

Tram Reports to Council since Mediation

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Edinburgh Tram Update

The City of Edinburgh Council

16 May 2011

1 Purpose of report

- 1.1 This report updates the Council on the key outcomes arising from the mediation of the tram dispute in relation to the contract ("Infraco Contract") between **tie** and the Bilfinger Berger/Siemens/CAF consortium (BSC). Council is asked to note these outcomes, pending the detailed design and costing work that will be needed to provide a more complete picture of the full costs and revised programme for the Edinburgh Tram Project.
- 1.2 The report also deals with plans for rectifying the road surface cracking problems which have emerged on Princes Street since the tram tracks were laid in 2009.

2 Summary

- 2.1 Mediation talks were held from 8 - 12 March 2011 involving the main parties to the tram dispute. Good progress was made in resolving the issues at the heart of the dispute. Short-term actions are underway with work recommencing in priority locations along the route of tram line 1a, pending the resolution of detailed design and costing work on the first phase of the route, from the Airport to St Andrew Square (with a turn back point in York Place), in accordance with the agreement reached by the parties during mediation.
- 2.2 Council is also asked to note the proposals made by Infraco to rectify the surface cracking problems that have arisen on Princes Street. It is proposed that this will be done through a programme of remedial work from July 2011 to spring 2012, with an embargo over the Christmas/New Year shopping season. Consultation has already commenced with City Centre stakeholders about these proposals.

3 Main report

- 3.1 On 16 December 2010, the Council received a report on several tram related issues including: the refreshed Business Case; progress on the Emergency Council Motion of 18 November 2010; future project governance arrangements; and powers for land acquisition. The Council was asked to note that steps had been taken to initiate mediation of the dispute between **tie** and BSC, the

consortium responsible for the delivery of the tram infrastructure, in accordance with the Emergency Motion.

- 3.2 The Council's incoming Chief Executive, Sue Bruce, made early contact with the consortium and **tie** to agree the timing and terms of reference for mediation of the dispute. An independent mediator, Mr Michael Shane, was subsequently appointed, on a mutually agreed basis. Mr Shane has a track record of successful mediation of Civil Engineering projects worldwide. Intensive mediation meetings took place from 8-12 March 2011 with all relevant parties represented, including Transport Scotland and, since March, positive dialogue has been maintained between the parties.
- 3.3 The parties involved in mediation agree that good progress has been made in identifying the key issues at the heart of the tram dispute, and a measure of goodwill has been re-established, that has enabled work to progress on priority sections of tram line 1a whilst detailed planning, design and costing work is undertaken to provide greater cost certainty for the first phase of the route from the Airport to St Andrew Square/York Place.
- 3.4 One specific outcome of the mediation is that it is proposed the contract with the provider of the tram vehicles – CAF – should be novated back to **tie** Ltd, thus separating their role, as supplier of the trams and the provider of maintenance and technical support for the vehicles, from the parties involved in infrastructure construction – Bilfinger Berger (Civil Engineering) and Siemens (Power Systems and Equipment) - BBS.
- 3.5 Full details of revised plans for the incremental delivery of phase one of line 1a will be reported to Council later this summer, as soon as there is sufficient certainty on price, scope and programme, following the conclusion of the outstanding design consents and related matters, discussed during and subsequent to mediation. An independent review of the Business Case will also be included, as requested in at the December 2010 Council meeting.
- 3.6 In the meantime, Council is asked to note a number of short term actions that are required to restore momentum to the construction of tram infrastructure in priority sections of line 1a. These will be managed through a Minute of Variation to the contract, 'Priority Works Minute of Variation', reference here after as MoV4, which deals with the immediate priority issues that were resolved through mediation. The main provisions of MoV4 are summarised in appendix 1. MoV4 will be superseded by a subsequent Minute (MoV5), reflecting the full terms of any agreement reached between the parties to deal with the completion of the revised programme, scope and budget for the Airport to St Andrew Square phase of line 1a. A report will be brought to Council this summer for a decision on the terms of this more substantive minute of variation to the tram contract.

Priority Works Programme

- 3.7 During the mediation process, Council officers stressed the need for an urgent re-commencement of work along tram route 1a in a number of locations of particular importance to the city and to the tram project timetable. An immediate outcome of the mediation is that Bilfinger Berger Civil UK and

Siemens have started to re-mobilise staff to complete infrastructure works in the following priority locations:

- Haymarket Yards;
- Tram Depot, including Depot access route, and a section of track towards the airport;
- A8 Underpass.

3.8 Work re-commenced at these locations in early May 2011. As part of the priority works programme, some auxiliary works will also be carried out to progress detailed site investigations, clearance and demolition at several other locations along the tram route. Agreement has also been reached under MoV4 for all materials held by Siemens, including overhead power lines, track and associated equipment to transfer to the ownership of the Council. The costs associated with the re-commencement of work, the transfer of materials to Council ownership and related matters has been subject to independent verification by an external Chartered Quantity Surveyor and cleared with Transport Scotland officials. These costs, added to those already incurred, take the cumulative expenditure on the tram project up to 6 May 2011 to a total of £440M.

3.9 All of the above have been subject to past dispute and uncertainty and it is clearly now more prudent to complete these works on an agreed basis rather than to suffer further time delays and associated costs.

Princes Street Remedial Works

3.10 A further outcome of mediation is that the infrastructure consortium has agreed to carry out a rectification plan to repair the deficient sections of Princes Street where there has been a failure of the mastic bond between the flexible road surface and rigid tram track. This problem has led to deformation of the road material, resulting in cracks and holes in the road surface. This has given rise to health and safety issues which accelerate over time and the work is therefore time critical. Bilfinger Berger Civil UK/Siemens (BBS) propose to carry out the Princes Street remedial work in two stages commencing from 1 July – 26 November 2011, and then from January – May 2012. This will be done at no additional cost to public funds.

3.11 The agreed technical solution to the cracks that have appeared in the road surface will involve reinforcing the area around the tram rails with concrete to a depth of approximately 25 cm (9.8 inches). The concrete will be dyed black to blend with the road surface.

3.12 In addition, BBS will complete other necessary work on Princes Street, including the installation of the foundation pits for poles carrying overhead line equipment, tram stop furniture and all remaining infrastructure work, except hooking up the overhead catenary, power lines and cables.

3.13 The Council's previous experience of managing tram works on Princes Street has highlighted the importance of careful project management, well planned

stakeholder communications, and effective traffic management. BBS will remedy the surface cracking problems which have emerged in Princes Street, and will take the lead role in managing the remedial works, within the rectification plan.

- 3.14 The remedial work on Princes Street will be managed and paid for by BBS. However, the Council will have a key role to play in ensuring that this is completed in such a way as to minimise any detrimental impact on businesses, residents and visitors.
- 3.15 The target date, for remedial work to begin on Princes Street, is 2 July 2011. Over the next two months there will be detailed consultation with the City Centre business community and other stakeholders to plan the necessary arrangements for traffic diversions, delivery of goods to shops, offices and restaurants, waste collection, pedestrian routes, bus services, health and safety management, and signage. The plans for Princes Street remedial work will build upon the lessons learned from the previous closure of the street as approved by the Council on 12 March and 30 April 2009, and the traffic diversion arrangements will be broadly similar, with buses diverted to George Street. The details of the Princes Street rectification work are set out in Appendix 2.
- 3.16 The nature of the proposed remedial work is not expected to be as complex and intrusive as the original track laying operations. However, parts of Princes Street will require to be closed, in two stages, for a total period of up to ten months to ensure that the work can be progressed in line with the expected programme for delivery of the first phase of line 1a from the Airport to St Andrew Square. Detailed proposals for managing the period(s) of closure of Princes Street to bus and taxi traffic will be disseminated, following consultation with City Centre stakeholders. The consortium has accepted that there should be no work on Princes Street over the course of the peak Christmas and New Year shopping season. The proposals also seek to mitigate the impact of Tram works during the Edinburgh summer festival period.

Future Project Management and Governance Arrangements

- 3.17 The mediation process has resulted in a significant change to the joint working relationship amongst the Council, **tie** and the infrastructure contractor, reverting more to the project partnering ethos of mutual cooperation set out in the main body of the original contract. In future this will mean closer working relationships across the key parties. There will be a requirement for the infrastructure contractor – Bilfinger Berger Civil UK and Siemens – to deliver tram infrastructure to meet the employer's requirements.
- 3.18 This approach will provide opportunities for savings to be made in project management costs. Proposals for revised project management arrangements and appropriate changes to the governance structure will be brought to Council for consideration this summer.
- 3.19 In the meantime, it is essential that project management costs are kept to an appropriate level, and that overheads are minimised as far as possible. During the period until detailed post-mediation design changes and scope revisions

have been concluded, **tie**/TEL has therefore been instructed to review its overhead costs and achieve savings wherever possible. A letter has been issued to **tie** to enable it to progress the priority works identified in MoV4. **tie** has been asked to focus its efforts on these key elements of the programme. Members should note that elements of this cost have been expended within the £440M cumulative costs to date.

Surplus Tram Vehicles

- 3.20 One consequence of the move to incremental delivery of tram line 1a is that there will be between 6-10 trams that will no longer be required for operational service, for a period of several years.
- 3.21 The Council has been exploring the opportunity to lease a number of surplus tram vehicles to Transport for London for use on the Croydon Tram Network. This potentially offers the opportunity to mitigate sunk investment costs and reduce the need for storage, security and maintenance costs for these vehicles, whilst attracting a short term rental income or a capital receipt, should the sale of surplus vehicles prove to be the better option.
- 3.22 With the support of **tie**, the Council has expressed interest in a Transport for London tender call for tram supply. The Council has the option to withdraw from this process without penalty at any stage until the formal award of the contract, currently scheduled for July 2011. In advance of potential selection as the preferred bidder, for the supply of leased tram vehicles, a business case will be brought to the Council. The agreement of Transport Scotland and Scottish Government will also be required.

4 Financial Implications

- 4.1 As a result of the mediation process agreement has been reached amongst the parties in dispute that has enabled work to progress on priority sections of line 1a, whilst detailed design and costing work is carried out on the full extent and budget for the first phase of Line 1a, from the Airport to St Andrew Square.
- 4.2 The Priority Works Minute of Variation (MoV4) will enable the Council to acquire the Siemens materials and equipment needed to complete line 1a. The valuation certificates for these payments have been verified, elements of which are included in the cumulative programme costs to date of £440M.

5 Environmental Impact

- 5.1 The Edinburgh Tram Project will make a positive environmental contribution to the city's future growth by mitigating the forecast increase of 1 million vehicle kilometres per day, anticipated by 2020. The tram will also help the city to cope with the increased demand for public transport connections into the city by airport users (forecast to rise from 9m to 13m at Edinburgh Airport by 2020) and from the 40% forecast rise in rail passenger volumes, that is anticipated from the enhanced capacity on central Scotland rail routes and the opening of the Gogar Intermodal station. The tram will have no on-street pollution emissions and will offer a quiet mode of transport, enabling Scotland's capital

city to provide a positive, modern, reliable public transport service to residents, commuters and visitors to Edinburgh.

6 Conclusions

- 6.1 Positive progress has been achieved as a result of the formal mediation of the tram dispute. The parties involved have agreed to a priority works programme that will allow progress to be made on key sections of line 1a under the Priority Works Minute of Variation (MoV4) to the contract, pending detailed work to complete fully designed and costed proposals for the incremental delivery of the first phase of line 1a from the Airport to St Andrew Square/York Place. These proposals will be brought to Council in the summer, once sufficient certainty has been achieved on total project costs for the first phase of line 1a.
- 6.2 Works is progressing on the completion of a subsequent Minute of Variation (MoV5) which will give legal expression to the key issues resolved at mitigation, in relation to the full extent of the first phase of Line 1a (Airport to St Andrew Square/York Place). As stated in paragraph 3.6, a report will be brought to Council this summer for a decision on the terms of this more substantive minute of variation to the tram contract.

