEC. Is the shortfall in (£) a reflection of free issue land value which CEC are contributing? Or, as only Phase 1a is authorised at present, does this mean that CEC are reducing their contribution?

Page 12 paragraph 47 states that sufficient funding is in place to proceed with Phase 1a. This is based on the cost estimate of £501.8m and funding of £545m. However the cost and funding concerns noted above could mean that cost is greater and funding is less thus giving a different assessment of affordability i.e. £545.5m cost against £523m funding (£33m plus £490m).

Also with tie's proposed range of savings of £28m - £68m required to secure the affordability of Phase 1a, the prospect of further savings to generate spare funding towards Phase 1b is not yet substantiated. Lastly to note there are no developers contributions forecast from tie in financial reports at present.

SUNK COSTS:
Page 14 paragraph 48 states that the £17m spent taking the Bills through Parliament do not count against the projects overall anticipated final cost of £593.8m.

The report states estimated cost of Phase 1a of £501.8m. Transport Scotland confirm that corresponding funding for Phase 1a is £490m.

If the corresponding £490m does not cover parliamentary, what funding budget was agreed to pay for the parliamentary phase? These costs have been funded by Transport Scotland and invoices paid. They are in Transport Scotland's cost centre for ETN Project. When Transport Scotland are asked to produce a report of the cost expended on this project the financial records will include the £17m – yet other parties will not. When asked to produce a cost against funding TS will include the £17m plus other costs against the £490m. Even assuming everything goes as planned to deliver the project for tie's current cost estimate, with this discrepancy, at some point, cost will exceed Transport Scotland's funding contribution. This accounting and funding inconsistency requires to be clarified within Transport Scotland otherwise ETN project accounting will not correlate with TS organisational financial accounting.

GRANT AWARDS:
As a result of the exercise carried out by Transport Scotland in February there was an award of the next phase of funding (£60m) to CEC / tie.

This was specifically for utilities diversions, some advance works and scheme development up until Financial Close in the autumn 2007. This was to achieve approval of Final Business Case (FBC) in September 07 and Infraco Contract Award in October 07 as per tie's DFBC programme. Therefore Page 13 header and paragraph 49 of the report for spend into 2008 is misleading – the current funding is not authorised for spend beyond October 2007.

As stated the £60m authorised was to achieve approval of the FBC in September 07. If this £60m is expended by October 07 but FBC not achieved then surely actual expenditure will have exceeded planned expenditure for that element or stage of the project? Conversely if it is now planned that FBC is delayed until January 2008, (as reported in the Audit Scotland report) then why are tie and CEC still forecasting that £60m associated funding will be expended by October 07 in financial reports to Transport Scotland? Neither scenario demonstrates sound financial management and reporting or clear project management and organisation.

It should also be noted that Transport Scotland amended the Grant terms for the £60m funding to reflect TS concerns surrounding tie's project management processes, reporting and poor visibility of information. This is not reflected in the Audit Scotland report.

TIME SCHEDULE:
The time schedule submitted with the DFBC in Nov 06 reflected a service date for Phase 1a of December 2010. This end date was dependant on advance works in Spring 07 and award of Infraco in October 07.

In this submission tie stated that the programme had "zero float" which means that any delay up front directly impacts on the end date – unless of course the programme of works is rescheduled to mitigate the impact. This would under standard project management practice result in the issue and communication of a new programme of works. In Transports Scotland's response to the DFBC, tie's programme (and the concepts of zero float /right first time), was highlighted as an area of concern requiring rectification.

The Audit Scotland reports states that tie now report some slippage but that tie actions have mostly recovered the slippage and forecast a service date of 21st January 2011.

Specifically the report records that the FBC has slipped circa 4-5 months from September 07 to January 08 (page 3 paragraph 13 and Page 14 paragraph 54). It also records in page 13, paragraph 52 that the preferred Infraco bidder will be appointed in September 07. This is a 5 month slip from the May 10th date forecast in tie's DFBC programme. The report does not mention any other delay areas identified by tie or assessment of the impact.

