(7)

Graeme Greenhill

From: Sandra Elgin <sandra.elgin@edinburgh.gov.uk>
Sent: 21 January 2011 17:06
To: Graeme Greenhill
Subject: RE: Audit Scotland draft report: Edinburgh trams project interim report
Attachments: black01.pdf; Audit Scotland Tram Report - Tracked changes.doc

Importance: High

Hi Graeme,

As discussed, please find attached our comments/tracked changes to your report. If there is anything you are unsure of or need clarification, please feel free to give us a call.

Many thanks.

Sandra

Sandra Elgin
Chief Executive's PA/Secretary
The City of Edinburgh Council
Waverley Court
4 East Market Street
EDINBURGH
EH8 8BG

[redacted]

Comments on draft report from CEC

[redacted]

7.9.16

From: Graeme Greenhill [mailto:GGreenhill@audit-scotland.gov.uk]
Sent: 11 January 2011 17:55
To: Sue Bruce (Chief Executive)
Cc: Donald McGougan; Sandra Elgin
Subject: Audit Scotland draft report: Edinburgh trams project interim report

Dear Ms Bruce

Please find attached the joint Auditor General/Accounts Commission draft report on the *Edinburgh trams project interim report* together with a covering letter from the Auditor General.

The provision of this draft marks the beginning of the formal clearance process whereby the audited bodies involved are requested to confirm the report's factual accuracy.

Please accept my apologies for the limited timescale within which you are requested to respond. The timescale has been constrained by the forthcoming Scottish Parliament elections and the need to comply with the Public Audit Committee's work programme.

If you would like to meet to discuss the report then I would be grateful if this could be arranged as soon as possible and ideally no later than Monday 17 January. Alternatively, Audit Scotland is due to meet with Richard Jeffrey at tie to discuss the draft report on Friday 14 January and you may wish to send a representative to this meeting.

The draft report is strictly confidential and not for wider circulation at this stage. However, we appreciate the significant interest that the report is likely to generate and you will wish to consider how best to brief elected members on its content.

Yours sincerely

Graeme Greenhill

Graeme Greenhill
Portfolio Manager
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Edinburgh EH2 2QU

[redacted]

Edinburgh trams interim report

Draft report

January 2011

Contents

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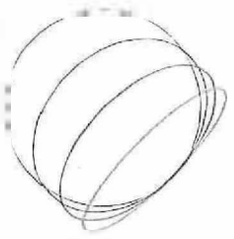

Summary

This report

1. The Edinburgh trams project is currently the third largest public capital project in Scotland. During the period since Scottish Ministers and the City of Edinburgh Council (CEC) gave their approval to the project's final business case in January 2008, there has been significant media attention given to it with concerns raised about cost over-runs and delivery delays.[1] In October 2010, the Auditor General and the Accounts Commission decided that an audit report should be produced to provide an update on the project's progress and to consider issues for the future. This is intended to be an interim report which might lead to further audit work and another report at a later date.

2. The decision to produce this report follows a previous report which the Auditor General published in June 2007 reviewing the arrangements in place for estimating the costs and managing the Edinburgh trams project and the Edinburgh Airport Rail Link. At that time, both projects were still at a very early stage. In the case of the Edinburgh trams project: no works had commenced; and major contracts for the construction of infrastructure and tram vehicles had yet to be awarded.

3. This report is a factual commentary which builds on work completed for the 2009/10 annual audits of Transport Scotland and CEC. The report is augmented where necessary by further analysis of the project's progress and costs (most of which is based on information already in the public domain) and interviews with key parties such as Transport Initiatives Edinburgh (**tie**). **tie** is a company wholly owned by CEC with responsibility for delivering the project.

4. There is currently a well-publicised contractual dispute between **tie** and the Bilfinger Berger Siemens consortium (BSC), and it would be inappropriate to comment on a live contract or the merits of the respective parties' performance or arguments, as these may be subject to future litigation. The report does not therefore, include a detailed review of the various works contracts which are in place and we do not express an opinion on the project's management or the performance of any the contractors involved. In particular, we have not examined in detail the form of contract or contractor performance relating to infrastructure construction, and we did not interview any contractor as part of the report's preparation.

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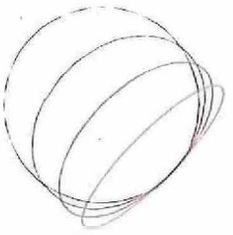
[1] The biggest two projects are the construction of a new £2.0 billion Forth Crossing and a new £842 million South Glasgow Hospital. The Scottish Parliament approved the Bill for the new Forth Crossing and the final business case for the Southern General Hospital in December 2010.



The Edinburgh trams project

5. CEC established tie as a wholly owned subsidiary in May 2002 to conduct investigations into how best to deliver CEC's local transport strategy, including the desirability of building one or more tram lines in Edinburgh. Following consideration of three options, the then Scottish Executive announced its support for the construction of a northern tram loop connecting Granton and Leith to the city centre and a western tram line from Edinburgh Airport to the city centre. Bills to construct these lines received Royal Assent in spring 2006.

6. The Edinburgh trams project is intended to support and promote a growing local economy and create a healthy, safe and sustainable environment for Edinburgh. The project is being taken forward in stages. Phase 1a consists of a tram line connecting Leith Waterfront to Edinburgh Airport. Phase 1b consisted of a tram line between Roseburn and Granton Square but this was postponed in April 2009 due to the economic downturn. CEC has not indicated when construction of Phase 1b might commence.

7. The Scottish Government, via Transport Scotland, has committed £500 million to Phase 1a subject to CEC approving a final business case which showed that the capital cost will not exceed £545 million; the project will deliver more benefits than it costs; and the tram network would not require any ongoing subsidy once trams become operational. The balance of funding is expected to come from CEC, most of it from developer contributions and capital receipts. Scottish Ministers and CEC approved the final business case, which confirmed these conditions were achievable, in January 2008.

8. Construction of Phase 1a involves a number of different stages and contracts:

    - Project design including design drawings for all infrastructure and associated land purchase and traffic regulation requirements
    - Utilities diversion works which were intended to take place before tramlines and other infrastructure was installed
    - Infrastructure construction including tramlines, a tram depot, overhead power lines, ticketing machines and passenger shelters
    - Construction of 27 tram vehicles.

9. CEC's governance arrangements for the project are intended to allow the work of tie to be subject to scrutiny while keeping all elected members informed of the project's progress. They also reflect the planned future role of another council owned company, Transport Edinburgh Ltd (TEL), in providing

integrated tram and bus services. TEL is now responsible for strategic and other material decisions affecting the project subject to delegated limits. The Tram Project Board, as a formal sub-committee of TEL, continues to be the project's main governance body.

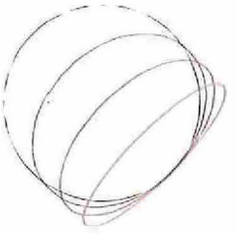
Key messages

The projects' progress to date

- The original plan to have trams operational by spring 2011 will not be achieved. Utilities work is now 97 per cent complete and good progress is being made with the delivery of tram vehicles. However, greater than anticipated utilities works; delays in completing design work; and disputes with the contractor responsible for infrastructure construction have all delayed progress. It is possible that trams will not be operational until at least 2013.
- The dispute between **tie** and BSC, the consortium responsible for infrastructure construction, shows no sign of abating. **tie**'s strategy to resolve the dispute is intended to test a number of principles associated with the contract's scope and specification, drive down the estimated cost of contract changes submitted by BSC and get work started at a number of locations. While this strategy has had some success, it is resulting in **tie** incurring additional project management costs and significant disagreement remains about the interpretation of elements of the infrastructure construction contract.
- Negotiations have been protracted and, although a further round of talks involving an agreed mediator are expected to begin in March ~~January~~ 2011, **tie** and BSC have not yet achieved a more co-operative way of working. Some 26 per cent of infrastructure construction works have been completed against an original plan of 97 per cent by the end of September 2010. Works which do not involve the installation of tram lines on existing streets have seen a little more progress (37 per cent completed against a plan of 99 per cent) than on-street works (10 per cent against a plan of 94 per cent).

The project's costs to date

- **tie** has spent a total of £381 million on Phase 1a to the end of September 2010, representing 70 per cent of the available funding. infrastructure construction has cost £140 million to date. While **tie** considers it can accurately predict the final outturn expenditure for most elements of the project, the final cost will need to include the cost of resolving the infrastructure construction dispute, which is at present largely unknown. **tie** has, however, indicated that it is unlikely that all of Phase 1a can be delivered within the £545 million ~~available~~ funding envelope.
- Due to the programme and cost difficulties experienced so far, **tie** and CEC are in the process of developing options for taking the project forward. **tie** has been considering an incremental



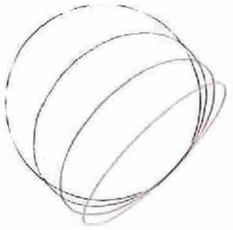
introduction of Phase 1a and the impact on the project if it was to terminate~~cancel~~ the contract with BSC. The council has been undertaki~~n~~ng contingency planning around~~considering~~ options to increase its funding of the project. Decisions on whether to plan for an incremental introduction of Phase 1a and how this would be funded are dependent on the outcome of the mediation talks.

Governance arrangements

- Elected members of the current administration~~ruling coalition~~ at CEC hold differing views of the Edinburgh trams project, and considerable debate is generated at council meetings when the subject is discussed. This has made it more difficult for CEC as a whole to present a unified commitment to the project.
- CEC's governance arrangements for the project are complex and are intended to allow the work of **tie** to be subject to scrutiny while keeping elected members informed of the project's progress. CEC is dependent on **tie** for providing timely and accurate data on operational progress, spend liabilities and commitments. While the Tram Project Board continues to be the project's main governance body, the overlap in membership between it and **tie**'s own board means that CEC may need to consider whether this limits effective oversight of the project's progress and risk management arrangements.
- Transport Scotland left the Tram Project Board in June 2007 when Ministers announced that the Scottish Government's contribution would be capped at £500 million. While it does monitor work in order to make grant payments, and CEC and **tie** keep it informed of the project's progress, Transport Scotland does not consider that it has the same oversight role for the trams project as it has for other projects.
- **tie** makes regular reports on the project's progress to the Tram Project Board and CEC also provides regular reports to elected members at full Council meetings. The commercially sensitive nature of the dispute with BSC and future financial projections, however, has meant that the information presented to members who are not directly involved in the project has been limited. Given the high profile of the project, the lack of detail which has been made available to some councillors has caused frustrations.

Key issues for the project

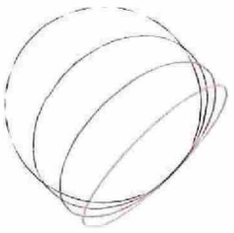
10. The Edinburgh trams project is at a significant decision point. There is increasing public concern about what the project may finally cost and whether a tram network will be realised. Contractual disputes mean that progress is now largely at a standstill although **tie** is still incurring staff and other project management costs. While **tie** is aware of the issues and has attempted to enforce compliance with its interpretation of the infrastructure construction contract, it is imperative that CEC,



tie and BSC work together to establish a clear way ahead for the project. The following table outlines the key issues which need to be considered in taking the project forward.