7 Recommendations

- 7.1 Council is asked to approve the following recommendations:
- a) To note the outcomes of the mediation process to date;
 - b) To note the consultation arrangements for remedial work on the Princes Street road surface;
 - c) To note that a further detailed report will be brought to the Council in the summer of this year.

Dave Anderson
Director of City Development

Appendices 1. Minute of Variation Summary;
 1A. Priority Works Programme
 2. Princes Street Rectification Plan.

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Wards affected All

Single Outcome National Outcome 1 – We live in a Scotland that is the most attractive
Agreement place for doing business in Europe.
 National Outcome 14 – We reduce the local and global impact of our
 consumption and production.

Background
Papers

PRIORITY WORKS MINUTE OF VARIATION – SUMMARY OF KEY TERMS

This appendix summarises the key provisions of the Priority Works Minute of Variation between tie and the Infraco. The Minute of Variation deals with the following:

1. The Siemens materials and equipment and certain other works

Scope

The Council will take ownership of certain Siemens materials and equipment needed to complete line 1a. In addition, payments are to be made in for costs in respect of:

- (a) progress of the design;
- (b) procurement of sub-contractors and suppliers and instruction of site clearance works;
- (c) works carried out at the Depot; and
- (d) works carried out to execute changes.

Payment

Payments will be issued in the amounts certified by an independent certifier who will have a duty of care to the Council, tie and the Infraco.

Timetable

Payments of the valued and certified amounts are due on agreed dates from May to August 2011.

2. Priority works

Scope

The scope of the priority works is as set out in paragraph 3.7 of the Report.

Payment

Monthly payments will be made to the Infraco based on works completed or delivered in that month, as valued and certified by the independent certifier.

Timetable

There is an agreed timetable set out in Minute of Variation. This is set out at appendix 1A.

3. Agreement for incremental delivery – effect on the Infraco Contract

As set out in the Report, detailed discussions between the parties are continuing in order to agree fully designed and costed proposals for the incremental delivery of the

first phase from the Airport to St Andrew Square. It is proposed that if agreement is reached this will be set out in a further minute of variation to the Infraco Contract ("**Incremental Delivery Minute of Variation** ") which will be brought to the Council for consideration as soon as it is available.

In the event that the parties fail to agree a deal for incremental delivery of the project, or CEC/tie fail to obtain funding for the proposed incremental delivery plan within an agreed timescale, this will have consequences for the existing Infraco Contract as follows:-

1. Where the Incremental Delivery Minute of Variation has not been entered into:
 - (a) on an **unconditional** basis because tie and/or CEC do not have sufficient funding to meet tie's obligations under the Infraco Contract; or
 - (b) on a **conditional** basis subject to funding being available,

the following provisions apply:

- Infraco is required to continue to carry out and receive payment for the priority works, but there is no requirement on the Infraco to carry out any other works under the Infraco Contract;
- The Infraco Contract will automatically terminate;
- Parties are to discuss separation terms; and
- The Infraco will continue to transfer ownership of and receive payment for the Siemens materials and equipment to the Council.

2. Where the Parties have not entered into the Incremental Delivery Minute of Variation for reasons other than lack of availability of funding the following provisions apply:

- Infraco's obligation to perform the priority works ceases;
- Infraco works under the existing Infraco Contract are to recommence;
- The Infraco will continue to transfer ownership of and receive payment for the Siemens materials and equipment to the Council.

4. Cessation of hostilities

There is a ceasefire in respect of existing disputes and claims under the Infraco Contract during the currency of the Priority Works Minute of Variation.

Programme of Priority Works

All works to commence in May 2011, following the agreement of the Priority Works Minute of Variation.

The Priority Works identified for progress under the Priority Works Minute of Variation are set out below. All works to commence in May subject to the signing of the Priority Works Minute of Variation. The current planned completion dates are also detailed.

Priority Work	Planned completion dates
Princes Street Rectification:	July 2011 to April 2012, See <i>Appendix 2</i> .
Haymarket Viaduct	Phases 1 and 2 - 22 Nov 2011.
Depot Access Bridge	May 2011.
The Depot	16 Dec 2011 (excluding Operation Control Centre).
Mini Test Track	2 December 2011.
A8 Underpass	Phases 1,2 & 4: 27 September 2011.
Auxiliary Items	N/A.

**Princes Street Rectification Plan:
Proposed Works Programme
(For Consultation)**

The following Works Programme has been prepared to manage the rectification of Princes Street. The drawings, noted below, show the layout of Princes Street for the various periods of the Works Programme and show the proposed traffic diversion arrangements, and include a proposed layout for the weekend of the Festival Fireworks.

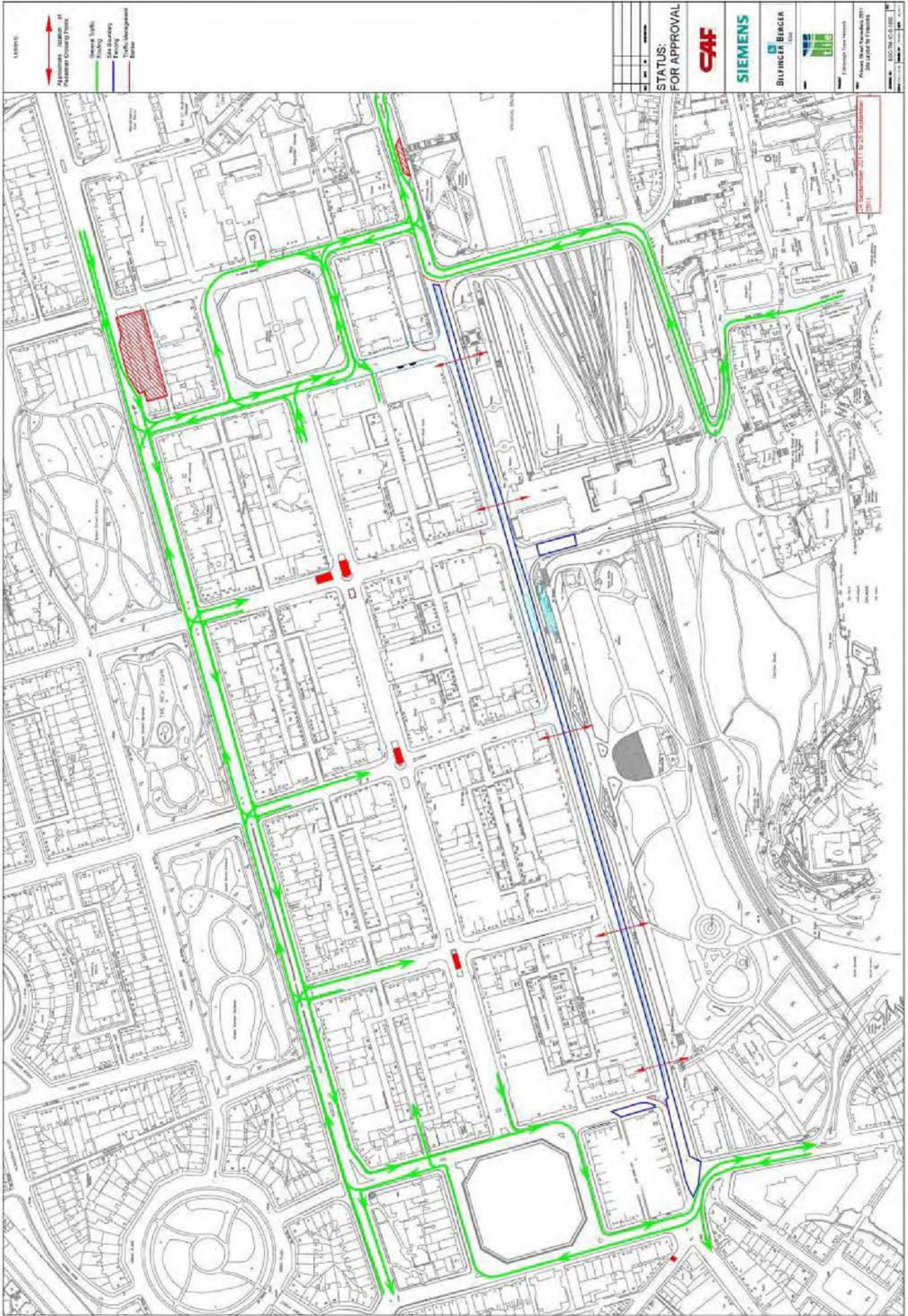
- Period 1** 3 July 2011: Works will commence on the tram tracks on the south side of Princes Street, involving planing to a depth of 25cm (approximately 10 inches) along the entirety of the street with planing machines working from both ends. Work will subsequently be carried out to infill the area around the tram rails with reinforced concrete. The north side road lanes, during this time will remain open to pedestrians and delivery vehicles, up until the end of the festival period. The south side footpath will remain open throughout the remedial works. See drawings:
- **BSC-TM-1C-6-1001, 'Princes Street Remedials 2011 Site Layout Pre-Festival'** and;
 - **BSC-TM-1C-6-1002, 'Princes Street Remedials 2011 Site Layout for Fireworks'**-
- Period 2** 5 September 2011: Work will also commence to plane the north side lanes of Princes Street, and infill the area around the tram rails with concrete. See drawing:
- **BSC-TM-1C-6-1003, 'Princes Street Remedials 2011 Principal Layout'**.
- Period 3** 26 November 2011: All work on Princes Street will cease for the duration of the Christmas/New Year shopping season and the site compound will be removed. Princes Street will remain pedestrianised. See drawing:
- **BSC-TM-1C-6-1004 Rev B, 'Princes Street Remedials 2011 Christmas Embargo Layout'**.
- Period 4** 16 January 2012: Work will recommence on Princes Street to complete the reinforcement of the outstanding section of tram track and carry out ancillary work, erecting overhead line poles, associated equipment and to install the street furniture at the tram stop.
- Period 5** 27th April 2012: Target completion date for all remedial works. This is subject to the assumption that there is no slippage due to adverse or severe weather. Princes Street will re-open to bus, taxi and bicycle traffic from 30 April 2012.