However slippage areas against the DFBC Programme that are evident to tie and Transport Scotland as of May 2007 are:

- SDS design progress (both tie and TS period reports record difficulties as well as the response from tie to the review on 31st January 2007).
- Award of £60m funding (possible delay)
- MUDFA progress (partly SDS impact)
- Infraco negotiation (partly SDS impact)
- FBC progress (impacted by all of the above)

The Audit Scotland report records that the Infrastructure construction bidders provided their own draft programmes of work to tie in May 2007 and that tie are currently analysing these. However the response by tie to TS on 12th February 07 states that the bidders returned programmes with the bids and there were no problems envisaged – tie also indicated that any differences were adequately covered by provisions in the risk register and associated contingency.

It must be recorded that Transport Scotland has not received an updated programme from tie since January 2007. The only programme being reported by tie since Jan 07 has been the DFBC programme of Dec 2006 – and this has not been updated with actual progress as is normal established project management practice. TS understood that this was because tie were assessing the Infraco bids and the impact of the SDS difficulties and were updating the time schedule, however TS were concerned that the assessment was taking so long which is why Transport Scotland internal reporting reflects concerns around time schedule management.

The concern around all of these conflicting dates is this.

- The Audit Scotland report clearly indicates an approximate 5 month delay in the project (based on the Dec 06 programme) on key activities such as FBC and Infraco award.
- The DFBC programme was issued by tie with a statement that it contained "zero float".
- However the current end date is reported to have slipped by only 1 month.
- This is reported to be due to actions taken by tie to mitigate the impact of the 5 month slippage, i.e. bringing forward advance works and critical path works such as the construction of the tram depot at Gogar.

However these works are not a 'response to delay' as reported in page 14 paragraph 54. These works were always planned to be sequenced that way by tie, as reflected in the DFBC programme and reflected in the planned expenditure authorised in the £60m grant early in 2007.

So if these actions were always planned – what *are* the actions have been taken by tie to mitigate the 5 month delay on a zero float programme? The report states in page 14 paragraph 55 that the full extent of the contingency in the programme will be confirmed once the bidder programme is negotiated and agreed. However tie has already confirmed to Transport Scotland that there was no contingency in the DFBC programme i.e. zero float.

Also the report states in page 14 paragraph 58 that 'there is a clear project programme that provides start and finish dates for each stage of the work'. What clear project programme was exhibited to Audit Scotland that demonstrated a 21st January 2011 operational start for Phase 1a? And why has this programme not been presented to Transport Scotland? The report also states that the Project Board regularly review progress against the programme and consider requests to change it. If there have been such discussion why have tie not progressed, updated, changed, reissued and communicated an altered project programme that reflects the mitigation actions that have recovered the 5 month delay? Also there has been no corresponding assessment of cost impact reflected in change control submissions or reporting of an altered estimated out turn cost. Project delivery experience suggests that programme recovery can lead to an increase in cost and it is not clear that the project risk estimate has sufficient contingency.

SUMMARY:
From the information Transport Scotland has from tie on Phase 1a:

- *The tie cost estimate could range from £477.5m to £545.5m based on December 2010 service.*

- *Transport Scotland informed Ministers of a TS range of £510m to £545m. This was updated in June 07 to reflect an increase in the upper end of the range – this was a considered view on the information available (i.e. £517m tie cautious estimate plus £17m sunk costs plus a further £15m forecast increase to final cost for schedule delays and other changes totalling circa £549m).*

- *The sunk cost for parliament could add to tie cost estimate or erode funding*
  - *Sunk cost of £17m increasing tie cost estimate range to £494.5m to £562.5m (unless other funding source is confirmed or instructed)*

- *Funding estimate could range from £523m to £545m based on DFBC programme November 06*