- The continuing dispute between **tie** and BSC over the infrastructure construction contract is clearly a matter of public concern. It is vitally important therefore that the latest attempts at mediation are successful in establishing an agreed way ahead for the project which gets construction work started again.
- Care needs to be taken, however, that a negotiated solution does not result in unnecessarily higher costs to the public purse. It is important for CEC and **tie** to maintain a clear view of the benefits of a negotiated solution which can be compared against any additional costs which might be incurred.
- At the same time, if a satisfactory solution cannot be found from mediation, CEC and **tie** will need to consider fully the consequences of alternatives including terminating the contract with BSC. This needs to take into account the cost of any compensation which may be payable, the project delays which are likely to result and whether re-letting the contract, or a version of it, will generate sufficient interest from alternative bidders.
- Given the circumstances of the project, there is significant public concern about what the project may finally cost and whether it will deliver the expected benefits. CEC and **tie** continue to ~~need to~~ work together to develop options for the project which clearly set out costs and timetables for delivery. They should also ~~formally update~~periodically review their calculations of the benefits accruing and ensure that benefits are maximised for the additional costs which will be required to deliver a working trams system. All budgets and option appraisals should be subject to independent scrutiny and verification and they should be published, with any requirements for overriding confidentiality constraints kept to a minimum.
- CEC and **tie** urgently need to strengthen public confidence in the project. In addition to the above measures, there are a number of steps which they could take to help this:
  - a number of key staff have left **tie** in recent months creating a risk that it may lack the necessary skills and experience to complete the project. **tie** may therefore wish to consider how best it can reassure the public over its project management capabilities including its organisational structure, and reporting lines.
  - develop more effective communications with the general public on the project's complexities and progress. Without sufficient public engagement, it is difficult to see how criticism of the project can be managed or prevented.
- Project governance arrangements are complex and the overlap in membership between the Tram Project Board and **tie**'s own board raises questions about whether the oversight of the project's

Comment [dr1]: This point needs to be explored and clarified. Who would provide the independent scrutiny ensuring observation of appropriate commercial confidentiality?



progress and risks can be fully effective. Although CEC has agreed to review the operational and governance arrangements necessary to integrate bus and tram services once trams are operational, it needs to consider the scope for a wider review of governance arrangements while the project is still in the construction phase. In particular, CEC needs to be able to satisfy itself that the membership and remit of each element of the governance framework contains sufficient scrutiny of the project's progress and risk management arrangements.

- There are also difficulties in allowing elected members who are board members of TEL to share full information on the project's costs and progress more widely with political group colleagues. CEC needs, therefore to consider the best ways to ensure elected members are kept informed about the project while having due regard to the requirements of companies act legislation and the commercially confidential nature of the issues under consideration.
- Although Transport Scotland already monitors project spend, it has a significant financial commitment to the project and it needs to consider its future involvement in providing advice and monitoring the project's progress. In particular, if CEC decides that an incremental approach should be taken to the delivery of Phase 1a, there may be implications for the conditions of the grant which would require to be considered by Transport Scotland. Transport Scotland should also consider whether it should use its expertise in managing major transport projects to be more actively involved and assist the project in avoiding possible further delays and cost overruns.

Part 1. Introduction

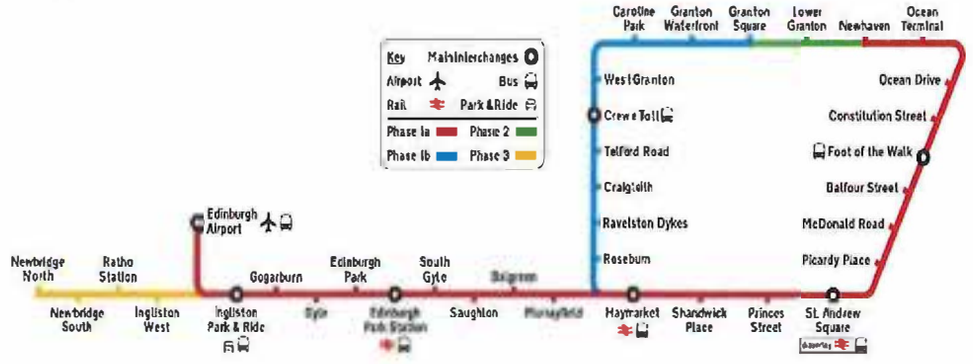
Background to the project

11. The City of Edinburgh Council (CEC) established tie as a private limited company, wholly owned by CEC, in May 2002 to conduct investigations into how best to deliver CEC's local transport strategy, including the desirability of building one or more tram lines in Edinburgh. In September 2002, tie submitted its proposals to CEC, identifying three trams lines as the most promising in terms of economic viability and benefits to the city:

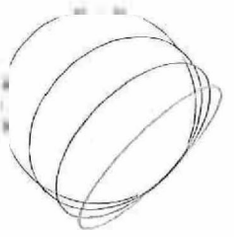
    - A northern loop connecting Granton and Leith to the city centre
    - A western line connecting the city centre to Edinburgh Airport
    - A south-eastern line connecting the city centre to the new Royal Infirmary.

12. In March 2003, following CEC's decision to take these lines forward, the Scottish Executive announced its support for the construction of the northern loop and western line (**Exhibit 1**). In January 2004, two Bills were submitted to the Scottish Parliament which received Royal Assent in spring 2006.

Exhibit 1: Proposed route of the Edinburgh trams project



Note: While legislative approval was obtained for all three phases of the project, only Phase 1a is currently being progressed.



Source: Trams for Edinburgh website

13. As the tram Bills were being considered in the Scottish Parliament, tie's review of costs indicated that a complete network of both lines was unlikely to be affordable in one phase of construction. CEC and tie concluded that the project should be taken forward in stages. Phase 1 of the project consists of a tram line connecting Leith Waterfront to Edinburgh Airport via Haymarket and Princes Street (Phase 1a - involving 18.5km of track) and a section from Roseburn to Granton Square (Phase 1b - involving 5.5km of track).

The Edinburgh trams project has a number of objectives

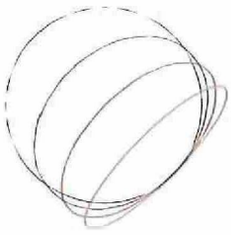
14. The project's objectives are to:

- support the local economy by improving accessibility
- promote sustainability and reduce environmental damage caused by traffic
- reduce traffic congestion
- make the transport system safer and more secure
- promote social benefits.

15. Phase 1 in its entirety was expected to deliver benefits of £2.31 per £1 of cost.[2] Phase 1a was expected to generate benefits of £1.77 per £1 of cost. Phase 1b was expected to generate higher benefits than Phase 1a because it was expected to contribute to the regeneration of Granton. Other outcomes expected from Phase 1 include:

- 3,800 residential units and 43,800m^2 of factory, office and retail space through regeneration of the Granton area
- 930 additional jobs of which 590 are attributed to Phase 1a (through a mixture of construction and regeneration)
- improved air quality, traffic noise and CO_2 emissions resulting from the transfer of car trips to public transport
- enhanced opportunities to make journeys on the public transport network through bus-tram service integration and ticketing arrangements
- improved access to key trip attractions and destinations.

[2] *Edinburgh Tram Network Final Business Case Version 2, December 2007, tie*



16. Phase 1a was expected to be constructed first, although contractual arrangements allowed CEC to commit to Phase 1b at any time until March 2009. In April 2009, CEC announced that, as a result of the economic downturn, Phase 1b of the project was being postponed. This report therefore concentrates on Phase 1a.

The Scottish Government agreed to provide a maximum of £500 million towards Phase 1a

17. In January 2008, Scottish Ministers, via Transport Scotland, offered grant support for Phase 1a of 91.7 per cent of eligible capital costs subject to a maximum grant of £500 million. The Scottish Government's grant offer was conditional on CEC approving a final business case for the tram network containing:

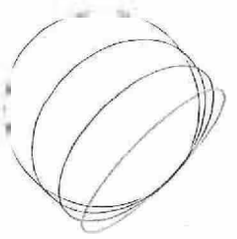
    - An affordability assessment that the capital cost of Phase 1a will not exceed £545 million
    - A benefits cost ratio (BCR) for Phase 1a which was greater than 1 i.e. benefits were to exceed costs
    - A projection that the Edinburgh tram network would not require any ongoing subsidy during its operation i.e. income was expected to exceed the tram network's running costs.

18. The grant offer letter did not stipulate the consequences of any changes to the project during its construction such that one or more of Transport Scotland's grant conditions would not be met. For example, it was not clear what would happen to the Scottish Government's continued funding of the project if it became clear that Phase 1a could not be delivered for £545 million.

19. CEC is expected to provide the balance of funding for Phase 1a, up to £45 million, mostly from developer contributions and capital receipts. ~~In particular, CEC considered that developers would take advantage of the tram system in helping to regenerate Granton.~~ Consultants reported in December 2007 that CEC's strategy for delivering this funding was a sound basis on which to proceed.[3]

The Auditor General's 2007 report on the trams project

[3] *Independent Review of Tram Funding Strategy – Council Contribution*, report considered at CEC meeting of 20 December 2007 This was reassessed by DTZ in light of the economic downturn and the results reported to CEC on 20 August 2009



20. In June 2007, the new Scottish Government asked the Auditor General to carry out a high-level review of the arrangements in place for estimating the costs and managing two transport projects for Edinburgh which were then being developed. The Auditor General's report examined whether:

    - the Edinburgh trams and Edinburgh Airport Rail Link (EARL) projects were progressing to time and cost targets
    - appropriate management systems were in place to promote successful completion of the projects.

21. The review was a short exercise and examined the process for estimating project costs and project management arrangements on the two projects. It did not provide assurances on the accuracy of the estimated project costs, nor did it examine the operating costs or projected revenues, and it did not review the options appraisals for the project and the benefits they were expected to generate.

22. At that time, both projects were still at a very early stage. In the case of the Edinburgh trams project: no works had commenced; and major contracts for the construction of infrastructure and tram vehicles had yet to be awarded. While the project was approaching a critical phase, Scottish Ministers and the City of Edinburgh Council (CEC) had yet to approve the final business case.

23. The Auditor General's report concluded that the arrangements in place to manage the trams project appeared sound. It said that a range of key tasks, such as the commencement of utilities diversion works and negotiations with bidders over the infrastructure construction contract, needed to be completed before the business case could be signed off. It added that unless work progressed to plan, cost and time targets may not be met.

24. Following publication of the Auditor General's report in June 2007, the Scottish Parliament conducted a major debate on the future of the Edinburgh trams and EARL projects. After a vote, the Scottish Parliament called on the SNP administration to proceed with the Edinburgh trams project within the £500 million budget limit set by the previous administration. The Scottish Parliament also noted that CEC should meet the balance of any additional funding required. Scottish Ministers subsequently agreed with this motion but decided to cancel the EARL project.

Part 2.Progress and costs to date

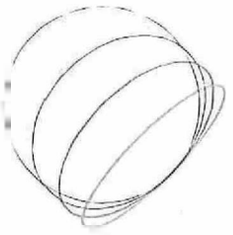
Key messages

- The original plan to have trams operational by spring 2011 will not be achieved. Greater than anticipated utilities works, delays in completing design work and contractual disputes with the consortium responsible for Infrastructure construction have delayed progress. It is possible that trams will not be operational until at least 2013.
- **tie** has spent a total of £381 million on Phase 1a to the end of September 2010. This represents 70 per cent of the available funding. While **tie** considers it can accurately predict the final outturn expenditure for most elements of the project, the final cost will need to include the cost of resolving the Infrastructure construction dispute, which is at present largely unknown. **tie** has, however, indicated that it is now unlikely that all of Phase 1a can be delivered within the £545 million funding envelopellmit.
- Due to the programme and cost difficulties experienced so far, **tie** and CEC are in the process of developing contingency measures. **tie** has been considering an incremental introduction of Phase 1a while CEC has been considering options to increase its funding of the project. Decisions on the future of the trams project have still to be made pending a further round of mediation talks in early 2011 aimed at resolving the infrastructure construction dispute.

tie's procurement strategy was intended to transfer risks to the private sector

25. **tie** developed its planning for the delivery of the tram infrastructure at the same time as the Scottish Parliament was considering the tram enabling Bills and the project's funding was being finalised. In forming its procurement strategy, **tie** visited a number of other light rail projects, such as the Lewisham extension to the Docklands Light Railway, and sought to learn lessons from these and relevant guidance. For example, the NAO found that the design, build, maintain and operate form of contract which was used in five out of the seven light rail projects in England it examined could result in higher construction costs because consortia might not be best placed to bear all the revenue risk of running a light rail system[4]. **tie**'s procurement strategy was therefore designed to have separate construction and operation contracts. It also sought legal advice on the form of the contracts,

[4] *Improving public transport in England through light rail*, National Audit Office, April 2004



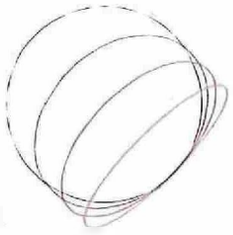
including how best the form of the contracts could be used to transfer risks to the private sector where this was appropriate.