Princes Street Remedials 2011 Detailed Site Layout - Pre-Festival

Ref: BSC-TM-1C-6-1001

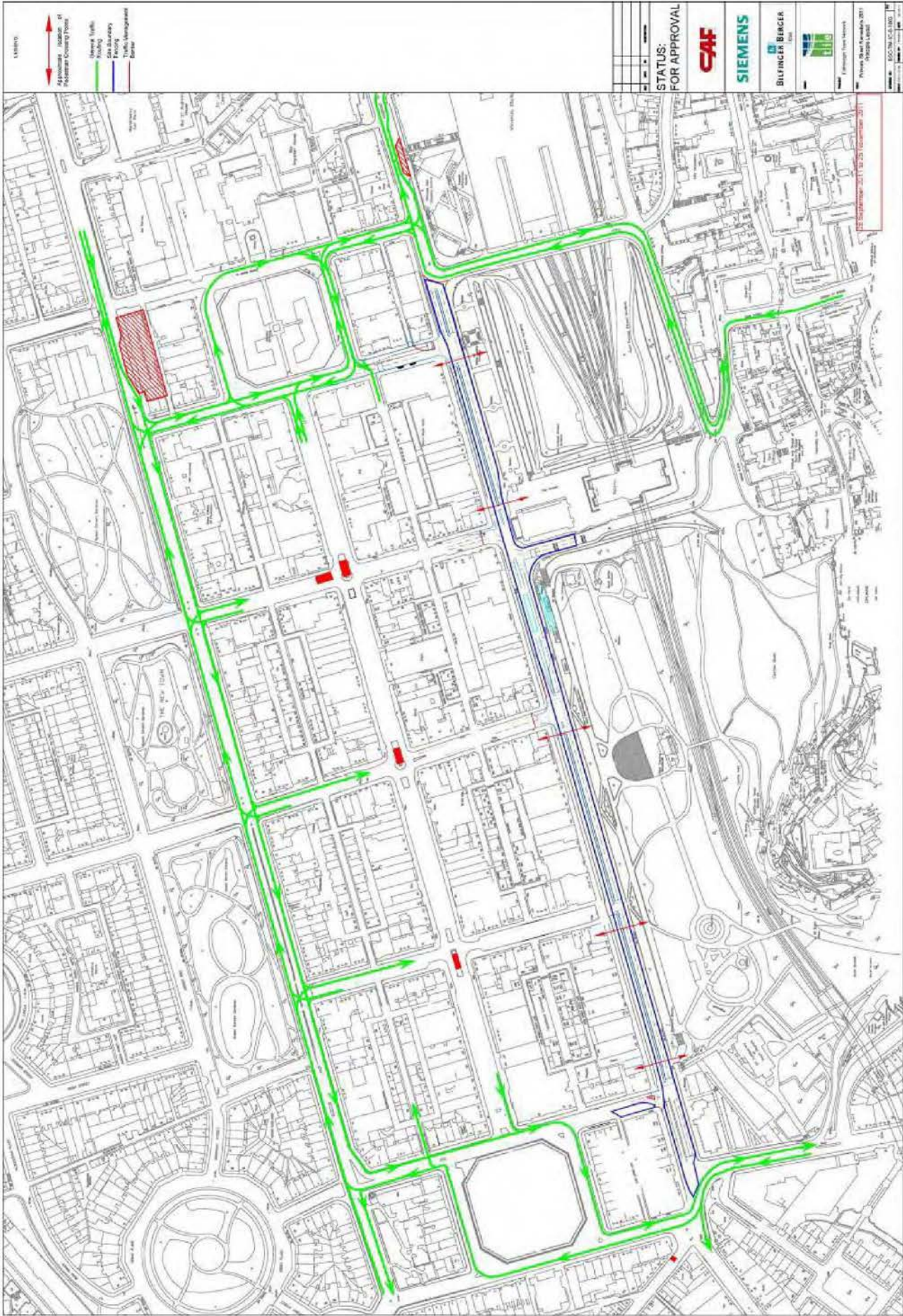
Princes Street Remedials 2011 Detailed Site Layout for Festival Fireworks

Ref: BSC-TM-1C-6-1002



Princes Street Remedials 2011 Detailed Principal Site Layout

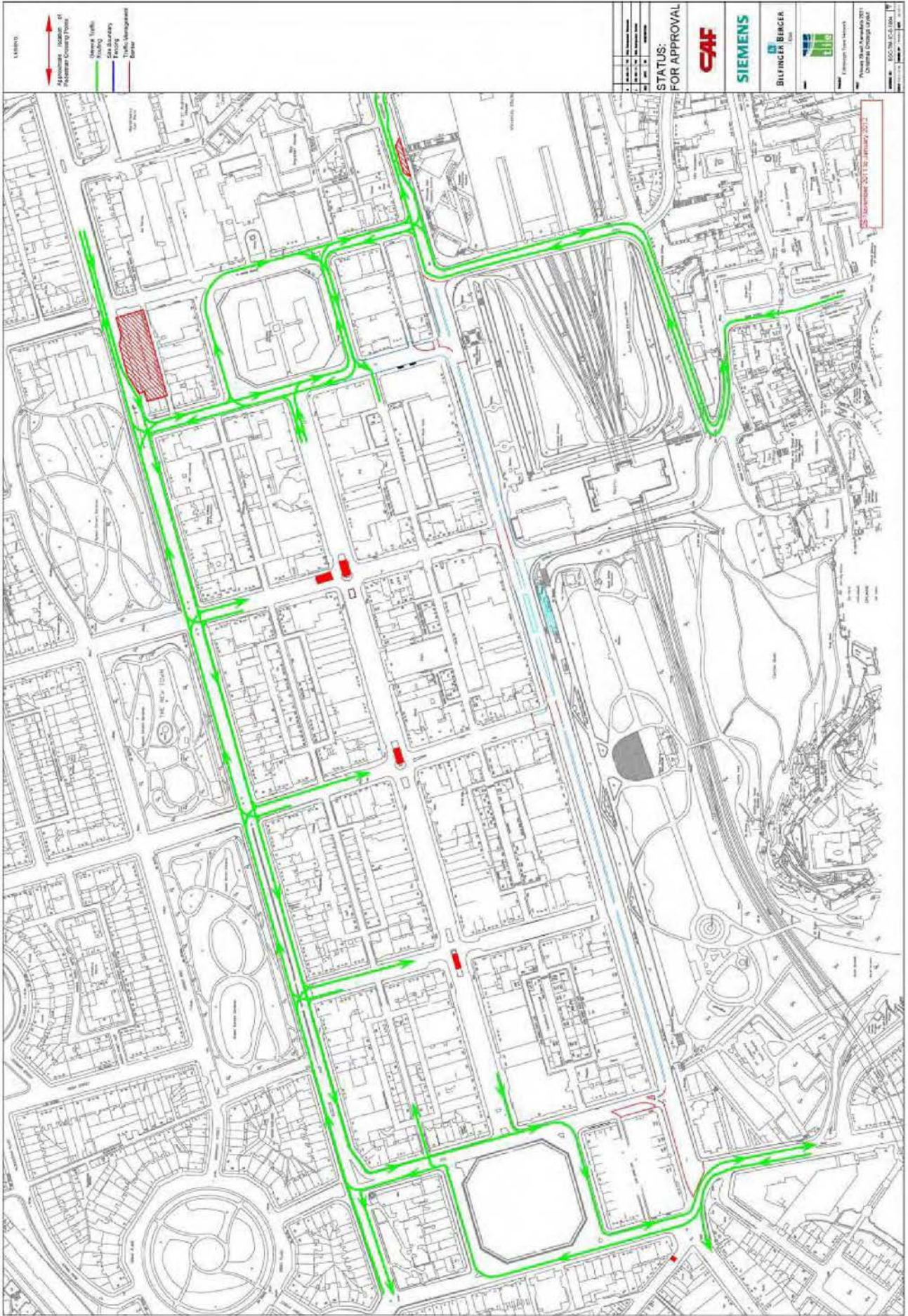
Ref: BSC-TM-1C-6-1003



Princes Street Remedials 2011 Detailed Christmas Embargo Layout

Ref: BSC-TM-1C-6-1004

Rev B.



The City of Edinburgh Council Meeting, 30
June 2011, Item 8.2: [Edinburgh Tram Project](#)

Edinburgh Tram Project

The City of Edinburgh Council

30 June 2011

1 Purpose of report

- 1.1 This report sets out options for the future of the Edinburgh Tram project. The report makes recommendations about the governance, financing and programming of the project and proposes a revised scope and timetable for the first phase of line 1a. Subject to funding approval, this could be completed from Edinburgh Airport to St. Andrew Square/York Place by 2013 with revenue services beginning from the spring of 2014. The costs of completing the project to St. Andrew Square/York Place are compared with the other options available to the Council, within the constraints of the contract between tie Ltd and the infrastructure contractor – Bilfinger Berger Civil (UK), Siemens plc and CAF – (BSC).

2 Summary

- 2.1 The strategic rationale and business case for the tram project has been subject to further external review and validation. The costs of terminating the project, or continuing under the terms of the existing contract, have also been examined in detail. Neither option is likely to be materially less expensive than completing the first phase of Line 1a. Accordingly, it is recommended that the Council should pursue the completion of the first phase of Line 1a to St. Andrew Square/York Place, subject to identification and confirmation of funding. A diagram of the route is shown in appendix 1.
- 2.2 It has been the intention throughout this process to be open and transparent, but in light of the continuing negotiations, and the commercial sensitivity of the financial information, all the figures cannot be made public at this stage. Arrangements have been made to brief all members and share this information on a confidential basis until final legal settlement is reached.

Contribution to Outcomes

- 2.3 The Edinburgh Tram project will contribute to several of the National Outcomes in the Council's Single Outcome Agreement with the Scottish Government. It will make Edinburgh a more attractive place in which to do business; contribute to sustainable place making; help protect and enhance the city's built and natural environment; reduce the local and global impact of the city's consumption and production; contribute to the lowering the carbon impact of

travel; and provide a public transport option that need not be dependent on fossil fuels. It is clear from recent economic impact studies, and experience elsewhere, that the Tram Project will act as a major catalyst for economic development along the length of the route, particularly in West Edinburgh.

3 Main report

- 3.1 Edinburgh is a growing city, with a population of around 486,600, forecast to rise to 543,325 by 2030. The city is an economic success story. Edinburgh has 15,735 private enterprises and supports over 315,000 private sector jobs. The city's role as an economic driver and employment hub attracts over 100,000 daily inbound commuters. Edinburgh's rail stations handle 22.9m passengers every year, with Waverley (19.3m) and Haymarket (1.8m) accounting for most of these.
- 3.2 Glasgow benefits from around 49.5m rail passenger journeys per annum on the Strathclyde Partnership for Transport network (SPT), plus a further 6m on its subway system. However, Edinburgh has had a smaller level of historic investment in heavy rail. The tram will help to address Edinburgh's infrastructure deficit and facilitate the city's economic growth.
- 3.3 The Scottish Government is currently supporting a programme of railway improvements across Scotland's Central Belt, including 350 km of rail electrification and over 20 complex rail projects. By 2016, the aim is to have 13 trains per hour running between Glasgow and Edinburgh with journey times reduced to 37 minutes on the fastest services.
- 3.4 The completion of the planned rail/tram interchange at Gogar (Edinburgh Gateway) will be pivotal to the success of the current Edinburgh-Glasgow Improvement Programme. Edinburgh Gateway will link passengers from the Fife line and North East Scotland to the airport within 5 minutes and, following completion of the Dalmeny Chord, will also link travellers from the Central Belt and Glasgow to the Airport.
- 3.5 Edinburgh Gateway will enhance rail/air transport integration and reduce the need for journeys by private car to the airport. It will also improve commuting options into the city, by serving the major employment centres at the Gyle, Edinburgh Park and RBS Gogarburn.
- 3.6 As Edinburgh has grown, the city's demand for public transport has increased. Annual passenger numbers at Waverley Station have risen from 14.2m in 2004/05 to the current level of 19.3m. A further increase of 40% is forecast by 2020.
- 3.7 In addition to commuter traffic, Edinburgh is the second most frequently visited UK city by overseas tourists. The city generated 3.52m visits from UK and overseas visitors in 2009/10, 23.5% of the Scottish total. Air passenger numbers at Edinburgh Airport were around 9m in 2010 and are forecast to rise to almost 13m by 2020.
- 3.8 As pressures on the city's transport network grow it is clear that low-carbon, rapid mass transit solutions will be required. The vast majority of European

capitals have tram, light rail or underground systems. Edinburgh, Valletta (Malta) and Belfast are amongst the few exceptions.