- *Time schedule effects could impact on tie's current cost estimate – These have not been clearly reported by tie to Transport Scotland.*
  - Effect of delays and rework impacting upto May 07 (design development & procurement)
  - Effect of current uncertainty
  - Effect of possible future delays (design completion & Infraco contract award on critical path)
  - Effect of programme recovery for January 2011

- *Securing £43.7m savings from bid to award through negotiation & value engineering is challenging for both client & bidder. However, delivering the savings is even more challenging. Through experience, the final cost often ends up being greater than the award value due to events giving rise to legitimate subsequent changes for the Contractor.*

CONCLUSION:
Page 4 paragraph 15 of the report states that unless work progresses to plan, the cost and time targets may not be met. This is a health warning for future cost and time increases. Additionally, page 18 paragraph 67 states that 'the longer there is uncertainty..., the greater the risk that potential contractors will become disillusioned'. Again this is a health warning providing a reason in due course for only the lower end of tie's reported range of savings to be achieved, and thus a higher cost estimate possibly to emerge in January 2008.

Given the above it is assumed that CEC and tie must confirm to Transport Scotland that as of 20th June 07 (despite possible delays reported or not reported via Audit Scotland) an estimated cost of £501.8m and operation start date of January 2011 for Phase 1a is achievable – indeed has a high degree of confidence.

And in order to measure if works are 'progressing to plan' – the most up to date programme as presented to Audit Scotland with January 2011 operational start for Phase 1a must be communicated to stakeholders and specifically to Transport Scotland as principle funder.

RECOMMENDATION:

Given the above discrepancies between the information presented in the audit and the information that Transport Scotland have from tie, we recommend that Transport Scotland limit their funding liability for this project to a capped contribution expressed in out turn value. Page 18 paragraph 66 of the report reiterates that future funding mechanism is yet to be agreed. In light of the points raised a risk transfer strategy should be considered by Transport Scotland.

If the Phase 1a scheme is to progress unchanged in terms of scope, programme or stage works (which of course is another possibility open to the Executive), the previous out turn contribution value advised in March 2007 of £490m would still be largely relevant to a January 2011 completion date.

It is part of the programme manager's role at Transport Scotland to identify and communicate concerns or recommendations on project delivery that help to secure the on time on budget delivery of the programme of works. Therefore it is an obligation on the programme office to register concern that Transport Scotland and tie have information which does not support the information that has been presented by Audit Scotland. Particularly since Transport Scotland has acted on that information when presenting advice to Ministers previously in February 2007.

However it is recognised that the programme managers are not party to all the information held by tie or Transport Scotland on the Major Rail Projects. There may be other information available that resolves these concerns and discrepancies to your satisfaction.

Best regards

Nadia Savage

Head of Programme Management
Transport Scotland

Reference Documents:

- *Tie Draft Final Business Case – ETN submitted November 2006*
- *Tie letter ref 40.80.OLT.003234/MC/FH dated 26th January 2007 to Transport Scotland*
- *Scott Wilson Independent Review (Report) of tie Tender Analysis for the Tram Infrastructure Tender stage 26th January 2007*
- *Email from Damian Sharp to Matthew Crosse on 29th January 2007 at 18:26*
- *Tie power point presentation to Transport Scotland on ETN Infraco Initial Tender Return Project Estimate Update dated 30th January 2007*
- *Minutes to record the questions raised by Transport Scotland (and limited responses received) at the review of on 31 January 2007 of tie information presented in letter ref: 40.80.OLT.003234/MC/FH dated 26th January 2007*
- *Tie formal response to email from D.Sharp and face to face review on 31/1/07 submitted 12th February 2007*
- *Email from Damian Sharp to Minister for Transport on 20th February 2007.with subsequent responses (Minister for Finance and Public Service Reform and Minster for Transport concluding 28th February 2007.*
- *Grant Award £60m*
- *Period 2 FY 07/08 TS period report, ETN and tie period report*
- *Audit Scotland Report, Edinburgh Transport Project Review*