26. **tie**'s procurement strategy involved a series of different contracts intended to reduce the overall time taken to deliver the project, provide certainty over costs before construction began and allow the selection of the optimum combination of vehicle and infrastructure providers. The procurement strategy included:

- **The early involvement of an operator in the design and development of the project.** Developing the design as far in advance of procurement as possible was intended to reduce uncertainty and improve cost estimating of the construction phase.
- **Undertaking detailed design ahead of the award of the main construction contract.** Early award of the Systems Design Contract (SDS) was intended to facilitate the early identification of utility diversion works, land purchase requirements and traffic regulation requirements.
- **Tendering the utility diversion works as a separate package and diverting these in advance of the main tram works contract.** Risks associated with utilities diversions are difficult for the private sector to manage and price, and have been seen as a barrier to progressing light rail schemes. Separating utilities diversion work from infrastructure construction was intended to provide more cost certainty for infrastructure construction bidders. Advanced utilities diversion was also intended to reduce the risk of disruption to the progress of infrastructure works.
- **Tendering the infrastructure construction contract (infraco) and tram vehicle contract (tramco) separately.** This was intended to allow the parties responsible for providing infrastructure and vehicles to concentrate on their strengths.
- **Tendering the infrastructure construction contract as one large package.** The infraco contract included all civil engineering works, systems construction works and integration of the whole system.

27. **tie** also considered that there would be benefits in having a single consortium responsible for the overall delivery of construction and other works . The procurement strategy therefore included that on the award of the infraco contract, **tie** would transfer the SDS and tramco contracts to the infraco contract.

28. As a result, **tie** sought to award initially six contracts associated with the project (Exhibit 2). Most of these contracts were intended to be fixed price or, in the case of utilities diversion where the volume of work was unclear, based on agreed rates. For example, when the final contracts for tram vehicles and infrastructure construction were signed in May 2008, **tie** estimated that over 95 per cent of these



costs were fixed. Payment mechanisms were intended to provide incentives to contractors by ensuring that full payment was not made until the task was successfully completed.

29. For the reasons outlined earlier ien this report, we have not considered in detail the procurement strategy or the form of contracts used. Issues arising such as the overall risk management arrangements, and the potential benefits and risks from having a procurement strategy which differed from other tram projects, are matters for any subsequent examination of the project.

Exhibit 2: The main contractors associated with the Edinburgh trams project

tie's procurement strategy resulted in a number of different organisations being appointed to deliver different elements of the project.

Tram operator: tie appointed Transdev as the tram operator in May 2004 to assist planning of an integrated service network with Transport Edinburgh Limited (TEL), the CEC subsidiary company with overall responsibility for delivering an integrated tram and bus network for Edinburgh. The contract with Transdev was later cancelled in December 2009 and CEC now intends that TEL or a subsidiary of TEL will be responsible for operating an integrated tram and bus service.
System Design Service (SDS): tie awarded the SDS contract to Parsons Brinkerhoff in September 2005 to facilitate the early identification of utility diversion works, land purchase requirements and traffic regulation requirements and the completion of design drawings. **tie** transferred the SDS contract to the Bilfinger Berger Siemens consortium (BSC) when the infrastructure construction contract was signed in May 2008.
Utilities diversion: tie appointed Alfred McAlpine Infrastructure Services as the contractor responsible for the diversion and protection of utilities along the tram route in October 2006. Carillion bought-over Alfred McAlpine in December 2007 and assumed contractual responsibility for delivering utilities diversion works. When Carillion completed its agreed work package in late November 2009, **tie** appointed Clancy Docwra and Farrans to complete utilities diversion works.
Tram construction (tramco): tie signed pre-contract agreements for the supply and maintenance of 27 tram vehicles with Construcciones y Auxiliar de Ferrocarriles SA (CAF) in October 2007. When the infrastructure construction contract was signed in May 2008, **tie** transferred the tram vehicle construction contract to BSC, and CAF joined the consortium.
Infrastructure construction (infraco): tie awarded the contract for the construction of the tram infrastructure, including rails, overhead power cables and a tram depot to BSC in May 2008. On award of this contract, **tie** transferred the contracts for systems design and tram vehicle construction and maintenance to it.

Source: Audit Scotland

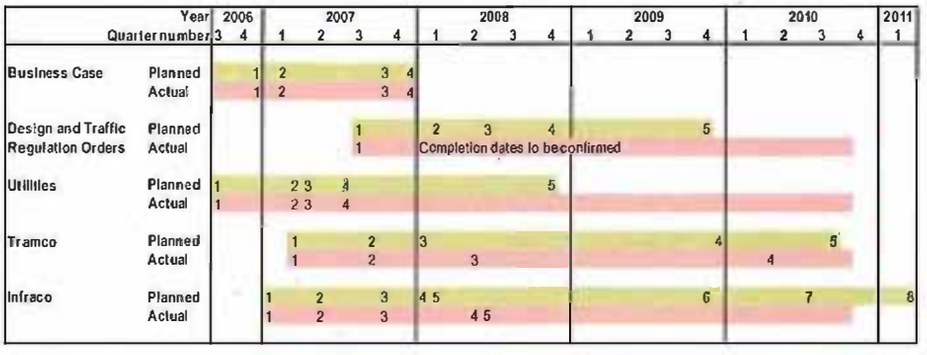
Comment [12]: NB: BSC is a consortium -- it would be helpful and transparent to be clear about members of the consortium and their roles as they are not cited in Appendix 2.

The original plan to have trams operational by spring 2011 will not be achieved

30. **tie**'s original project plan stipulated that Phase 1a was expected to be open for service by spring 2011. However, several elements of the project have experienced delays and it is not yet clear when trams will be operational (Exhibit 3). Delays in the completion of design work and the movement of utility pipes and cables created an unplanned overlap with infrastructure construction work. But the most important factor in contributing to the project's delay is a contractual dispute between **tie** and BSC over infrastructure construction.

Exhibit 3: Phase 1a delivery against key milestones

The main construction elements of the project have all taken longer than expected.



Key Milestones

Business Case
1. Approval of draft final business case by CEC and Transport Scotland
2. Confirmation of Infraco tender prices to CEC
3. Approval of final business case by Tram Project Board
4. Approval of final business case by CEC and Transport Scotland

Design and TROs
1. Traffic Regulation Order process commences
2. Completion of construction drawings - utilitaco
3. Completion of planning drawings
4. Completion of detailed design construction drawings
5. Traffic Regulation Order process complete

Utilities
1. Award of utilities diversion contract
2. Completion of pre-construction period of utilities diversion contract
3. Commencement of utility diversion works trial site
4. Commencement of utility diversion works
5. Completion of utility diversion works

Tramco
1. Completion of initial evaluation/negotiation of bids
2. Recommendation of preferred bidder
3. Award of Tramco contract
4. Delivery of first tram
5. Delivery of all trams

Infraco
1. Return of Stage 1 bid
2. Completion of evaluation/negotiation of Stage 2 bid
3. Recommendation of preferred bidder
4. Award of Infraco contract
5. Construction of track and tram depot commences
6. Depot completion
7. Commencement of test running
8. Delivery into revenue service

Source: Edinburgh Tram Network Final Business Case version2, 7 December 2007, tie and Audit Scotland

Utilities diversion work is almost two years late but is 97 per cent complete

31. **tie** expected that utilities diversion work would take 70 weeks between July 2007 and November 2008. Surveys undertaken by **tie** along with information received from individual utility companies indicated that the original scope of the work would cover 27,000 metres of pipes and cables. However, **tie** had to significantly extend the scope of work once the physical conditions underground became clear. According to **tie**, the complexity of utilities along the tram route, congestion of pipes and cables in key locations and unforeseen obstructions were much more difficult than originally anticipated. In addition, records held by utility companies and CEC were far from comprehensive.[5]

32. Carillion finished its contracted works package at the end of November 2009 by which time utilities diversion work had covered some 40,000 metres of cables. **tie** now estimates that the final extent of diverted utilities is around 50,000 metres and it has appointed two contractors, Clancy Docwra and Farrans to complete it. **tie** has reported that around 48,300metres of utility diversion work has now been completed.

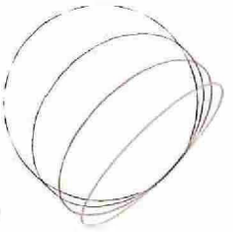
Contractual disputes over infrastructure construction have resulted in significant delays to the project

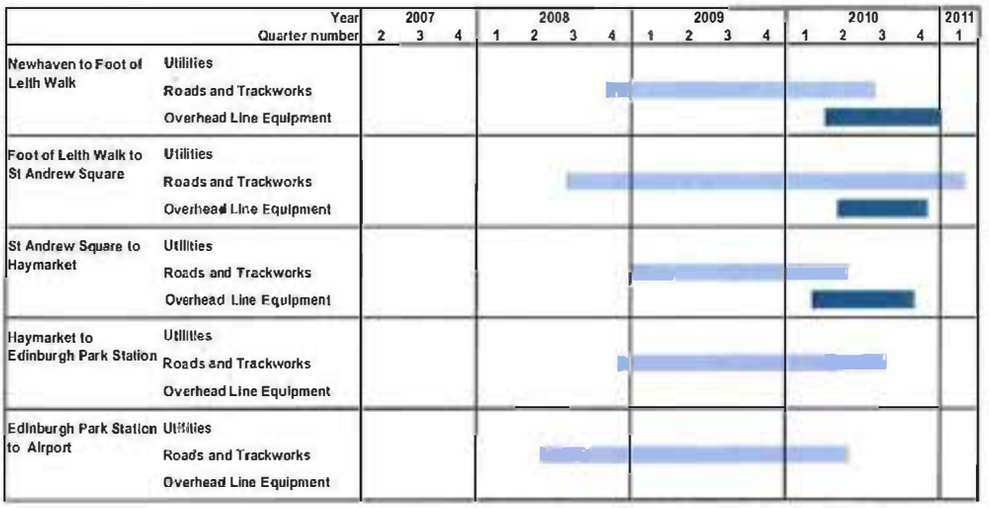
33. The planned infrastructure construction programme required the project to be delivered in a series of sections with tram lines and overhead line equipment being installed after utilities diversion work was completed (Exhibit 4). **tie** also expected design drawings to be largely completed before infrastructure construction started.

Exhibit 4: Planned infrastructure construction programme

tie planned that infrastructure construction would take place in stages.

[5] *Edinburgh Tram Project – Update Report*, report considered at CEC meeting of 24 June 2010





Sections:

Newhaven to Foot of Leith Walk
Newhaven to Ocean Terminal
Ocean Terminal to Port of Leith
Port of Leith to Bernard Street
Bernard Street to Foot of Leith Walk

Foot of Leith Walk to St Andrew Square
Foot of Leith Walk to Balfour Street
Balfour Street to McDonald Road
McDonald Road to Picardy Place
Picardy Place to St Andrew Square

St Andrew Square to Haymarket
St Andrew Square to Princes Street West
Princess Street West to Shandwick Place
Shandwick Place to Haymarket

Haymarket to Edinburgh Park Station
Haymarket to Roseburn Junction
Roseburn Junction to Murrayfield
Murrayfield to Balgreen Road
Balgreen Road to Saughton Road North
Saughton Road North to South Gyle Access
South Gyle Access to Edinburgh Park Station

Edinburgh Park Station to Edinburgh Airport
Edinburgh Park Station to Edinburgh Park
Edinburgh Park to Gyle
Gyle to Depot Stop
Depot Stop to Gogarburn
Gogarburn to Ingliston Park and Ride
Ingliston Park and Ride to Edinburgh Airport

[Still to clarify what the timeline to introduce overhead line equipment in the final two stages is?]