- 3.9 Trams provide a fast, quiet, safe and reliable system of public transport, with no pollution emissions at the point of use. Daily car/private vehicle trips in Edinburgh are forecast to rise from around 160,000 at present to 180,000 vehicles by 2016, adding to congestion and air quality concerns.
- 3.10 Experience of tram usage in other cities has shown that a notable percentage of new patronage occurs as a result of modal shift from cars and other private vehicles. This will be an important consideration for Line 1a, with modal shift from cars using the Ingliston Park and Ride facility forecast to take a significant volume of cars off the city's road network daily.
- 3.11 Edinburgh has an excellent bus network. Lothian Buses has a fleet of over 600 buses with an average age of 4.9 years and carried 109m passengers in 2010. The integration of bus and tram services in Edinburgh will provide the opportunity for seamless connections across the key modes of public transport in the city.
- 3.12 Trams are popular in other European cities, from long established systems such as Vienna which carries over 200m passengers each year, to modern systems such as the Manchester Metrolink which has recently expanded from 32 to 80 trams vehicles. In Dublin, a 2010 residents' survey showed an overwhelming 98% level of public support for and satisfaction with their tram network – known as LUAS.
- 3.13 There is clear evidence to support the view that rail based transport systems enhance the value of adjacent properties.
- 3.14 A review of evidence by AECOM in 2011 identified four general rules relating to the relationship between rail-based transport systems and property values:
 - Rail-based transport systems can positively affect property values;
 - Properties within walking distance of stations experience the largest uplift in value;
 - Property value uplifts increase as transport systems mature; and,
 - Properties in densely-populated areas experience the largest uplift in value.
- 3.15 Research into the impact of light rail upon property values in various European cities, by Buck Consultants International, identified further positive relationships:
 - Light rail has the greatest impact upon the property values of lower-priced residential properties.
 - The greatest rises in the property values of commercial properties were found in peripheral areas with no alternative public transport.

- 3.16 In addition to improving accessibility, rail-based transport systems can indirectly impact on property values by enhancing the image of areas and making them more attractive locations.
- 3.17 The findings of a number of studies into the relationship between rail-based transport stations and property values are summarised below:
- The value of residential properties along the DART light rail line in Dallas, USA increased by an average of 32.1% between 1994 and 1998, while the value of commercial properties increased by an average of 24.7%.
 - The value of residential properties in the catchment areas of the Naples Metro system in Italy increased by an average of 37.8% between 2001 and 2005. The value of commercial properties rose by an average of 57.7%, while the value of retail properties rose by an average of 31.1%.
 - Property values along the Hiawatha light rail line in Minneapolis in the United States increased by an average of 83% between 2000 and 2004, compared to 61% for the city as a whole.
 - The value of properties within 500 to 2,000 metres of a LUAS light rail system station in Dublin in Ireland is on average between 7% and 17% higher than properties in other areas. The value of properties close to stations rose by an average of 54% between 2002 and 2005.
 - The value of residential properties located close to commuter rail stations in the Netherlands is on average 25% higher than the value of properties located 15 kilometres or more from a station.
- 3.18 The environmental case for trams is also important. Trams carry around 3 times as many passengers as buses and, according to DEFRA, have around one third the greenhouse gas emissions, per passenger, of cars. Scotland has set the most ambitious carbon reduction commitments anywhere in the world – 42% by 2020. As part of a wider programme of sustainable transport, trams can help Edinburgh reduce its carbon emissions.
- 3.19 Trams can also help unlock economic regeneration. Economic Infrastructure drives competitiveness and supports growth by increasing productivity, reducing business costs, diversifying means of production and creating jobs. Dublin's experience was of a 25% increase in footfall around Grafton Street and a 15% increase in city centre retail spend. The key development zones in the West Edinburgh corridor will be reliant upon tram line 1a to unlock new investment and create jobs to fill a growing employment gap in the city.
- 3.20 West Edinburgh is home to some of Scotland's most productive businesses and supports over 43,000 jobs, including major employers such as BT, Diageo, Aegon, JP Morgan, HSBC, the Miller Group, Logica, Astra Zeneca and RBS. Economic analysis undertaken by Biggar Economics indicates that West Edinburgh has the potential to create an additional £4.4bn in Gross Value Added (GVA) for Scotland's economy by 2030 and 3,600 new jobs. Early investment in enabling infrastructure, including the tram, will be critical to unlocking the investment potential of West Edinburgh and the associated

development benefits. Tram line 1a can also help to bring forward the development of the southern end of Edinburgh Park, as well as protecting around 1,400 full time jobs in businesses in Edinburgh Park with lease expiry dates occurring over the next eight years.

- 3.21 The development of the Tram network will be complemented by other sustainable transport measures including the expansion of park and ride sites; the promotion of active transport (walking and cycling); moves towards low emission and electric vehicles; and the use of intelligent transport management systems to aid personalised journey planning. Without such measures, the city will experience serious congestion difficulties as it grows. Trams, developed as part of a broader sustainable transport policy, can therefore provide major benefits to Edinburgh from an economic, social and environmental viewpoint, whilst enhancing the city's image, reputation and quality of life.

Contractual Issues

- 3.22 The award of preferred bidder status for the main infrastructure contract for the Edinburgh Tram network was made, in June 2007, to Bilfinger Berger Civil (UK) and Siemens plc. A period of almost 12 months elapsed between preferred bidder stage and financial close. During this period, there were significant negotiations about commercial matters including the management of risks arising from incomplete design work.
- 3.23 Utility diversions also remained incomplete at financial close, presenting additional risk. In the spring of 2008, tie Ltd agreed that responsibility for completion of design work should be novated to Bilfinger Berger Civil (UK) and Siemens plc (BBS).
- 3.24 The Spanish manufacturer of the tram vehicles – CAF – also had its contract with tie Ltd novated to BBS at this time, with the result that tie Ltd subsequently entered into one major contract for all infrastructure related construction, with BSC.
- 3.25 The Council gave its formal approval for the Edinburgh Tram Project on 13 May 2008. BSC immediately commenced the mobilisation of sub-contractors to begin the infrastructure construction programme. Claim related disputes were evident from an early stage, testing the respective parties' understanding of the terms of the contract. Difficulties were exacerbated by delays with utility diversion works; slow progress in clearing design related activities; and problems with sub-ground conditions during utility diversion works.
- 3.26 These problems culminated in a stand off between the parties with regard to infrastructure works on Princes Street; this was resolved, following difficult negotiations, by an agreement for work to be done on the basis of tie Ltd meeting demonstrable costs for the works.
- 3.27 The current status of the project is that cumulative expenditure of £461m had been incurred as of 21st May 2011. The key expenditure headings and project deliverables are as follows:

Areas of Expenditure	£
Infrastructure	198,226,898
Tram Vehicles	47,899,805
Utilities	70,425,728
Land	4,807,286
Project management	79,577,755
Other resources	24,784,593
Design	33,057,471
Traffic management	2,655,447
Total	461,434,982

- 3.28 From early 2009, tie Ltd began to test key principles within the contract by referring claims to adjudication using the agreed dispute resolution process. Subject matter experts in areas of construction law and civil engineering adjudicated on individual disputes. Whilst this process enabled tie Ltd to achieve a reduction on some claims originally submitted by BSC, it became clear that resolving disputes through external adjudication would not be easy or straightforward.
- 3.29 During 2010, tie Ltd pursued a twin track approach of asserting its legal position through the contract, whilst progressing discussions aimed at securing a guaranteed price for project completion. The failure to achieve a successful resolution through either approach led, ultimately, to the Council's emergency motion of 18 November 2010, which instructed the Council's Chief Executive to initiate mediation talks amongst the parties to the contract.
- 3.30 Mediation talks were held from 8-12 March 2011 at Mar Hall Hotel, Renfrewshire, and the terms of a framework, timetable and process for commercial settlement of the disputes and differences between the parties were agreed in outline. If the settlement fails due to lack of funding the existing contract will automatically terminate.

Option Appraisal

- 3.31 There appear to be three main options available to the Council and tie Ltd at this stage. These are:
- (i) to continue to attempt to secure the completion of the project under the existing contract;
 - (ii) to separate from the current contract and pursue matters either through the courts or by agreeing a commercial settlement with BSC, outside of the courts (this option would require decisions to be made subsequently

about whether the project should be cancelled entirely or re-procured, either immediately, or at some point in the future); or,

- (iii) to complete the project as far as St. Andrew Square/York Place on the basis of the terms outlined during the mediation talks, with a sub-option to complete only to Haymarket at this stage.

Option (i): Status Quo

3.32 The option to persevere with the existing contract and continue to completion is likely to be fraught with practical difficulties including the prolongation of claims disputes and change related issues. The main risks would include:

- a lack of certainty on timescales for completion and eventual cost;
- the possibility that tie Ltd could lose key points of contractual principle through the dispute resolution process;
- extra expenditure on project management and legal costs, which could otherwise be avoided; and,
- a prolonged period of disruption and uncertainty for the city, with no guarantee of a positive outcome.

3.33 The costs of this type of attrition are difficult to estimate. Experience suggests that there would be a high likelihood of continuing contractual disputes and extension of time claims, if this route were to be taken. The Council has worked with McGrigors to assess the key costs likely to be incurred and information on this is included in the confidential appendix.

Option (ii): Separation

3.34 The option to separate from the current contract, either by mutual agreement and settlement of costs, or by unilateral termination of the contract on specific grounds provides no guarantee that there will ever be a return for the sunk investment of £461m incurred to date.

3.35 However, the potential benefits of a **mutually agreed** separation are:

- the likelihood that a final cost could be agreed to settle with the BSC; and,
- the ability either to re-procure immediately, to mothball and re-procure at a later stage, or to cancel the project entirely, reinstating land and removing redundant structures, where required.

3.36 Whilst this option could provide certainty in the short term and would offer future flexibility, the costs of settlement would produce no value for the city and in the event that the project were cancelled there could be no certainty that a fresh procurement exercise would proceed. Separation by unilateral termination of the contract by tie Ltd could lead to a protracted legal dispute that could be very costly and with no clear outcome, creating uncertainty for Council finances and unquantifiable contingent liabilities. In the case of project

termination liabilities will have a direct impact on the Council's revenue budget and could not be supported by borrowing or alternative methods of private finance.

- 3.37 tie Ltd asked McGrigors, legal advisors during the mediation, to assess the costs of separation, taking account of advice prepared for tie Ltd by Cyril Sweett. This assessment has been externally checked and validated by construction, project and cost management consultants, Faithful and Gould. Information on these costs are included in the confidential appendix.

Option (iii): Progress to St. Andrew Square (York Place)

- 3.38 The completion of the first phase of line 1a from the Airport to St. Andrew Square/York Place is the only option that will, with a strong degree of certainty, produce a tram line for Edinburgh, as the first building block of a future network.
- 3.39 Under this option all existing claims would be settled by means of a settlement agreement. This agreement would also seek to amend the terms of the existing contract in order to reduce its scope and re-adjust the risk profile. Its terms are being carefully negotiated with the assistance of Ashurst; London based legal specialists on tram and light rail projects. A summary of the proposed terms and current state of negotiations is contained in the confidential appendix.
- 3.40 Whilst negotiations (both between the Council and Infraco and also within Infraco itself) are not yet complete the intended commercial position has been set. If the Council is minded to proceed with this option the proposal is for the settlement agreement, once finalised, to be entered into subject to funding. To facilitate this it may be necessary to extend the timescales for MoV4, referred to in the May Council report, which deals with priority works at key locations, to give time for the negotiations to be finalised.
- 3.41 The costs for the Airport to Haymarket section are now established, following the completion of the 'off street' design, and have been incorporated into the calculation of a lump sum price for this section, as agreed during mediation talks.
- 3.42 The costs for the incomplete sections between Haymarket and St. Andrew Square have been identified and an 'on-street' contract price agreed, plus a substantial risk allowance to cover variable elements, such as utilities and ground conditions. This is based upon a worst case scenario informed by the previous experience of sub ground conditions, in Princes Street. This element of the price is variable and a proposed pricing mechanism has been defined. Details of this are in the confidential appendix, but total costs are estimated as between £725m and £773m, dependent on the risk allowance.
- 3.43 Work is underway to map potential utility and other sub-ground obstructions in the Haymarket to York Place section and prepare appropriate design solutions; this process will increase price certainty, and reduce the size of the required risk allowance prior to contractual close.
- 3.44 The benefits of option (iii) include:

- the completion of a working tram line connecting the Airport to the city centre and the realisation of the £461m investment already made in the project;
- the potential for major improvements in public transport access to West Edinburgh via the Edinburgh Gateway inter-modal station at Gogar;
- a significant reduction in car journeys into Edinburgh and a consequential reduction in carbon emissions, relative to what would otherwise be likely to happen;
- the protection of around 500 jobs directly associated with the Tram construction and further minimum 147 jobs from Tram operations and the ability to unlock major investment and development in West Edinburgh with the potential to create 3,600 jobs and contribute up to £4.4B in Gross Value Added (GVA) to the Scottish economy by 2030;
- the opportunity to provide a modern, green, efficient transport connection from Scotland's principal tourism gateway – Edinburgh Airport - into the heart of Scotland's capital city on a basis comparable to other top ranking European cities which are competing with Edinburgh for investment, trade and tourism revenue;
- the opportunity to have the first trams running on the test track near the depot before the end of 2011 and a full open for revenue service by 2014.