Source: Edinburgh Tram – Construction Programme, report to the Tram Sub-Committee, CEC, 12 May 2008

34. tie intended to obtain cost certainty for infrastructure construction by agreeing a lump sum, fixed price contract (infraco) for an agreed delivery specification and programme. It appointed the Bilfinger Berger Siemens consortium (BSC) as the preferred bidder in October 2007. Between then and contract award in May 2008, tie and BSC held a series of meetings to discuss the terms of the contract. tie describe these negotiations as robust, with it attempting to remain close to the draft terms which supported BSC's appointment as the preferred bidder. As part of the negotiations, BSC submitted a late request for additional funding of £12 million. This resulted in a further series of meetings which culminated in tie agreeing to pay up to £4.8 million in incentive bonuses and to underwrite BSC's demobilisation costs of £3.2 million in the event Phase 1b did not proceed.

35. The overall result of the negotiations between tie and BSC was an increase in the budget for infrastructure construction from £223 million at the time the project's final business case was prepared in December 2007 to £243 million in May 2008. In exchange, tie considered it had

achieved more cost certainty and also transferred risks to the private sector in line with its procurement strategy of having a series of discrete contracts based on fixed costs where possible.

36. The infrastructure construction contract also sets out mechanisms to discuss and resolve the financial and time impact of additional work not covered in the contract. However, its form, which has not routinely been used in other tram projects, may present a risk because of lack of legal precedent with which to inform the outcome of any contractual dispute between the purchaser and contractor. tie now considers that the extended time the negotiations took was, with the benefit of hindsight, an early indicator of potential difficulties that could arise with its management of the infraco contract.

37. Contractual disputes between tie and BSC began soon after infrastructure construction commenced. For example, a major dispute arose in February 2009, one week before track-laying work was due to start in Princes Street, amid claims that BSC was seeking an extra £80 million funding mainly to compensate for incomplete utility diversion works at the Mound. According to tie, in addition to the impact of delays caused by utilities work, the contractual difficulties with BSC are associated with:

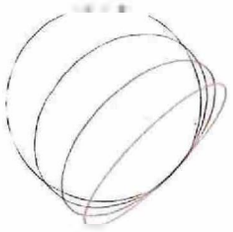
- Design issues, including delays in design completion
- Failures to achieve progress on the works.[6]

38. tie's strategy for systems design work was to appoint a contractor who would be responsible for completing systems design drawings for items such as utility diversions, overhead pylons, electronics, power supply and passenger ticketing machines and shelters before infrastructure construction began. tie appointed Parsons Brinkerhoff to the Systems Design Service (SDS) contract in September 2005. tie then transferred the contract to BSC in May 2008 when it was awarded the infraco contract. BSC assumed overall responsibility for integrating the track, vehicle and systems design after May 2008, although Parsons Brinkerhoff still undertook the work.

39. tie told us it encountered a number of problems with the delivery of the SDS contract including slow mobilisation, poor quality of design work requiring multiple iterations and late delivery. As a result, design packages which were expected to be finished by May 2008 were not delivered until autumn 2008. tie has also expressed concern about BSC's performance after May 2008 in managing the SDS design contract. Although around 80 per cent of the design work has been completed, a complete design package which integrates tracks, vehicles and supporting systems has still to be delivered. BSC appear to consider these delays are the result of either awaiting decisions from tie and CEC, or to the time taken to incorporate design changes requested by tie.

Comment [13]: NB: Audit Scotland might usefully clarify tie's role in overseeing the SDS Design Management work that was novated at financial close.

[6] *Edinburgh Tram Project – Update Report*, report considered at CEC meeting of 24 June 2010



40. Following the dispute over the Princes Street works, tie and BSC agreed to convene a Project Management Panel, as allowed for under the contract, with the aim of resolving a number of other contentious differences between the parties. Although this showed some potential to assist the resolution of outstanding issues, the early impetus was not sustained. In June 2009, tie and BSC held a week of informal mediation which examined, among other things, the interpretation of key clauses in the pricing schedule, the allocation of risks and the substantiation of claimed contract changes.

41. In July 2009, tie reported to the Tram Project Board that the informal mediation had not been successful.[7] In light of the ongoing dispute with BSC, the Tram Project Board endorsed tie's strategy of enforcing a more rigorous application of its interpretation of the contract's terms with the aim of:

- testing a number of contractual principles which lay at the heart of the changes to the contract's scope and specification which BSC were claiming
- driving down the estimated cost of the changes being submitted by BSC
- getting work started at a number of locations through the issuing of formal instructions to proceed
- encouraging a more collaborative working approach from BSC.

42. tie accepts that there is liable to be some change in the specification of any large construction project for a variety of technical and commercial reasons. It has accepted that some design-related changes are additional to the contracted scope of works and it concedes that some infrastructure construction works have been affected by delays to the completion of utility works. However, tie considers that, compared to other construction projects, the number of claims submitted by BSC for additional payments has been excessive.

43. To the end of September 2010, BSC has submitted 779 notices to claim of which 126 were later withdrawn (Exhibit 5). BSC has submitted cost estimates in respect of 380 out of the remaining 653 notices to claim. tie and BSC have settled 186 of these claims with the others either rejected or not yet agreed. The cost to tie of those settled has been £21 million compared to the £41 million claimed by BSC (51 per cent). Included within the 186 settled are 17 which have been settled through formal dispute resolution procedures, as allowed for in the contract.[8] These have reduced BSC's claims for additional payment from £21.9 million to £9.6 million (44 per cent). A further four cases being

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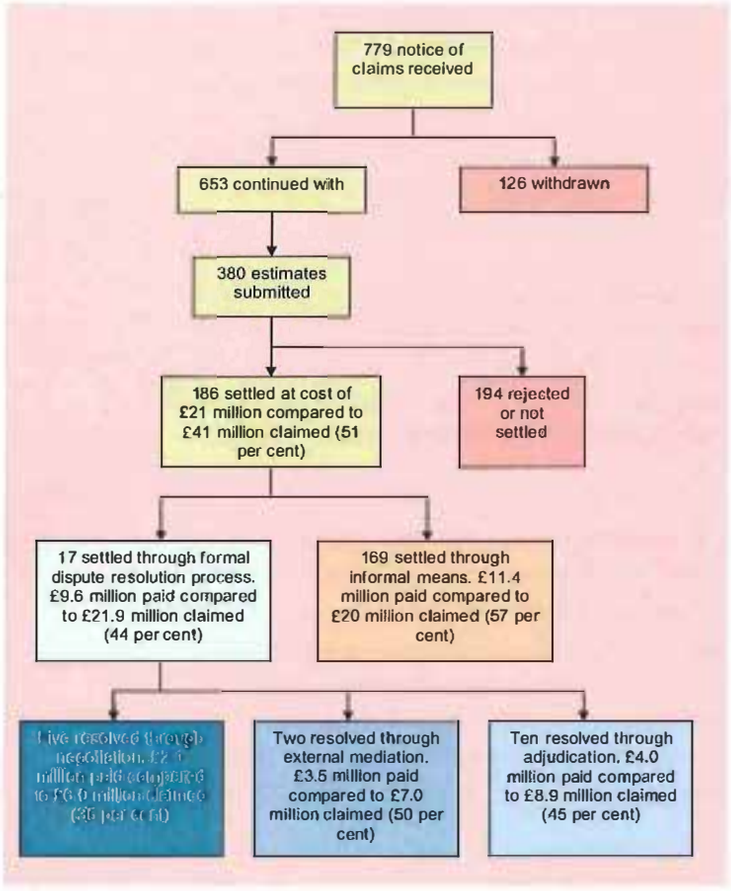
[7] The Tram Project Board is the project's main governance body. See Part 3 of this report.
[8] Dispute resolution processes fall into two major types. There are adjudicative processes, such as litigation or arbitration, in which a judge, jury or arbiter determines the outcome. There are also consensual processes, such as mediation, conciliation or negotiation in which the parties attempt to reach agreement.

resolved through dispute resolution procedures have been referred for external adjudication or negotiation is in progress.

Exhibit 5: Changes and disputes to date

tie has paid £21 million in respect of 186 claims for additional payments submitted by BSC which have been settled to date.



Source: Audit Scotland

44. While **tie**'s strategy was successful in getting work started at some locations and driving down the final value of the submitted cost estimates, in **tie**'s view it was intensive of management time and expensive in advisor costs. In December 2009, **tie** concluded that little real progress was being made in advancing infrastructure installation works. It decided, with the approval of the Tram Project

Board, to further escalate its rigorous approach to enforcement of its interpretation of the contract's terms and conditions. tie also began a fundamental review of the contractual position with BSC.

45. tie's current dialogue with BSC is focussed on ensuring a revised programme which clarifies the sequencing of work and the respective parties' responsibilities. However, a continuing difficulty with the progress of infrastructure construction work is tie's and BSC's different interpretation of certain contract clauses. tie has issued a number of Instructions to BSC to proceed with works in accordance with its interpretation of the contract. According to tie, BSC has a different Interpretation of its contract responsibilities and is not progressing works where there is a change, or an alleged change, to the contracted scope of works until a price is agreed. In June 2010, tie informed a full meeting of the council that a large proportion of the changes proposed by BSC remain unresolved. tie alleged that this is mainly due to BSC being slow to provide sufficient technical evidence to support its claims for extra payments.[9]

46. As well as trying to resolve the disagreements with BSC through the terms of the contract including use of the dispute resolution process, tie has also begun to consider options to terminate the infrastructure contract. However, it recognises that any such decision would have significant consequences for the progress of the trams project and may involve the payment of compensation to BSC. tie is taking extensive legal advice before any proposals on contract termination are put to CEC.

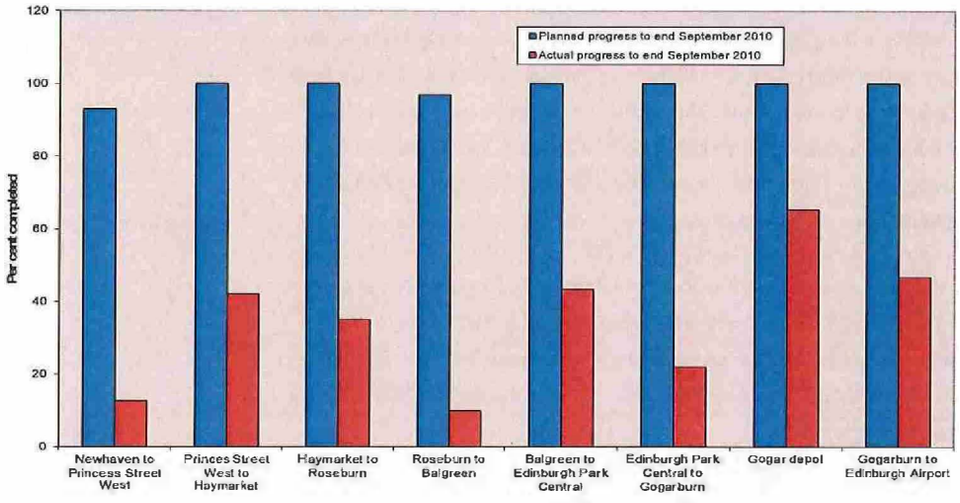
Comment [NS4]: NB: There are issues of confidentiality under the Infraco Contract. The report appears to present as fact matters which are conjecture. Have BSC been spoken to?

47. Infrastructure construction is now largely at a standstill except for certain items most of which were not in the scope of the Infraco contract and which tie has awarded to other contractors. tie estimates that, overall, some 26 per cent of the infraco works has now been completed against an original plan of 97 per cent by the end of September 2010 (Exhibit 6). Although significant progress has been made in some areas, such as the construction of the Gogar tram depot, limited progress has been made elsewhere. Off-street works I.e. those which do not involve the tram network running along existing streets, from Haymarket to Edinburgh Airport have seen a little more progress (37 per cent completed against a plan of 99 per cent) than on-street from Haymarket to Newhaven (10 per cent complete against a plan of 94 per cent).

Exhibit 6: Progress to date on infrastructure construction

tie estimates that 26 per cent of infrastructure construction works are now complete although some sections are more advanced than others.

[9] *Edinburgh Tram Project – Update Report*, report considered at CEC meeting of 24 June 2010



Source: Transport Scotland Internal Period Report, Edinburgh Tram Network, Period 7 2010/11

48. tie continues to report that operational service by February 2013 for part of the route is achievable although it has obtained two independent experts' views that Phase 1a can still be operational by late 2012, if BSC take a pro-active approach. BSC, however, considers that November 2013 is a more realistic start date based on progress to date.

16 out of 27 tram vehicles have been completed

49. The project plan for the construction of trams expected that all 27 vehicles would be delivered by September 2010. tie signed pre-contract agreements for the supply and maintenance of 27 tram vehicles with Construcciones y Auxiliar de Ferrocarriles SA (CAF) in October 2007. However, the plan to transfer this work to the infraco contract and the extensive negotiations between tie and BSC before the infraco contract was signed, meant that tram vehicle construction could not start until May 2008, some five months later than planned. CAF delivered the first tram vehicle in April 2010 against the original plan of December 2009. Since then, 16 trams have been completed and the remaining 11 are in production. CAF is currently on target to deliver the final tram by January 2011.

Phase 1a has cost £381 million to the end of September 2010 and is unlikely to be delivered within the current funding limit

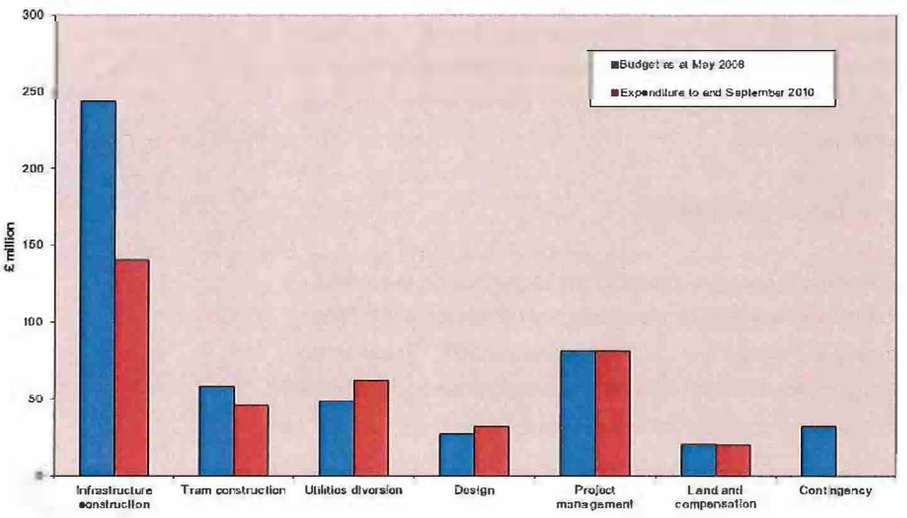
50. tie's final business case for the trams system, which CEC and Transport Scotland approved in January 2008, indicated that Phase 1 was expected to cost £585 million with Phase 1a costing £498

million[10]. Final negotiations between tie and the preferred bidders for the tram vehicle and infrastructure construction contracts in the period to May 2008 when the infraco contract was signed, increased the overall estimated cost of Phase 1a to £5112 million. The main reason for this increase was the firming up of provisional prices to fixed prices. This increased the expected cost of both these elements of the project but, because a higher proportion of the project's total costs were considered to be fixed, it also allowed the built-in contingency for unexpected cost increases to be reduced from £52 million to £32 million.

51. tie has spent a total of £381 million on Phase 1a to the end of September 2010, some 74 per cent of the estimated cost as at May 2008 and 70 per cent of the available funding of £545 million. Infrastructure construction forms the largest element of expenditure, representing 37 per cent of the total costs to date (Exhibit 7). tie should have spent around £480 million to the end of the September 2010 had the project been progressing to plan.

Exhibit 7: Edinburgh tram network spend to the end of September 2010

tie has spent a total of £381 million on Phase 1a to the end of September 2010.



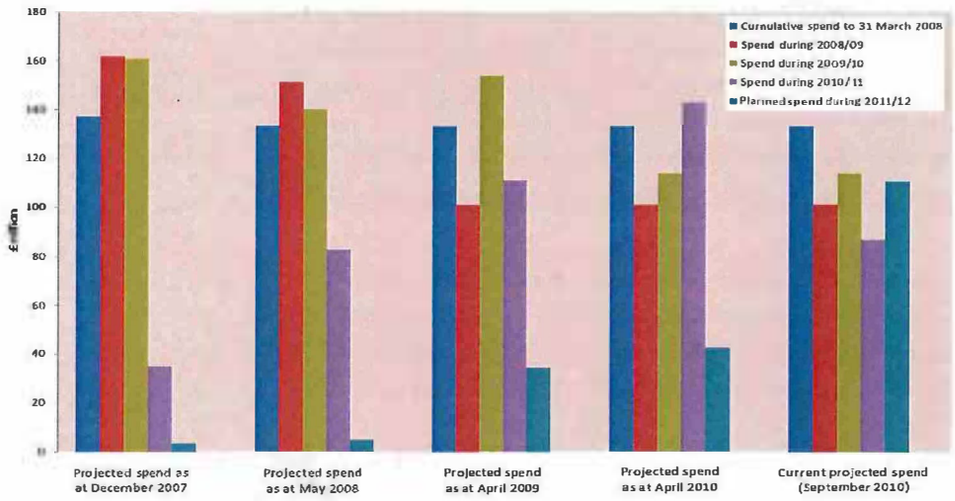
Source: Audit Scotland

[10] *Edinburgh Tram Network Final Business Case Version 2*, tie, December 2007

52. **tie** has regularly updated the project's budget over time. A consequence of the delays in the project's progress has been that expenditure profiles have changed with much more expenditure now forecast to occur in 2011/12 than originally planned (Exhibit 8). For example, the final business case planned that £162 million was due to be spent in 2008/09 and £181 million in 2009/10. Actual expenditure in these years amounted to only £101 million and £114 million respectively. As a result, **tie**'s latest expenditure projections show planned expenditure of £87 million in 2010/11 and £111 million in 2011/12, compared to £39 million for both years according to the final business case.

Exhibit 8: Planned and actual expenditure profiles

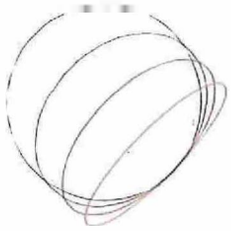
A consequence of the project's delays is that more expenditure will occur later than first planned.



Source: Audit Scotland

53. We analysed actual spend to date against the total budget set when the infraco contract was signed in May 2008, and what was projected to be spent at that time to the end of September 2010 (Exhibit 9). The results show:

- **Infrastructure construction – tie** has spent £140 million to date on infrastructure construction against a total budget of £243 million and a projected spend to the end of September 2010 of £229 million. Spend to date therefore represents 58 per cent of the budget while only 26 per cent of the scope of works has been delivered. However, it is normal in contracts of this kind to make an initial up-front payment to allow the contractor to purchase materials and to mobilise, and a strict linear relationship between spend and progress should not be expected. Although **tie**'s latest projections set an expected total



spend of £276 million for infrastructure construction, this is heavily dependent on resolution of the dispute with BSC.

- **Tram vehicles – tie** has spent £46 million to date on tram vehicle construction against a total budget of £58 million and a projected spend to the end of September 2010 of £52 million. Given the good progress made so far, **tie** is confident that the tram vehicles will be delivered to budget.
- **Utilities diversion – tie** has spent £62 million to date on utilities diversion against a total budget of £49 million. Utility diversion works were expected to be completed by the end of September 2010 so the projected spend to this date is also £49 million. The unanticipated extra amount of utility works which had to be undertaken has contributed to expenditure greater than budget. However, the amount of utilities works undertaken represents a significant improvement to Edinburgh's infrastructure as many of the diverted pipes and cables were old and in need of repair. CEC and tie expect that the utility companies will contribute around £4 million towards the cost of this work which will reduce total expenditure to £58 million. Utility companies have yet to agree how much they will contribute.[11] This cross refers to the detail on additional utilities work as explained at paragraph 32.
- **Design – tie** has spent £32 million to date on design work against a total budget of £27 million. Design works were also expected to be completed by the end of September 2010 so the projected spend to this date is also £27 million. Around 20 per cent of design work has still to be delivered and tie's current projections put the total cost of design work at £34 million.
- **Land and compensation – tie** has spent £20 million to date on land and compensation which matches both the total budget and the projected spend to the end of September 2010. **tie** does not expect to incur further expenditure on land and compensation in respect of Phase 1a.
- **Project management – tie** has spent £81 million to date on project management against a total budget of £81 million and a projected spend to the end of September 2010 of £73 million. The dispute with BSC has led to **tie** obtaining additional advice in areas such as contract and dispute management, technical and forensic planning/delay analysis and litigation. It currently projects a total spend of £98 million on project management although this is dependent on resolution of the dispute with BSC.

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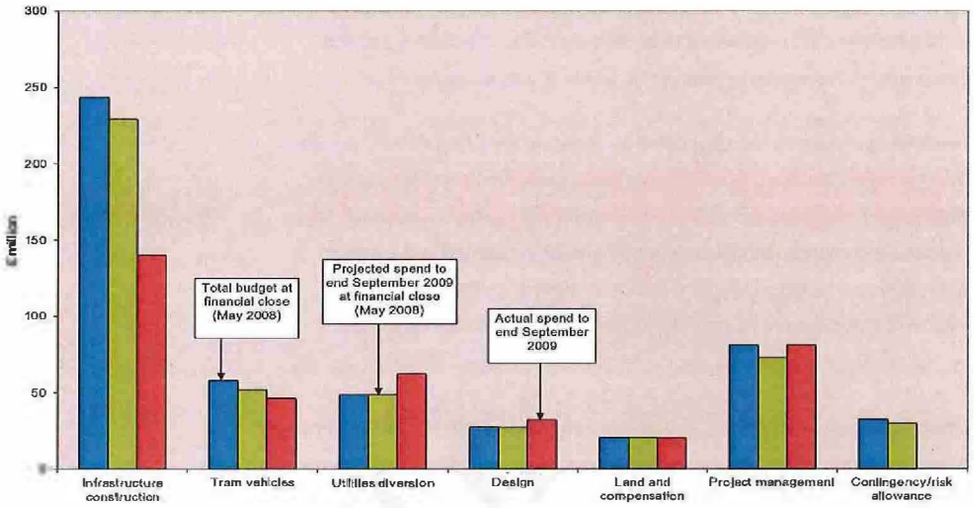
[11] *Edinburgh Tram – Multi Utilities Diversion Framework Agreement Update*, report considered at the CEC Tram Sub Committee meeting of 22 March 2010

- **Contingency/risk allowance– tie** has now allocated the £32 million allowance for contingencies and risk which was set in May 2008 across other expenditure headings. **tie**'s latest projections contain no contingency/risk allowance.

Exhibit 9: Spend by type against budget

Some elements of the projects are over budget while expenditure in others has not kept pace with plans.

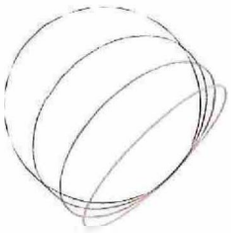


Source: Audit Scotland

54. **tie**'s latest monitoring report to the Tram Project Board and Transport Scotland indicates that its anticipated final cost of Phase 1a is £545 million. This figure, however, does not reflect the consequences of the contractual disputes with BSC. While **tie** considers it can accurately predict the final outturn expenditure for most elements of the project, it is unable to report a robust final cost estimate for infrastructure construction.