3.45 The main risks of this option are:

- the opportunity cost for the public purse of the extra capital that the Council will need to source and commit to complete to St. Andrew Square/York Place (although costs will also be incurred for attrition or separation of a similar amount);
- the possibility, post mediation, that the infrastructure contractor could fail to deliver: although this risk exists in every infrastructure project;
- the risk that the disruption to the city during the 'on-street works' between Haymarket and St. Andrew Square/York Place would further alienate business and public opinion.

Option (iii): Sub Option Progress to Haymarket only

- 3.46 In addition, a sub-option to complete Line 1a only as far as Haymarket has been examined. This service, whilst costing less in capital terms to complete, (estimated costs of £700m) would be loss making and would require a substantial subsidy year-on-year going forward. It would also fail to deliver a tram into the city centre, compromise tram/bus integration in the city and would not provide the same scale of tram/rail integration to the national rail network.
- 3.47 In conclusion, the option to complete the project to St. Andrew Square is believed to yield the best prospect of a return on investment, relative to the

original aims of the project. The cost of this option exceeds the available budget. Contingency plans have been drawn up to finance a portion of the necessary funding. Not all of this contingency would be available for the option to Haymarket. However, in both cases the Council will need additional help to bridge the gap, either from the Scottish Government, or from other external sources.

Funding Proposals

- 3.48 As evidenced in the appraisal of the main options, there is no option that will avoid the need for additional expenditure on the tram project. The legal position is such that significant additional funds will be required to be paid out, either in the event of separation followed by cancellation, separation followed by re-procurement or by continuing with the existing contract.
- 3.49 The Council's original commitment to the project was for £45m. This was to be funded, primarily, through a mix of developer's contributions and capital receipts. The current position with regard to the original funding commitment is highlighted in the table below;

CEC Contribution Breakdown	Planned Contribution	Achieved Contribution
	£m	£m
Council Cash	2.5	2.5
Council Land	6.2	6.2
Developer Contributions – Cash	26.6	6.9
Capital Receipts (Development Gains)	2.8	0.0
Capital Receipts	6.9	2.0
Total	45.0	17.6

- 3.50 Certain contributions were anticipated from the section of the route to the north and east of York Place. Although development projections have changed, the total developer contributions anticipated over the life of the project remain achievable. Council has previously determined to fund interim shortfalls through prudential borrowing and this issue can now be closed out on the basis that forthcoming contributions will be used to offset borrowing costs, wherever possible.
- 3.51 The capital costs for the completion of the project, under the Settlement Agreement, have now been established. Included within these costs is an element of sunk investment for developing revenue services beyond St. Andrew Square.
- 3.52 It has previously been reported to Council that contingency planning had been undertaken to identify further finance for the project up to £600m. The additional increase in project cost will require the Council to secure funding beyond the previous contingency planning arrangements: from surpluses in the business plan and headroom in the Council's Long Term Financial Plan. There

would be no surpluses under the Haymarket sub-option and the headroom would be needed to part fund the required subsidy.

- 3.53 Council officers have reviewed options for securing additional funding for the project. The main funding routes available to the Council are:
- the use of prudential borrowing funded from surpluses on operations and financial headroom in loan charges in the Council's Long Term Financial Plan;
 - additional grant funding from the Scottish Government/Transport Scotland; and,
 - Alternative private funding sources: although this would be almost certainly be more expensive than public funding and would not necessarily deliver the integrated public transport solution that is fundamental to the business case.
- 3.54 Future capital allocations from the Scottish Government are, at this stage, uncertain and may not be known in advance of the September spending review. This review will determine Council specific allocations to be made in December 2011.
- 3.55 In any event, the allocation of additional funding for the tram would incur 'opportunity costs' for the Council which will become more significant as funding requirements increase.
- 3.56 Given the current decision making timetable, further engagement will be needed with the Scottish Government before a funding package for the project can be concluded. As part of this process it has been agreed to further investigate all funding options and it is proposed to carry this work out in consultation with Transport Scotland and the Scottish Futures Trust. The Scottish Government's current position is that they remain committed to a grant of up to £500m. Once clarity on funding is established, the proposed solution will be brought back to Council.

Business Case

- 3.57 Some of the underlying assumptions behind the business case for tram line 1a have changed since the project was first conceived. Following the Council's approval of the project in May 2008, the collapse of global financial markets, precipitated by inflated asset prices, based on easy access to credit, has created a situation in which assumptions about the pace of development of Edinburgh's Waterfront require to be reviewed. Land values on the Waterfront have fallen by up to 80% since 2007 and prospects for recovery in the short term are poor. The number of new housing starts in the city fell from 2,529 per year in 2006/07 to 1,557 in 2009/10¹. Whilst the underlying demand for housing, on the back of continuing population growth, remains strong, the

¹ New housing starts for 2006/07 (2nd quarter 2006 to 1st quarter 2007) was 2,529. New housing starts for 2009/10 (2nd quarter 2009 to 1st quarter 2010) was 1,557. **source:** Housing Statistics for Scotland - all sector new build (Scottish Government): <http://www.scotland.gov.uk/Topics/Statistics/Browse/Housing-Regeneration/HSfS/NewBuildAllSector>. Data on private and local authority new building are provided by quarterly returns from councils (NB1 and NB2) and data on new housing provided by housing associations are drawn by the Scottish Government from data on the administration of housing support grants.

supply side is expected to be constrained for the next few years due to continuing liquidity constraints as banks repair their capital reserves.

- 3.58 A significant part of the business case for tram line 1a was based upon the forecast population growth from new communities on Edinburgh’s Waterfront. It is clear that this growth is likely to be slower than forecast. As a result, it is appropriate that the business case for line 1a should be thoroughly and independently reviewed.
- 3.59 Council officers instructed the consulting firm, Atkins, to review the tram business case to test the impact on operating revenue forecasts arising from the need to deliver line 1a in incremental phases, with a first phase to St. Andrew Square/York Place. The project costs and patronage forecasts have also been reviewed for a subsidiary option from the Airport to Haymarket. Estimates have also been prepared for passenger revenues and the extra capital construction costs for tram service options terminating at the foot of Leith Walk, or at Ocean Terminal or Newhaven.

Location	Section Length	Cumulative Length
Airport to Haymarket	11.26km	11.26m
Airport to St Andrew Square	2.14km	13.40km
Airport to Foot of the Walk	2.40km	15.79km
Airport to Newhaven	2.69km	18.48km

- 3.60 Atkins reviewed the modelling tools used in the original business case to test their fitness for purpose. They have also tested the key assumptions made in the business case, as refreshed in 2010, and looked at the outputs from the modelling work undertaken on passenger number forecasts, and the associated benefits across the wider road user network. Members will recall that independent consultants, senior staff at Lothian Buses and Council Officers were all involved in the production of this refreshed business case. Lothian Buses senior staff remain supportive of the option to build to St. Andrew Square/York Place, but have expressed concerns about the operation of a subsidised route finishing at Haymarket.
- 3.61 All costs were expressed on a basis comparable to the original business case, and take account of the impact of inflation. The headline conclusions are that:
- building tram line 1a from the Airport to Haymarket would deliver a line with an annual operating loss initially of £4m, getting no better than a £3.1m annual loss over the life of the project, requiring ongoing subsidy and therefore providing no capacity to contribute to the capital shortfall;
 - completing tram line 1a from the Airport to St. Andrew Square/York Place would deliver a line which can make a positive contribution (on average £2m annually after the initial ramp up period) to the combined tram and bus business. Both Department of Transport and Transport Scotland recommend discarding sunk investment costs when assessing

Benefit Cost Ratios (BCR) for infrastructure projects. On this basis the BCR to St. Andrew Square/York Place is **2.2:1**;

- the additional capital cost of completing tram infrastructure to the foot of Leith Walk is currently estimated at £100m and, to Newhaven, £160m, based on a bill of quantities priced against a schedule of rates and a risk allowance of 100%. Please note that these figures differ to the capital figures in the Atkins Summary, Appendix 3, as additional allowance has been made for risk. Intrusive studies would be required to achieve a more precise estimate. By way of comparison the recent 4km extension to the LUAS in Dublin cost €150m. Any decision on further investment beyond St. Andrew Square/York Place ought to be based on a new business case and market conditions at the time.

- 3.62 Each of these incremental stage options would drive increases in tram patronage, strengthening fare box revenues and operational profitability.
- 3.63 However, it is likely to be several years before a case could realistically be made to extend tram line 1a beyond St. Andrew Square/York Place and it would, therefore, be prudent to prepare a fresh business case for each incremental phase of line 1a that might be considered in future years. Given, also, the need to build public confidence in the project, and the likely timescale to extend the line, it may also be prudent to explore other ways of funding these sections of the route. It would also be necessary to establish a detailed risk management plan for any works east of York Place, in light of previous on-street experience.

Princes Street Remedial Works

- 3.64 As reported to Council on 16 May, a specific outcome of the mediation process was an agreement by the infrastructure contractor to carry out, at its expense, a rectification plan to repair the deficient sections of Princes Street, as explained in the May 2011 Council Report.
- 3.65 It was initially proposed that this work would commence in July 2011, subject to consultation with the city centre business community and other stakeholders.
- 3.66 As a result of feedback received in the course of stakeholder consultation, and discussions with political Group Leaders, a decision was taken to postpone the start of the remedial work on Princes Street until September, immediately following the conclusion of Edinburgh's summer festivals.
- 3.67 The infrastructure contractor has written to the Council asserting its right to commence the work in September to remediate defective areas that represent a potential safety risk. In the meantime, temporary patch repairs will continue to be carried out, where required.
- 3.68 The revised programme for Princes Street will see remedial works take place from September until the end of November 2011, starting again in early January 2012 until the summer. The infrastructure contractor has indicated that if the work were to be postponed further it would impact the overall completion date and give rise to potential claims for prolongation of work. It is important that it is understood that the Infrastructure contractor has a right of

access to Princes Street, under the terms of the contract, to carry out the above works, irrespective of a decision on any of the options noted in this report.

- 3.69 Further details of the proposed Princes Street programme will be communicated to elected members once the detailed work programme has been agreed. Close consultation will be maintained with city centre stakeholders about necessary mitigation actions to ensure that access routes and deliveries to shops, offices, hotels and restaurants can be maintained and the public can be kept fully informed about how to move around the city centre during the works.
- 3.70 A detailed plan will also be drawn up for the Winter Festivals period when the infrastructure contractor will move off site leaving Princes Street as a pedestrianised area throughout December.
- 3.71 There are no plans to provide compensation for businesses affected by tram construction works. Businesses directly affected by a fall in property values may be able to seek temporary rates relief, and Council Officers have brought this matter to the attention of the Rates Assessor. Every effort will be made to promote the message that Edinburgh remains 'open for business'.

Picardy Place to Newhaven Reinstatement Work

- 3.72 One consequence of building Line 1a in phases, with the first phase terminating at St. Andrew Square/York Place, is that temporary road and pavement reinstatement works, carried out in the section of Line 1a from Picardy Place to Newhaven, notably in areas such as Constitution Street, Leith will need to be properly rectified. The temporary repairs were only designed to last for the duration of the Traffic Regulation Orders, put in place for the tram works.
- 3.73 The delayed completion of tram infrastructure in this section of Line 1a, means that work will need to be done to repair temporary reinstatements, and address specific defects and drainage repairs arising from the Multi-Utilities Diversion Framework Agreement (MUDFA) works, as well as removing and replacing temporary traffic management measures, including traffic signals.
- 3.74 This work will need to be funded primarily by re-prioritising the Capital Roads Maintenance Programme.
- 3.75 The total cost of reinstatement and repair works in the Picardy Place – Newhaven section is estimated to be between £2.3m - £3.4m, subject to decisions on the scope of works and proposed finishes.
- 3.76 The proposals for dealing with repair and reinstatement works for the Leith Walk section will be reported to the Council's Transport Infrastructure and Environment Committee later this summer.

Edinburgh Gateway Station

- 3.77 The completion of Edinburgh Gateway Intermodal Station will be critical to the successful future integration of train and tram services, in particular, for travellers using Edinburgh Airport and commuters to places of employment in West Edinburgh.

- 3.78 The proposed Edinburgh Gateway Station will facilitate the interchange of passengers from the central Scotland and Fife and North East Scotland (including Perth, Dundee and Aberdeen) rail networks to the tram, and onward to destinations across Edinburgh. Edinburgh Gateway is a Network Rail Scotland project funded by Transport Scotland, on behalf of the Scottish Government, and will be project managed by Network Rail Scotland, the ultimate client.
- 3.79 It had been intended that the completion of Edinburgh Gateway would be synchronised with the tram infrastructure programme. However, the current intention of Transport Scotland is to commence work on the station once the tram infrastructure at Gogar has been completed. This approach will ensure that interface risks which may have arisen from two, simultaneous construction projects can be avoided.
- 3.80 The current expectation is that the Edinburgh gateway project will go out to competitive tender via the Official Journal of the European Union (OJEU) in 2012.

Future Governance Arrangements

- 3.81 In light of the difficulties experienced in managing the delivery of the tram project through tie Ltd, as an arms length, Council-owned company, it is proposed that the governance arrangements for the management of the tram project should be revised.
- 3.82 The proposed changes respond to the findings of the interim report on the Edinburgh Tram Project by Audit Scotland in March 2010. They also deal with issues that emerged during the mediation talks about improving behaviours of the parties and ways in which project governance can be made simpler, and more streamlined. This is also intended to reduce project management costs for the project.
- 3.83 The revised governance model proposed is shown at Appendix 2; this also shows how the key project workstreams will report into a new unified organisational structure. Under these arrangements, the Council would become firmly established as the owner of the project, and its principal sponsor.
- 3.84 The proposed arrangements reflect the best practice guidance issued by the Office of Government Commerce and will follow PRinCE2 project management principles.
- 3.85 Under the proposals, a Joint Project Forum will be established. This Forum will bring together the principal representatives of all the key parties involved in the delivery of the project. The Forum will be chaired by the Council's Chief Executive, who will fulfil the role of Investment Decision Maker on behalf of the Council, as client.
- 3.86 The Joint Project Forum will include the key decision makers from the infrastructure suppliers – Bilfinger Berger Civil (UK), Siemens plc and CAF. Lothian Buses, as the proposed end user and operator of the tram, will also be

represented, as will Transport Scotland as the main funder on behalf of the Scottish Government.

- 3.87 Once the new arrangements have bedded down, the Joint Project Forum would meet every three months. In effect, this represents a return to the project partnering, collaborative approach to managing the project, which was intended when the contract was originally let.
- 3.88 The Forum will provide clear strategic leadership and direction to the project and will be supported operationally by a Joint Project Delivery Group, drawn from the Council's Transport service, tie Ltd, Lothian Buses and the infrastructure contractor.
- 3.89 The Joint Project Delivery Group will be tasked with managing the operational delivery of the project and reporting on progress against programme and budget. Major issues requiring consideration at a strategic level would be escalated to the Joint Project Forum.
- 3.90 The importance of effective arrangements for political scrutiny of the Tram Project is clear, and elected members need to have the opportunity to question the arrangements for managing the project and accounting for public funds. To this end, it is proposed that an Audit Committee should be set up, chaired by the Leader of the Council, and attended by Transport Scotland, and by elected members from each party group on the Council.
- 3.91 The final part of the revised governance model would be the establishment of a Stakeholder Forum, through which the Council, as Project Sponsor, together with the contractors can manage key relationships with stakeholders directly impacted by the tram project, including organisations such as BAA Edinburgh Airport, Henderson Global Investors (St James Centre), Forth Ports and other groups such as the Edinburgh Business Forum, Essential Edinburgh, the Federation of Small Businesses (Scotland) and the Edinburgh Chamber of Commerce, as well as representatives of local communities in areas impacted by the tram. Future arrangements for the day to day stakeholder liaison along the construction route are yet to be finalised between the Council and the infrastructure contractor.
- 3.92 The revised governance arrangements proposed will have implications for the existing relationship between the Council, TEL and tie Ltd. Following agreement at Mar Hall, major progress has been made in clearing the vast majority of design consents for the project. The infrastructure contractor has also agreed a self certification regime that will deliver the completed work to meet the employer's requirements.
- 3.93 To support this new approach, an independent Certifier has been appointed. This role was identified to assist project control. The role provides services in an independent, fair and impartial manner, although the Certifier carries a duty of care to the Council.
- 3.94 Key to this service has been identifying a realistic programme and financial profile introduced within the mediation process. Project control is executed through a managed process, chaired in an impartial, consensual style of site management.

- 3.95 The key project drivers of design, consents, programme, risk, construction and commercial are dealt with at weekly project control site meetings. The meetings resolve matters of project management in a tightly managed way. This process is an integral component of the operational project governance arrangements. Where required, any unresolved issues will be referred to the Joint Project Forum for consideration.
- 3.96 In light of the new approach, the role of the Tram Monitoring Officer will also change. The role will be more closely aligned to that of the Independent Certifier, and have a more active organisational role on the Joint Project Delivery Group. This role will now be undertaken by the Council's Traffic and Engineering Manager.
- 3.97 The method of measurement and payment for the construction works has also been simplified. A significant consequence of these developments is that there will be a reduction in the level of staffing resources required within tie Ltd. To that end, tie Ltd has initiated consultation with its staff about a programme of voluntary redundancies.
- 3.98 As a result of the changes above, and if the Council agrees to proceed with completion to York Place, the current operating agreements will need to be amended to: reflect the new governance arrangements and allow commitments to be incurred in line with the new budget estimates, once funding is secured. This will require further detailed work once the Council has determined which option is to be pursued. However, it will not be permitted for expenditure to exceed the currently approved budget before a further report is considered by Council.
- 3.99 In parallel with the above proposal, discussions are ongoing with senior management of Lothian Buses on the future management of the trams. Subject to the staff consultation, it is proposed that Edinburgh Trams Limited (ETL) staff should move across to Lothian Buses to continue the process of preparing for operations, ensuring a smooth transition. The Council as shareholder would welcome tie Ltd and Lothian Buses preparing for this transfer at the earliest possible stage.

4 Financial Implications

- 4.1 As previously reported to Council, there have been contingency plans prepared for up to £55m above the current committed funding. These plans would be funded through a combination of the surpluses from the business plan and the Council's long term financial plan. The increase in capital costs would clearly require the funding envelope to be pushed further, resulting in additional opportunity costs and/or revenue costs to support further borrowing.
- 4.2 The proposal to have a service to St. Andrew Square will result in a surplus of up to 10 trams, until further phases are eventually delivered. These would have a potential value through sale or leasing of £25m.
- 4.3 Based on the recommendations of this report, the estimated further funding gap on the project will be between £100m - £148m, with revenue consequences to support borrowing potentially between £7.1m - £10.6m. The funding gap includes a risk provision within the overall cost forecast of £77m. For the

Haymarket sub-option the funding gap appears less, but the loss of contingency funding and the need for revenue subsidy means the potential overall revenue consequences are increased.

4.4 **Should the project be terminated separation and cancellation costs will create a significant funding gap to be met from revenue, with a potentially higher risk to the sums for grant support already received from Transport Scotland.**

4.5 Discussions with Scottish Government have taken place. It has been agreed to further investigate all funding options and it is proposed to carry this work out in consultation with Transport Scotland and the Scottish Futures Trust. The Scottish Government's current position is that they remain committed to a grant up to £500m.

5 Equalities Impact

5.1 The proposals and recommendations described in this report could contribute to the public sector general equality duty to: (i) advance equality of opportunity. There is no distinct relevance in respect of the general duties to; (ii) eliminate unlawful discrimination, harassment and victimisation, or; (iii) foster good relations.

5.2 The relevance score for the specific proposals and recommendations described in this report is: (i) one for relevance to equalities legal duties; (ii) three for level of public concern expressed by equalities groups, and; (iii) one for relevance to significant negative impact on the quality of life of equalities groups.

5.3 Consequently, matters relating to this report will be included in the ongoing full equalities impact assessment that is being undertaken of the Edinburgh Tram project.

5.4 It should also be noted that due care has been taken with regard to accessibility issues arising out of the proposed Princes Street works. In this regard, an Equalities Statement and Accessibility Statement has been published on the Council's website and distributed to relevant partner organisations.

6 Environmental Impact

6.1 The Council's local transport strategy (2007-2012) emphasised the important role that a modern transport system would play in supporting the economic, environmental and social development of the city and the key contribution of the tram network to the city's future.

6.2 A full Scottish Transport Appraisal Guidance (STAG) review was undertaken at the Parliamentary Approvals Stage in 2003; this demonstrated how the Council, as promoter of the tram, had satisfied government objectives in terms of environmental, safety, integration, accessibility and economic concerns.

6.3 An updated STAG report, in 2006, concluded that despite the predicted increase in the city's population and traffic growth to 2026, there would be a

small, net improvement in air quality across the city as a whole, as a result of the introduction of the tram.

- 6.4 The STAG report acknowledged that within this overall net improvement there would be areas where air quality would deteriorate as a result of the displacement of traffic from the tram routes.
- 6.5 The Council remains committed to ensuring that any such air quality issues are properly monitored and addressed.
- 6.6 As a result of concerns expressed by residents of the Moray Feu, following the temporary diversion of traffic during the MUDFA utility works, additional air quality monitoring has been carried out on Great Stuart Street since July 2009 and, following the Tram Sub Committee meeting of 28 February 2011, additional air quality checks have been introduced in this area to include monitoring on building facades and at basement level.
- 6.7 The data from the existing and additional air quality monitoring levels in this neighbourhood will become available in the first quarter of 2012.
- 6.8 The tram itself has no carbon emissions at the point of service delivery and has the potential to contribute to the city's strategy for low carbon growth as electricity generation in Scotland transitions from fossil fuels to renewable energy sources.
- 6.9 As part of a broader sustainable transport strategy within the city the tram will, therefore, make a positive overall contribution to the environment by encouraging modal shift from private vehicles to public transport and mitigating the impacts of population growth and commuter and visitor generated traffic.
- 6.10 Air quality, especially in neighbourhoods which may receive traffic displaced from the tram route as a result of traffic regulation orders, will need to be carefully monitored and managed so that any issues can be dealt with and properly mitigated.

7 Conclusions

- 7.1 As the options set out above illustrate, the incremental delivery options for tramline 1a have been examined, in accordance with the guidance of the decision of Council from 24 June 2010.
- 7.2 The June 2010 report highlighted to Council that the Project had run into contractual difficulties and that issues of cost, programme and scope had emerged as risks to the successful delivery of the Project, made clear by the stalemate that developed in the autumn which led to the call for mediation. It is from this base that the current efforts to seek a solution have been undertaken.
- 7.3 As agreed by Council on the 18 November 2010 Motion (item 23), mediation has been undertaken to resolve the dispute that emerged in the Project and to work towards delivery of the Council's stated goal of a Tram line that runs from the Airport to Newhaven.