55. **tie** considers that, until the key contractual issues with BSC are resolved, it is not possible to forecast accurately what the trams project will finally cost. In December 2009, it considered that enforcing BSC's adherence to the contract might result in the project costing in the range of £623 million to £665 million. This, however, was dependent on **tie** and BSC achieving a more co-operative way of working. In June 2010, CEC Indicated to Transport Scotland that it is unlikely that the full scope of Phase 1a will be completed within the available funding of £545 million.

Comment [15]: Clarify where this was reported



CEC and tie are now considering different options for taking the project forward

56. tie is now considering the completion of Phase 1a in incremental stages due to the programme and cost difficulties experienced so far. The main focus of incremental delivery would be to deliver the Edinburgh Airport to St Andrew Square as the first phase, as tie considers this would yield early economic benefits and would allow integration with bus services. tie has still to clarify the cost of this, and other sections of Phase 1a which would be delivered later. However, tie considers a phased approach would enable the best use of the remaining budget to deliver a viable tram service.

57. According to tie's final business case, Phase 1a was expected to generate benefits of £1.77 per £1 of cost. ~~The incremental implementation of Phase1a will require tie to demonstrate that a positive benefit cost ratio (BCR) will still result in order to qualify for continued Scottish Government funding.~~ To date, tie has not commissioned a complete reassessment of the BCR presented in the final business case. It has, however, done some calculations to demonstrate the continuing economic viability of the project if Phase 1a is completed in its entirety. While we have not audited these calculations they indicate:

Comment [dr6]: this is incorrect.

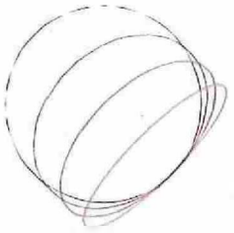
- If the costs of delivering the whole of Phase 1a were to increase to £640 million (a 25 per cent increase on the cost when the final business case was approved in May 2008) then, all other things being equal, tie estimates the BCR for the project would reduce to 1.37 i.e. £1.37 of benefits per £1 of cost

- In addition to the increase in costs above, if slower then expected new development and delayed growth in passenger numbers associated with the later delivery of the whole of Phase 1a results in a 20 per cent reduction in the discounted value of time travel benefits, tie estimates that the BCR would be further reduced to 1.10.[12]

58. CEC is also considering ways in which it may be able to increase its funding of the trams project. Due to the lack of clarity on the project and its associated costs, CEC is examining contingency planning options up to a capital cost of £600 million. To date, it has achieved contributions of £16 million from developers and other sources, although the effects of the recession mean that contributions are currently lower than expected.

59. A potential option which CEC is considering is to use the contributions already received to cover borrowing ~~costs in order that additional funding could be obtained through~~ with debt being repaid

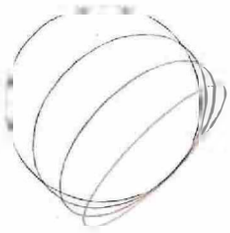
[12] *Edinburgh Tram – Business Case Update 2010*, tie September 2010



from future developer contributions and capital receipts. There is also scope to undertake future prudential borrowing[13] supported by provisions in the Long Term Financial Plan for infrastructure development and future profits from TEL Business Case. CEC's funding strategy in respect of the tram project is reviewed on a six monthly basis and the results reported to its Internal Planning Group.

60. Following correspondence between the managing director of Bilfinger Berger and the CEC chief executive, senior council officials met with representatives of BSC in December 2010. This meeting was exploratory in nature and provided BSC with an opportunity to raise issues of concern. At the meeting, BSC confirmed its willingness to explore the resolution of outstanding matters with CEC and **tie** via formal talks involving an agreed mediator. CEC and **tie** have still to make decisions on the future of the trams project pending the outcome of these mediation talks which are due to start in early 2011.

[13] Local authorities to able borrow to invest in capital works and assets so long as the cost of that borrowing is affordable and in line with principles set out in a professional Prudential Code, endorsed by the Chartered Institute of Public Finance and Accountancy.



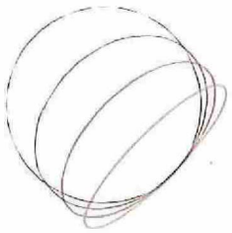
Part 3. Project governance arrangements

Key messages

- Elected members of the current ruling coalition at CEC hold differing views of the Edinburgh trams project and considerable debate is generated at council meetings when the subject is discussed. This has made it more difficult for CEC as a whole to present a unified commitment to the project.
- CEC's governance arrangements for the project are complex and are intended to allow the work of tie to be subject to scrutiny while keeping all elected members informed of the project's progress. While the Tram Project Board continues to be the project's main governance body, the overlap in membership between it and tie's own board means that CEC may need to consider whether this limits effective oversight of the project's progress and risk management arrangements.
- Transport Scotland left the Tram Project Board in June 2007 when Ministers announced that the Scottish Government's contribution would be capped at £500 million. While it does monitor work in order to make grant payments, and CEC and tie keep it informed of the project's progress, Transport Scotland does not consider that it has the same oversight role for the trams project as it has for other projects.
- tie makes regular reports on the project's progress to the Tram Project Board and CEC also provides regular reports to elected members at full Council meetings. The commercially sensitive nature of the dispute with BSC and future financial projections, however, has meant that information presented to full Council meetings has been limited. Given the high profile of the project, the lack of detail which has been made available to some councillors on, for example, the project's likely costs has caused frustrations.

61. Corporate governance is about direction and control of organisations. Councils are large complex organisations so good governance and effective scrutiny are critically important. Governance arrangements for the Edinburgh trams project have had to take into account:

    - The organisational structures of CEC's arm length bodies that will be responsible for delivering an integrated transport service once trams are operational.
    - The need for effective scrutiny of TEL and tie in delivering the project.
    - The high political and media profile of the project and the wish to keep elected members informed of its progress.



Transport Edinburgh Ltd is responsible for strategic and other material decisions affecting the project

62. One of the objectives of the Edinburgh trams project was to reduce traffic congestion and environmental damage caused by traffic. The CEC considered that a key mechanism to deliver this objective was to develop an integrated public transport network which provided high-quality bus and tram services. When the trams project began, in addition to **tie**, CEC wholly, or substantially, owned two companies involved in public transport provision:

    - **Transport Edinburgh Limited** (TEL) – a wholly owned company established in 2004 to promote and develop the implementation of transport projects set out in CEC's local transport strategy; and promote the integration of all modes of public transport in Edinburgh
    - **Lothian Buses** plc – a company 91 per cent owned by CEC which runs bus services in the city region.[14] In 2009, Lothian Buses carried some 107 million passengers and generated profits of £5.8 million on a turnover of £112 million.

63. CEC established TEL at a time when it anticipated major investment in Edinburgh's transport infrastructure. CEC considered that TEL would be central to a new company group structure and organisational framework for the delivery of a range of transport services. Since then, the recession and events such as the cancellation of the Edinburgh Airport Rail Link has meant that the envisaged role of TEL has changed. CEC is currently reviewing its plans, but it was originally intended that ~~now plans that~~ TEL would ~~will concentrate its activities on being responsible for~~ oversee the running of an integrated bus and tram service once trams come into operation.

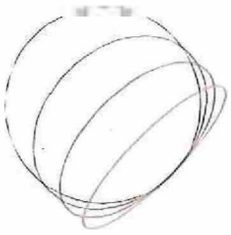
64. As part of this, once trams are in operation, CEC planned that **tie** would be wound up and TEL and Lothian Buses would ~~merge to~~ form a single operating ~~company~~group of companies.[15] As an interim step, in ~~August~~ December 2009 the council agreed that ownership of **tie** should be transferred to TEL. Under this arrangement, day-to-day management, control and execution of the tram project remained with **tie**. CEC gave TEL responsibility for all other strategic and other material decisions affecting the project except for certain key matters, such as approving project costs exceeding £545 million, which remained with the elected members of the full Council (Exhibit 10).

Comment [NS7]: Delete. This may be the plan but should not be publicised at present on both of paras 63 (last sentence) and 64 (first sentence). This will be a public document and CEC must not be compromised by publishing speculative comments which may harm future options.

Comment [dr8]: Intention was for TEL to be parent company of the group, but it has not yet been looked into in great detail how the operation of LB and Trams would sit below TEL.

Exhibit 10: CEC delegated limits as they apply to the trams project

[14] The remaining shares are owned by East Lothian, West Lothian and Midlothian Councils.
[15] The planned integration of TEL, tie and Lothian Buses was expected to take place in mid-2011 once trams were operational. CEC now intends to conduct a further review of the operational and governance arrangements necessary to integrate tram and bus services.



TEL is responsible for strategic and other material changes affecting the project within delegated limits.

In ~~August~~ December 2009, CEC agreed that ownership of tie should be transferred to TEL. tie remained responsible for the day-to-day management, control and execution of the tram project while TEL assumed responsibility for all strategic and other material decisions affecting the project. To formalise these arrangements, CEC and TEL signed an Operating Agreement setting out their respective obligations and responsibilities in relation to the delivery of the tram system. CEC, tie and TEL also signed a separate Memorandum of Understanding updating an earlier Operating Agreement between CEC and tie when tie was a separate company from TEL. These arrangements provided TEL with responsibility for all matters affecting the programme, cost and scope of the project except for the following matters whose approval was reserved to CEC:

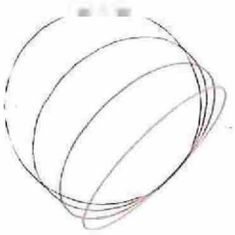
- Any actual or reasonably expected delay beyond three months after the 'baseline date' (the estimated date when trams were to be operational as determined by CEC's chief executive and intimated to TEL from time to time)
- Any actual or reasonably expected increase in capital cost which would mean the 'baseline cost' (the estimated capital cost of the project as determined by CEC's chief executive and intimated to TEL from time to time) is exceeded by greater than £1 million
- Any substantial change to the design, scope or service pattern set out in the Final Business Case.

In setting the baseline cost and baseline date, CEC's chief executive was also required to obtain elected members' approval to specify a baseline date beyond October 2012 and a baseline cost exceeding £545 million.

In addition, the CEC/TEL Agreement also formalised the council's decision first made in December 2007 that TEL should establish the Tram Project Board (TPB) as a formal committee of the TEL board with delegated responsibilities. The TPB was provided with full delegated responsibility for the delivery of an integrated Edinburgh tram and bus network on behalf of TEL and CEC. The TEL chief executive officer, as project senior responsible owner, was also provided with delegated responsibility for approving more minor changes to the project which resulted in:

- Delays to key milestones of up to one month
- Increases in capital costs of up to £1 million
- Reductions in annual operational surplus of up £0.1 million per annum
- Reductions in the project's economic viability measured by a reduced benefit cost ratio of less than 0.1 i.e. a reduction in benefits of 10 pence per £1 of cost.

The arrangements require TEL to report to CEC on a four-weekly and annual basis with regard to the project's finances and progress. In particular, immediately that TEL becomes aware of the likelihood of a



delay to, or overspend in, the project it was required to notify CEC's Tram Monitoring Officer providing reasons for the potential delay or overspend and detailing the steps to be taken to mitigate against this.

Source: Audit Scotland

65. In December 2009, CEC also agreed that **tie** should cancel its contract with Transdev as tram operator and allow TEL to take on full responsibility for planning the operational introduction of the trams service. To ensure construction and operational planning was kept in two separate and distinct entities, Edinburgh Trams Limited, a non-trading company then registered as owned by Lothian Buses, was transferred to TEL. Transdev's staff were also transferred to Edinburgh Trams Limited to undertake the necessary planning work.

66. In addition, in December 2009, CEC agreed a revised structure for the board of TEL intended to strengthen its ability to deliver integrated transport across the city. In deciding the membership of TEL, CEC sought to include council officials to provide an operational link with CEC and, elected members to provide a political ~~political link with other elected members~~representation and non-executive directors with expertise in transport issues. The board, whose membership is subject to the approval of elected members, now includes:

- A chair
- The chief executive of **tie** who also became TEL's chief executive when ownership of **tie** transferred to it
- CEC representation in the form of six elected members~~,~~ plus the Director of Finance and the Director of City Development to provide operational and political links with CEC
- A director with specific responsibility for the integration of bus and tram operations
- The managing director of Lothian Buses to support the establishment of the proposed group structure, particularly in relation to bus and trams operations
- Four non-executive directors with expertise in transport issues (who are also non-executive directors of **tie**).

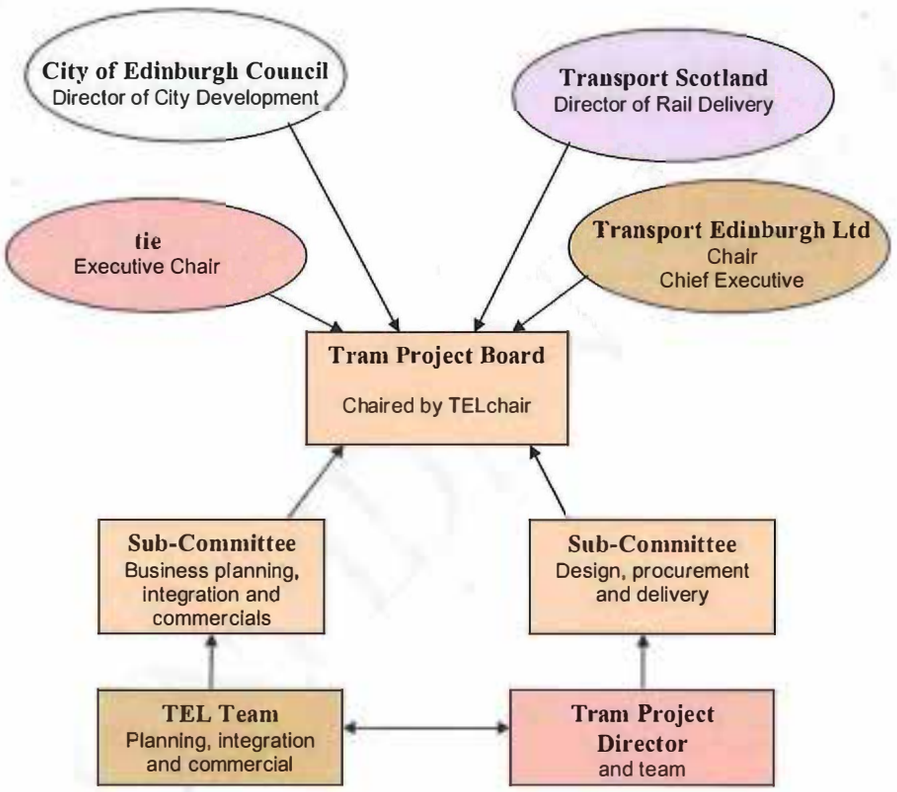
The Tram Project Board continues to be the project's main governance body responsible for overseeing the work of tie

67. In the Auditor General's June 2007 report we recorded how the Tram Project Board (TPB) exercised overall governance of the project and included senior representatives from **tie**, Transport Scotland, CEC and TEL (Exhibit 11). At the time, the project was at a relatively early stage and the TPB was a free-standing board with no direct reporting lines to other organisations. In December 2007, elected members agreed that TEL should establish the TPB as a committee of TEL with delegated

responsibilities (Exhibit 12). The TPB continues to be the project's main governance body. Its broad remit is to oversee the execution of all matters relevant to the delivery of an integrated Edinburgh bus and tram network.

Exhibit 11: Original Tram Project Board governance structure

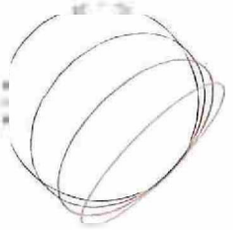
The original Tram Project Board included senior representatives from **tie**, Transport Scotland, CEC and TEL.



Source: Audit Scotland

Exhibit 12: Current tram project governance arrangements

The current governance arrangements take into account the need to oversee the work of **tie**, the need to keep elected members informed of the project's progress and the planned future role of TEL in providing integrated tram and bus services.



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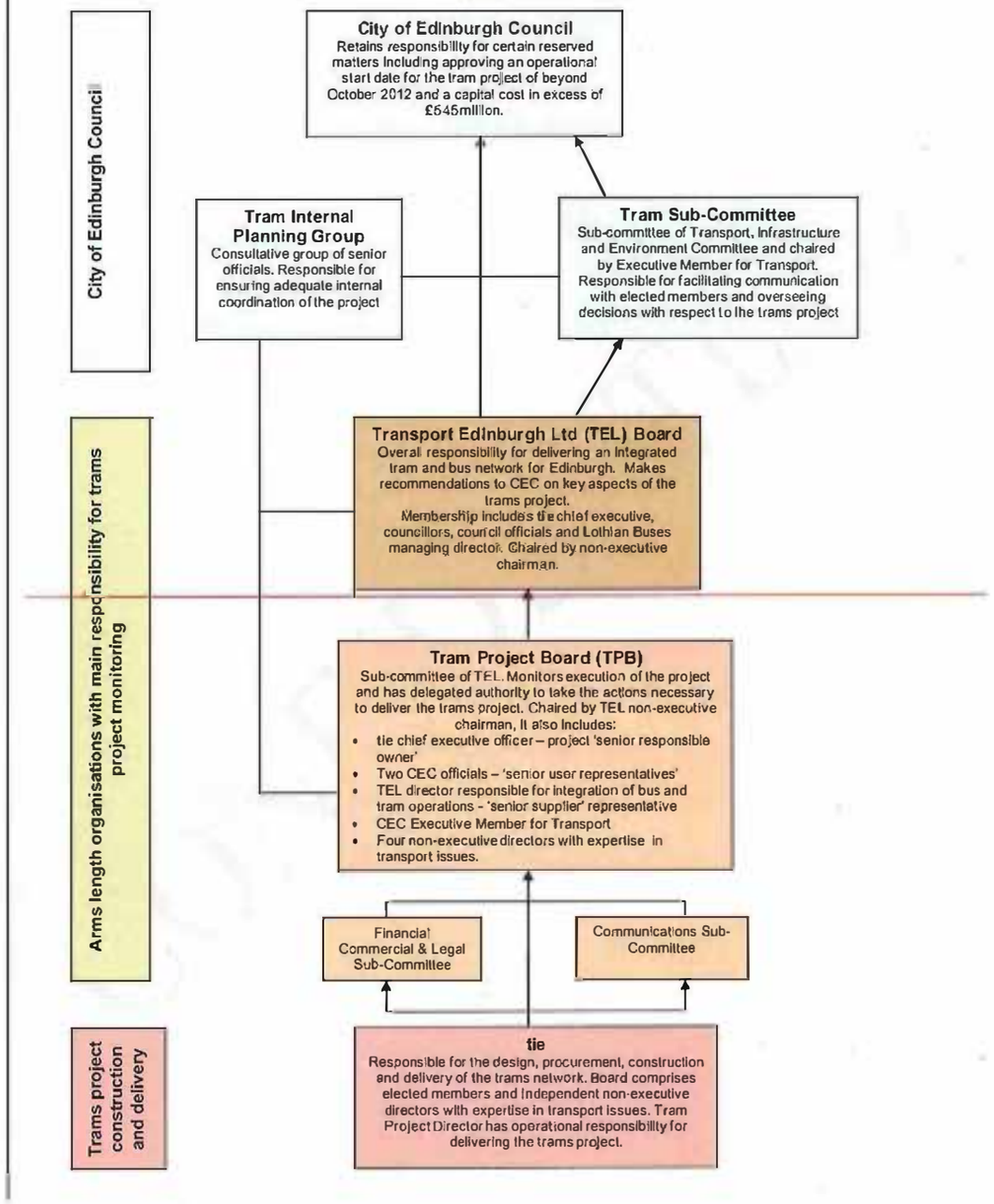
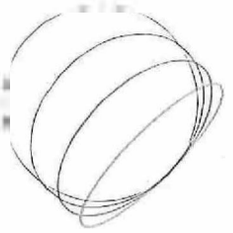




Source: Audit Scotland

Membership of the Tram Project Board includes key roles identified by the Office of Government Commerce

68. The Office of Government Commerce (OGC), amongst others, has published a range of guidance on managing successful projects including the role of project boards. There is significant variability in the way project boards are constructed and the composition of individual boards must suit the circumstances of the project. The OGC has, however, defined three roles which should be represented on project boards.[16] The current membership of the TPB includes these three roles (Exhibit 13).

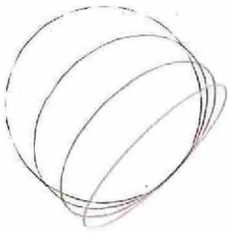
69. A key role for the TEL board is to exercise adequate oversight over the project's progress and risk management arrangements. The TPB, as a formal sub-committee of TEL, is responsible for undertaking this role. However, the significant degree of overlap in membership of the TPB and tie's own board, where the chief executive of tie and its four non-executive directors are also members of the TPB, means that CEC may need to consider whether this limits effective scrutiny of the project.

Exhibit 13: Current composition of the Tram Project Board

The composition of the Tram Project Board includes key roles identified by the OGC.

Membership of Tram Project Board	OGC classification	Role
TEL chair (chair of TPB)	Not classified	The chair provides overall leadership to the TPB.
Chief executive of TEL and tie	Senior responsible owner	The chief executive is responsible for ensuring that the tram project meets its objectives and delivers the expected benefits. He is personally accountable for the success of the project.
TEL director responsible for integration of bus and tram operations	Senior supplier representative	The director represents TEL from the perspective of the eventual supplier of operational tram services.
CEC Director of Finance	Senior user representatives	The two CEC officials represent the

[16] *Managing Successful Projects with PRINCE2*, Office of Government Commerce, 2009



CEC Director of City Development		ultimate recipient of the trams project. They are there to ensure that the project deliverables are fit for purpose and to provide an operational link with CEC.
~~CEC Executive Member for Transport~~	~~Not classified~~	~~The Executive Member for Transport provides a direct link between the TPB and elected members of CEC~~
Four non-executive directors (who are also non-executive directors of tie)	Not classified	The non-executive directors bring expertise in transport issues.

Comment [NS9]: Accuracy - No Cllrs on TPB

Source: Audit Scotland

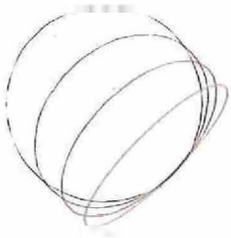
Transport Scotland is no longer represented on the Tram Project Board, despite its significant financial commitment

70. As originally constituted and reported in the Auditor General's 2007 report, the TPB included representation from Transport Scotland. However, in June 2007, following Ministers' decision to cap the Scottish Government's financial contribution to the project to £500 million, Transport Scotland withdrew from the TPB. This reduced its influence over the project to mainly that of providing grant funding.

71. Under this regime, Transport Scotland does not consider that it has the same oversight role for the trams project as it has for other transport projects it manages directly, for example, in relation to risk management.[17] Transport Scotland has, however continued to hold regular meetings with tie and CEC to discuss progress with the project. There are also clear project monitoring processes, with grant claims or requests for payment checked and authorised prior to processing. Regular reporting to Transport Scotland's Rail Delivery Directorate board and its main board also takes place.

72. Transport Scotland continues to make grant payments to CEC despite tie's view that the whole of Phase 1a will not be delivered within the £545 million limit., ~~which is was a condition precedent of the Scottish Government's financial support~~. In Transport Scotland's view, there is still an expectation that the funding provided will result in a tram system and grant conditions will only be breached once more than £545 million has been spent on the project. It considers, therefore, that stopping making payments in respect of valid work undertaken would currently represent a breach of the grant conditions on its part. In CEC's view spending more than £545m on the project would not in itself

[17] Transport Scotland is responsible for the delivery of most transport projects in Scotland and has significant skills and experience in this area.