- 7.4 As a result of the mediation process, three options have become better defined: attrition, separation, or settlement. In the simplest terms: attrition would leave the Council at significant exposure to risk on a final cost; separation would still leave the Council with a situation where additional cost would be incurred and project completion could not be guaranteed. The recommended settlement would also incur additional cost, but with the benefit of delivering an asset for the city, concluding the current contractual difficulties, providing a revenue generating service, and enabling those works currently in the ground to be concluded.
- 7.5 In providing Council with an understanding of the available options and a recommendation on how to progress, a guiding principle has been how to secure Best Value from this point in this project. In that context, it is significant that both Department of Transport and Transport Scotland advice recommends discarding sunk investment costs when assessing Benefit Cost Ratios (BCR) for infrastructure projects. The BCR for completion to St. Andrew Square, computed on this basis is **2.2**.
- 7.6 Consideration of Best Value is a difficult balancing act which has included consideration of contractual matters that are commercially sensitive, and needed to be looked at from the perspective of what is best for the City, the Council and the Project. The revised project management arrangements will reassert the Council's role as client and sponsor of the Project, as explained in paragraphs 3.81 to 3.99.
- 7.7 The scale and complexity of the current situation requires direct, assertive action, as was recognised by Council in November. Following the work undertaken by officers, a clear course of action has now been established. Agreement to pursue Option (iii) (Airport to St. Andrew Square/York Place) would allow the Council to pursue to conclusion the Settlement Agreement with BSC. It is proposed that the terms of the settlement should be delegated to the Chief Executive to take forward, following consultation with political group leaders.
- 7.8 In the period before a full settlement agreement can be concluded, TEL/tie Ltd will need to continue to operate with the authority to progress the priority works, in accordance with MoV4, and to incur expenditure accordingly, until the end of August 2011.
- 7.9 To ensure that Council has full confidence in the proposed new governance arrangements, a detailed explanation of those arrangements will be brought back to Council in the autumn.
- 7.10 All of the above is, of course, conditional on funding being available. A detailed explanation of the position regarding revised funding will, therefore, also be brought back to Council in the autumn.

8 Recommendations

8.1 That Council:

- a) Agree that of the options available, and subject to funding, Option (iii) (Airport to St. Andrew Square/York Place) should be pursued to provide a revenue generating service and realisation of the investment to date;
- b) Authorise the Chief Executive to enter into the Settlement Agreement which is conditional on funding, substantively on the terms set out in the Settlement summary contain in the confidential appendix, with such amendments as may be considered appropriate;
- c) Authorise tie Ltd to progress on the priority works, in accordance with MoV4, and incur expenditure within the limits of the project budget of £545m, until the end of August 2011;
- d) Instruct the Director of City Development to report back to Council in the autumn with a detailed explanation of:
 - i. the revised governance arrangements; and,
 - ii. the funding, once this has been finalised.
- e) As shareholder, ask Lothian Buses to assist in preparing for operations, by accepting transfer of ETL, subject to staff consultation, as soon as possible.

Dave Anderson
Director of City Development

Appendices	<ol style="list-style-type: none">1. Tram Route 1a Diagram2. Revised Governance Model3. Atkins Independent Review of the Business Case (Summary)
Contact/tel/Email	Dave Anderson, Director of City Development dave.anderson@edinburgh.gov.uk Tel 0131 [REDACTED]
Wards affected	All

Single Outcome Agreement

[National Outcomes:](#)

- National Outcome 1 - We live in a Scotland that is the most attractive place for doing business in Europe
- National Outcome 10 - We live in well-designed, sustainable places where we are able to access the amenities and services we need
- National Outcome 12 - We value and enjoy our built and natural environment and protect it and enhance it for future generations
- National Outcome 14 - We reduce the local and global impact of our consumption and production.

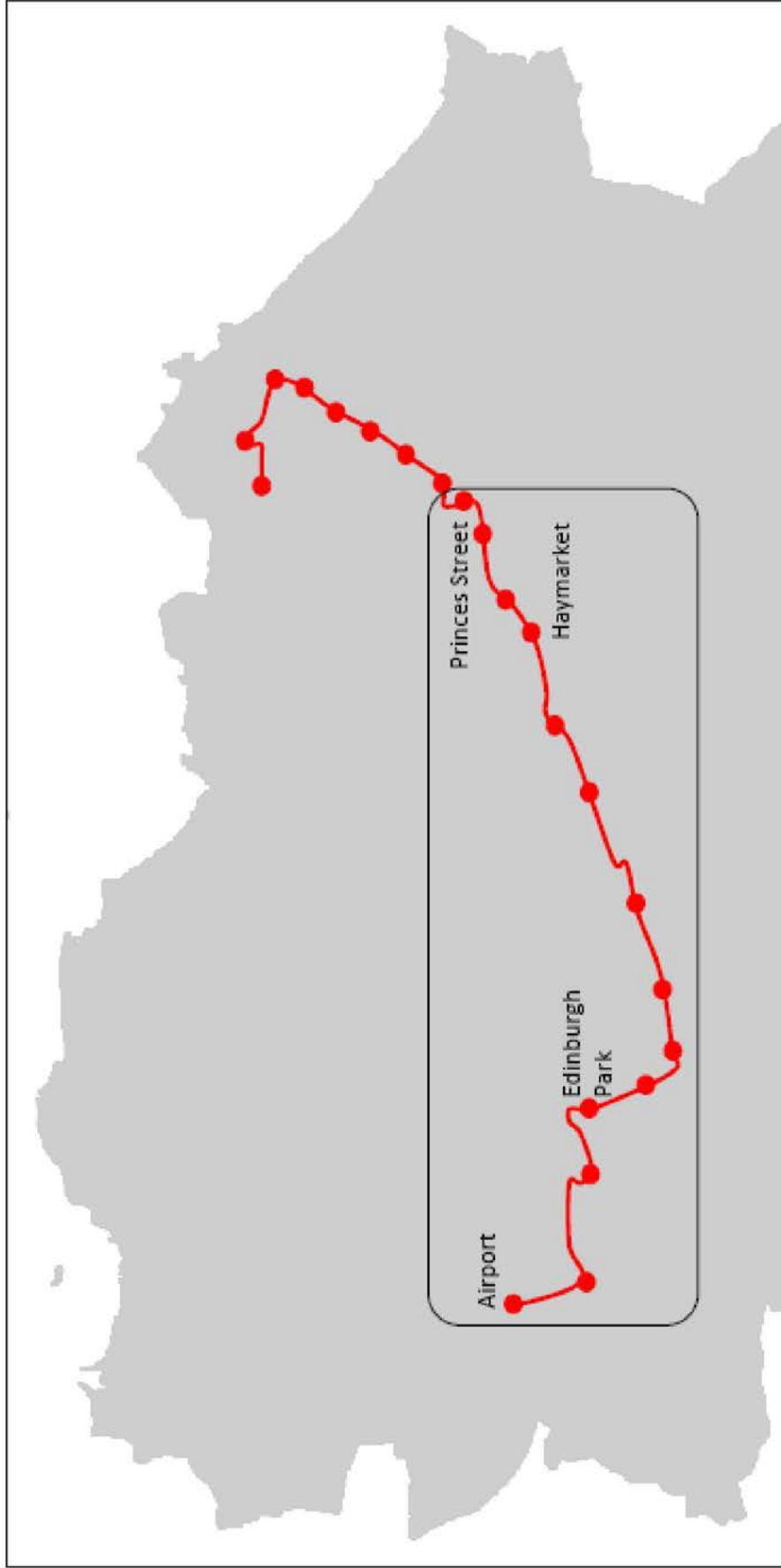
Background Papers

- The City of Edinburgh Council Meeting, 16 May 2010, Item 2.1: [Edinburgh Tram Update](#)
- The City of Edinburgh Council Meeting, 16 December 2010, Item 8.2: [Edinburgh Tram Project](#)
- The City of Edinburgh Council Meeting, 14 October 2010, Item 8.1: [Edinburgh Tram Update Report](#)
- The City of Edinburgh Council Meeting, 24 June 2010 Report, Item 8.2: [Edinburgh Tram Project - Update Report](#)

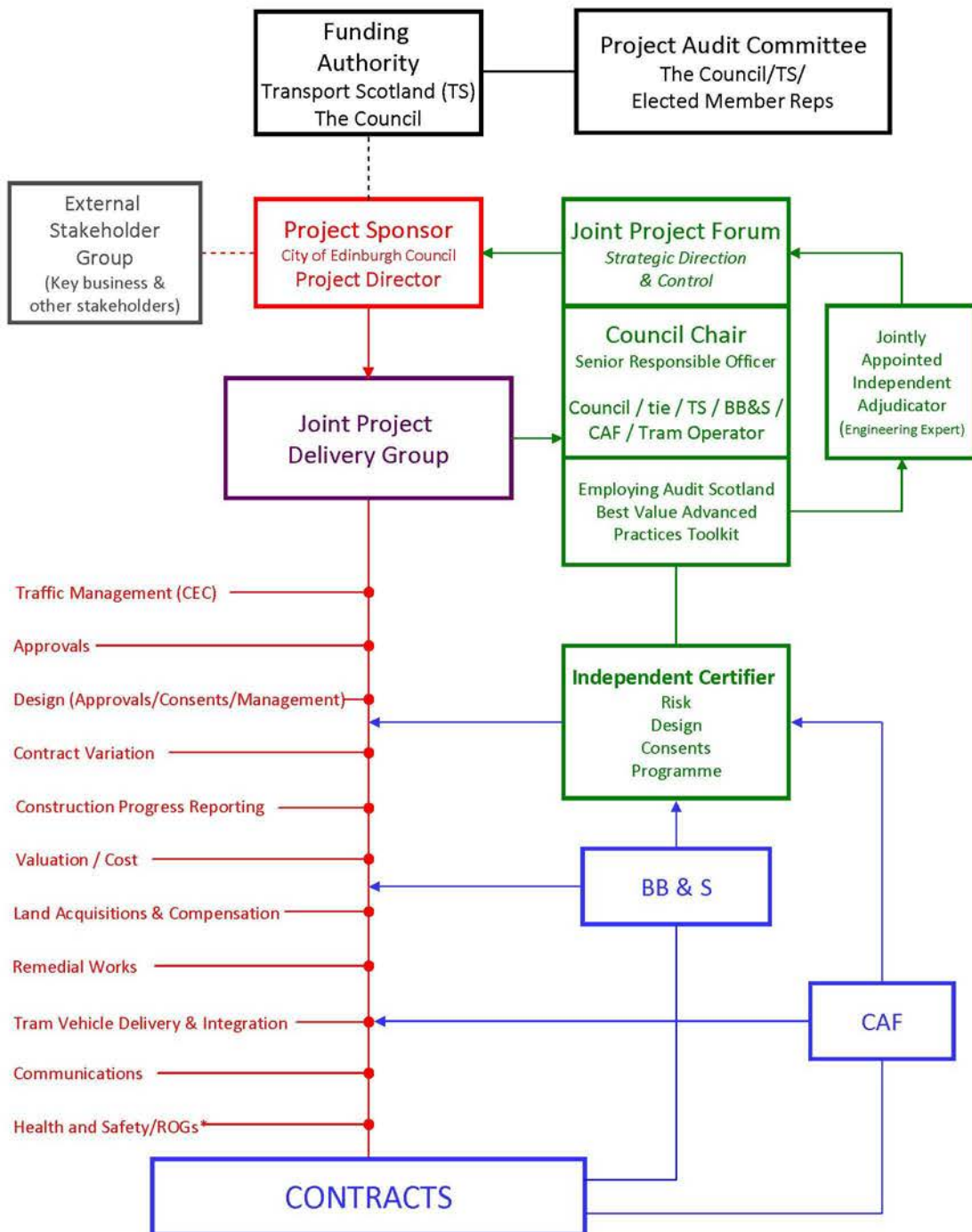
Addendum to paragraph 3.61, bullet point 2 and paragraph 7.5

In finalising the production of the Atkins report, there has been an adjustment in the treatment of sunk costs, and their relationship to remaining infrastructure costs for the St Andrew Square appraisal, as reference on page 2 of appendix 3. As a result the BCR for St. Andrew Square should be **1.85**.