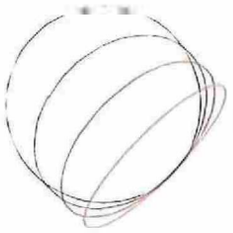
amount to a breach of the grant conditions. Reference is made to paragraphs 17 and 18 of this report. In light of the project's current progress, Transport Scotland and CEC are reviewing the conditions contained in the grant offer letter. The auditor will continue to monitor developments on this as part of his 2010/11 audit of Transport Scotland.

Council officials exercise oversight of the project through an internal planning group

73. The CEC established a Tram Internal Planning Group (IPG) in October 2006 to provide an oversight of the different strands of work required to advance the delivery of the trams projects. The IPG has met monthly since May 2008 when construction commenced. In May 2010, the IPG's remit was changed to focus more explicitly on:

- the provision of CEC management scrutiny and oversight of the tram project, including the monitoring of progress against the programme timetable and budget
- the identification, management and mitigation of risks to CEC and Edinburgh resulting from the project failing to achieve its objectives
- ensuring that CEC co-ordinates its resources and activities to support the project's implementation
- ensuring that the interests of wider stakeholders, such as elected members, in the tram project are fully considered and communications with key stakeholders are properly managed
- monitoring and assisting with the integration of **tie**, Lothian Buses and TEL.

74. The core membership of the IPG includes the chief executive and the Directors of Finance and of City and Development who are also members of TEL and the TPB. Other members include the Director of Corporate Services, ~~the Director of Services for Communities~~ and the Heads of Transport, Communication, and Legal and Administrative Services. The Head of Transport in particular plays a key role as CEC's nominated Tram Monitoring Officer in providing direct operational liaison between CEC and TEL and in ensuring that CEC's interests are fully represented. Although not a member of TEL and the TPB, the Tram Monitoring Officer is expected to attend their meetings.



The project's progress and risks are reported regularly

75. The TPB meets every four weeks to consider reports from **tie**'s Tram Project Director. Issues which the TPB consider include progress with the project, updates on the dispute with BSC, the financial position, reviews of **tie**'s risk register and health and safety matters.

76. Day-to-day responsibility for delivering the project rests with the Tram Project Director who is supported by five teams responsible for delivery and programme, engineering matters, procurement, finance and operations and maintenance. The Tram Project Director exercises project control through four-weekly reviews of progress with project managers.

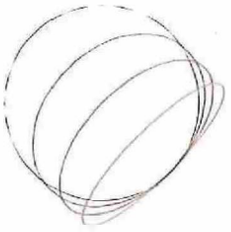
The commercially confidential nature of some of the issues reported has caused frustrations

77. In May 2008, CEC formed a Tram Sub-Committee of the Transport, Infrastructure and Environment Committee to oversee decisions with respect to the trams project and to facilitate communication with elected members on its progress. As part of this, CEC expected that TEL, the TPB and **tie** would provide regular reports and recommendations to the sub-committee. In reality, the sub-committee has met only six times, and not since March 2010. Given the profile of the project, its cost and the reputational risks involved, most reporting has been made directly to elected members at full meetings of the Council.

78. The full Council has received regular reports on the project's progress and on attempts to resolve the dispute with BSC. There have, however, been restrictions on details surrounding the dispute with BSC and the level of financial information included within council papers due to some of it being considered to be commercially confidentlal. In particular, in June 2010 the full Council asked officials to provide a refreshed business case for **TEL** detailing the capital and revenue implications of all the options being investigated by **tie** for taking the trams project forward. The paper considered by the council in October 2010 provided only limited financial detail as the TEL Business Plan contained information on patronage assumptions for buses and trams which were considered to be commercially sensitive.

Comment [dr10]: This is commercially confidential.

79. The TEL Business Plan was subsequently provided to elected members at the December 2010 council meeting, although certain information on forecast passenger volumes and TEL profitability was redacted. However, officials gave full copies of the TEL Business Plan to ~~the leaders~~ members of each political group on request, subject to written undertakings that they will not disclose commercially sensitive information to any other individual or organisation.

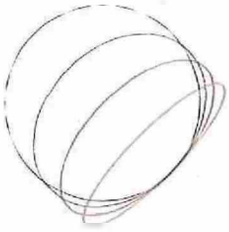


80. In addition, elected members who receive full information in their position as board members of TEL (~~apart from the Executive Member for Transport, although~~ there are no councillors who are members of the TPB, ~~although~~ councillors who are non-executive members of TEL can attend TPB meetings) are unable to share this information more widely with political group colleagues. The auditor of CEC recorded in her report on the 2008/09 audit that this continues to cause tensions and frustrations amongst elected members. This reflects more generally the potential conflicts of interest that can arise where councillors who serve as directors of bodies set up as commercial companies, become subject to the requirements of companies act legislation. These include for example, a responsibility to always act in the interests of the company and to abide by commercial confidentiality.

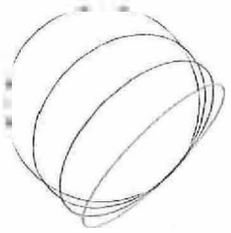
81. A key factor contributing to the tensions surrounding the project is that there are different views as to the need and value of the trams system. The project was developed and approved when the Labour Party held an overall majority in the council. The current ruling group consists of a Scottish Liberal Democrat/ Scottish National Party coalition. Members of the coalition hold differing views of the Edinburgh trams project and considerable debate is generated at council meetings when the subject is discussed. This has made it more difficult for CEC as a whole to present a unified commitment to the project.

Appendix 1. Project timeline

June 2000	City of Edinburgh Council publishes its Local Transport Strategy which sets out that the development of a tram network is central to its transport policy.
April 2001	CEC commission feasibility studies into Edinburgh tram system
May 2002	CEC establishes **tie** as an arms-length company to investigate how best to deliver its local transport strategy.
September 2002	**tie** submits its proposals to CEC, identifying three trams lines as the most promising in terms of economic viability and benefits to the city.
March 2003	Scottish Ministers announce £375 million available in principle for tram system.
January 2004	Two Bills submitted to the Scottish Government intended to enable the construction of the tram system.
September 2005	**tie** appoints Parsons Brinkerhoff to facilitate the early identification of utility diversion works and completion of design drawings.
March 2006	Bills receive Royal Assent.
October 2006	**tie** appoints Alfred McAlpine Infrastructure Services to be responsible for the diversion and protection of utilities along the tram route.
June 2007	Auditor General publishes his report *'Edinburgh transport projects review'* which includes the trams project. The report concluded that the arrangements in place to manage the trams project appeared sound although the final business case had yet to be approved. It said that a range of key tasks, such as the commencement of utilities diversion works and negotiations with bidders over the infrastructure construction contract, needed to be completed before the business case could be signed off. Unless work progressed to plan, cost and time targets may not be met.
June 2007	Following a debate and vote, the Scottish Parliament calls on the SNP administration to proceed with the Edinburgh trams project within the budget limit set by the previous administration. The Scottish Parliament notes that it is the responsibility of **tie** and CEC to meet the balance of the funding costs.
October 2007	**tie** signs pre-contract agreements for the supply and maintenance of 27 tram vehicles with Construcciones y Auxiliar de Ferrocarriles SA.
October 2007	tie announces the consortium Bilfinger Berger Siemens (BSC) as the preferred bidder for construction of the tram infrastructure, including rails, overhead power cables and a tram depot.
December 2007	**tie** publishes its final business case for the tram network. Phase 1a (Edinburgh airport to Newhaven) is expected to cost £498 million. Phase 1b (Roseburn to Leith) is expected to cost £87 million. Trams are expected to be open for revenue service by spring 2011.
January 2008	Scottish Ministers offer grant support for Phase 1a of 91.7 per cent of eligible capital costs subject to a maximum grant of £500 million. The Scottish Government's grant offer is conditional on project costs not exceeding £545 million, a positive benefit cost ratio and no requirement for an ongoing subsidy once trams are operational.
~~January 2008~~December 2007	CEC approves the final business case.
May 2008	BSC appointed as contractor for the construction of the tram infrastructure. On execution of this contract, the contracts for systems design and tram vehicle construction and maintenance are transferred to it.



February 2009	Major dispute arises between BSC and **tie**, one week before track-laying work was due to start in Princes Street, amid claims that BSC is seeking an additional £80 million funding.
April 2009	CEC announces that, in view of the economic downturn, Phase 1b of the project is ~~cancelled~~postponed.
June 2009	A week of informal mediation is held between **tie** and BSC which examines, among other things, the interpretation of key clauses in the pricing schedule, risk allocation and the substantiation of changes and value engineering issues
July 2009	**tie** reports to the Tram Project Board that the mediation had not been successful. Tram project Board endorses **tie**'s strategy of adopting a more formal approach to managing the contract.
November 2009	Carillion (who bought over Alfred McAlpine in December 2007) completes its works package of diverting 10,000 metres of utility pipes and cables. **tie** appoints Clancy Docwra and Farrans to divert the remaining 10,000 metres
December 2009	Following further disputes with BSC, the Tram Project Board concurs with **tie**'s proposal that, in view of lack of progress, a fundamental review of the contractual position with BSC should be conducted. If required, formal legal processes should be started to bring the major issues to a head to allow the project to progress.
March 2010	**tie** informs Transport Scotland that it is unlikely that all of Phase 1a of the project can be delivered for £545 million. £348 million has been spent to date.
March 2010	The Tram Project Board approves **tie**'s strategy for the future direction of the project including management of the infrastructure construction contract with BSC.
June 2010	CEC reports to full council meeting on progress of the project. Council requests a refreshed business case detailing the capital and revenue implications of all options being investigated by **tie**.
October 2010	CEC reports to full council meeting in response to its June 2010 request. The report provides an update on progress and outlines an incremental approach to the project which would see the opening of a line from Edinburgh Airport to St Andrew Square as the first phase. No cost or benefit figures are provided and the council requests a further report to be prepared for its December 2010 meeting.
October 2010	The Accounts Commission and the Auditor General for Scotland announce their intention to carry out a further review which will provide an independent view on the Edinburgh trams project's progress and costs to date and its governance arrangements.



Appendix 2. Main parties involved in the project

Funders	
Transport Scotland	The Scottish Government, via Transport Scotland, has agreed to provide up to £500 million for the project subject to certain conditions. The most notable condition is that the total cost of the project should not exceed £545 million.
City of Edinburgh Council (CEC)	Provides the balance of funding. The Council is currently looking at how to source additional funding up to a maximum project cost of £600 million.
Delivery bodies	
Transport Initiatives Edinburgh (tie)	An arms length company wholly owned by CEC. Responsible for the design, procurement, construction and delivery of the trams network.
Tram Project Board	A formal sub-committee of TEL. Monitors execution of the project and has delegated authority to take the actions necessary to deliver the trams project.
Transport Edinburgh Ltd (TEL)	An arms length company wholly owned by CEC. Has overall responsibility for delivering an integrated tram and bus network for Edinburgh. The intention is that once the tram network is delivered, TEL will be responsible for delivering tram and bus services which are currently provided by Lothian Buses.
Contractors	
Transdev	Transdev was appointed as the tram operator in May 2004 to assist planning of an integrated service network with TEL. The contract with Transdev was later cancelled in December 2009 as a cost saving measure. CEC now intends that TEL will be responsible for operating an integrated tram and bus service.
Parsons Brinkerhoff	Appointed in September 2005 to facilitate the early identification of utility diversion works, land purchase requirements and traffic regulation requirements and the completion of design drawings.
Alfred McAlpine Infrastructure Services/ Carillion	Alfred McAlpine was appointed as the contractor responsible for utilities diversion work in October 2006. Responsibility passed to Carillion when it took-over Alfred McAlpine in December 2007. When Carillion completed its agreed work package in late November 2009, Clancy Docwra and Farrans were appointed to complete utilities diversion works.
Construcciones y Auxiliar de Ferrocarriles SA	Responsible for tram vehicle construction. Appointed in May 2008
Bilfinger Berger Siemens	Responsible for infrastructure construction. Appointed in May 2008.