Tram Line 1a

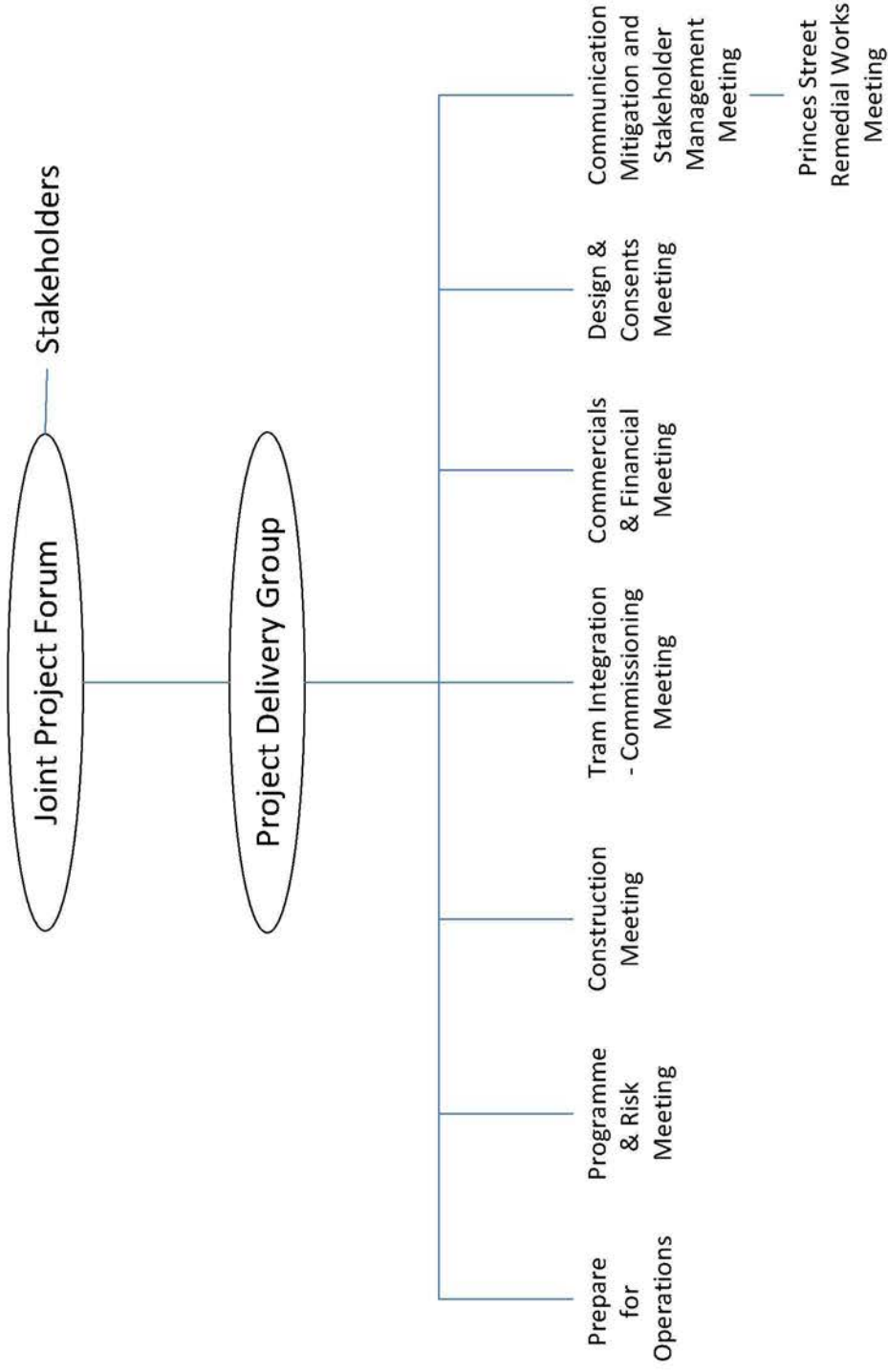


Revised Project Governance Structure



* RoGs are [The Railways and Other Guided Transport Systems \(Safety\) Regulations](#)

Revised Project Meeting Hierarchy



Atkins Independent Review of the Business Case (Summary)

Atkins

Edinburgh Tram Business Case Audit

June 2011

ATKINS

Plan Design Enable

CEC01914650_0054

Edinburgh Tram – Business Case Audit

June 2011

Executive Summary

Notice

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Executive Summary

Edinburgh Tram Business Case Audit

Atkins is the UK's largest engineering and design consultancy and has extensive experience in the planning, design, and delivering of mass rapid transit projects in the UK and overseas.

We were commissioned by the City of Edinburgh Council (CEC) in April 2011 to undertake an independent review of the Edinburgh Tram Business Case. The audit's principal focus has been reviewing the work which the Joint Revenue Commission (JRC) has been undertaking in assessing the benefits that could be gained from the introduction of the proposed tram system in Edinburgh.

Key inputs to the audit have included: Edinburgh Tram Network Final Business Case Version 2 (2007), Edinburgh Tram – Business Case Update (2010), recent analysis on three route options undertaken by JRC in parallel to the audit, historic revenue and risk reports, and the current financial models for the tram.

Options Tested

The JRC was commissioned by the City of Edinburgh Council in April 2011 to provide updated TEE analysis¹ for the following three tram routes options:

- The full Phase 1a, Edinburgh Airport to Newhaven;
- Truncated Phase 1a, Edinburgh Airport to St Andrews Square; and
- Truncated Phase 1a, Edinburgh Airport to Foot of the Walk.

Business Case Components

Our business case audit has focussed on the updated TEE analysis that has been provided by the JRC during June 2011. In addition to quantifying the benefits and costs to Government via the TEE analysis STAG² requires that other relative benefits from a transport scheme are presented within the context of the following parameters:

- Environment;
- Safety and Security;
- Accessibility and Social Inclusion;
- Transport and Land Use Integration;
- Economic Regeneration; and
- Economic Activity and Locational Impacts (EALI).

The Edinburgh Tram Network Final Business Case Version 2 (2007), and Edinburgh Tram – Business Case Update (2010) provide evidence of the relative benefits within each of these parameters; while these elements have not been updated by the JRC team, or reviewed in detail as part of this audit, we have drawn our overall conclusions acknowledging this wider context for the scheme.

The scheme's capital and revenue costs are a key input to the TEE analysis. The updated capital costs used by the JRC are presented in the table on the next page. These have been an important input to our

¹ Transport Economic Efficiency

² Scottish Transport Appraisal Guidance, Scottish Government, 2011

work, but we have not undertaken any auditing work specific to costs. Tram operating costs and savings associated with reducing bus provision have been provided to the JRC from TEL.

Updated Capital Costs³

Outturn Costs £m	Phase 1a	St Andrews Square	Foot of the Walk
Infrastructure costs already spent (sunk costs)	469	469	469
Vehicle costs	62	42	50
Remaining infrastructure costs	286	198	256
Total capital costs	817	709	775

Our Approach

The approach Atkins has adopted to undertake the business case audit has been developed around answering three questions:

- The **tools** used – are they fit for purpose?
- The **assumptions** used – are they reasonable?
- The **outputs** – do they look credible?

The Tools Used – Are They Fit for Purpose?

Our assessment of the appropriateness of the tools used has focussed on the modelling suite and the appraisal methodology.

The modelling suite comprises a number of elements, including the High level Model (HLM), which is a strategic multi-modal demand, network assignment and distribution/mode choice model developed using VISSUM software. The HLM is the main source of data for the assessment of demand, revenue, and user and non-user impacts which drives the benefits side of the TEE/BCR calculations, and, as such, has been the focus of our review of the tools used.

The model was subject to a detailed audit in 2008, and enhancements were implemented on the basis of recommendations made at that time. We have not replicated the technical depth and of that audit, but have reviewed aspects of the HLM to which the outputs (the benefits in the TEE/BCR calculations) are most sensitive. This has included the quality of the representation of highway and public transport network performance, and the behavioural parameters which drive mode choice.

Our overall assessment of the HLM is that it is an appropriate tool for the purposes of informing the TEE/BCR assessment. We have however identified some areas of relative weakness (not unusual in a model of this size and complexity), which we have used to interpret output and influence the focus of sensitivity testing requested. These are documented further in the main body of our report.

We have found the scheme **appraisal methodology** to be in line with standard good practice, and with the requirements of STAG. However, we do recognise that since the STAG appraisal was undertaken that there has been a number of changes in the context within which the appraisal was undertake; most notably within the policy context, and in particular the prominence of climate change policies that have emerged as a result of the Climate Change (Scotland) Act 2009. It is therefore recommended that consideration is given to refreshing the wider appraisal to ensure that the full benefits of the tram scheme are captured within a contemporary context.

³ Provided by CEC

In summary, therefore, our review of the tools which were used within the Business Case has found them to be broadly fit for purpose, with any relative weaknesses examined through sensitivity testing and interpretation.

The Assumptions Used – Are They Reasonable?

A number of assumptions have been made by the JRC in the development of the business case. The key assumptions that we consider to have the most significant influence on the business case relate to the following areas.

The composition of the transport network – now and in the future

The modelling tools used by the JRC to generate outputs has been updated periodically to reflect changes in the existing transport network, and the nature of the network in the future. A number of assumptions have been made regarding the infrastructure and operational characteristics for both the highway and public transport components of the transport network. In order to inform and validate these assumptions the JRC has engaged with a number of key stakeholders who are best placed to provide a view on the scale and magnitude of the variables associated with the transport network. Representatives for the following organisation contributed - CEC, SDS⁴ tie, Lothian Buses, and Transport Scotland.

On the basis that they had been validated by local stakeholders, we were broadly satisfied with these assumptions, however, we have not undertaken our own detailed review of the model's public transport network representations. We also considered it prudent to recommend a sensitivity test that replicated potential competition for the tram from a bus operator between the city centre and the airport.

The demand for transport – now and in the future

The original development assumptions which were utilised within the 2006 model were updated in 2010 to inform the Business Case refresh and again in 2011 for the most recent TEE analysis. The existing assumptions reflect the current advice from CEC planners and reflect the need to take account of known changes in development figures and the current economic climates and its impact on development in Edinburgh. An adjustment has also been made to the predicted future patronage forecasts to reflect recession impacts on bus patronage in Edinburgh, this has been derived base on adjustments proposed by TEL that reflect Lothian Buses recent experience of the bus market in Edinburgh.

Clearly, future development will provide much of the future demand for the tram and we recommended that a sensitivity test should be undertaken to represent a worst case scenario where no future development occurred.

Traveller responses to the tram

Finally, the JRC has made a number of assumptions relating to a number of parameters that will influence a traveller's propensity to use the tram – these include factors such as travellers' value of time, the relative attractiveness of the tram as a mode of travel, and the impact of having to interchange.

We have benchmarked the assumptions used by the JRC and are content that they are appropriate for use in the development of the business case. The parameters used to assess the scope for transfer to tram from other modes are cautious compared to similar schemes elsewhere, and we note that there may be some scope for greater shift to tram than has been forecast. However, in the interest of prudence we have also recommended that a sensitivity test was undertaken to assess the impact of lowering the relative attractiveness of the tram as a mode of transport.

The Outputs – Do They Look Credible?

The outputs which the 2011 analysis has supplied can be broken into the following main categories:

- Tram demand/revenue;

⁴ The Edinburgh Tram system designer

- Impacts on public transport users;
- Impacts on road users; and
- Value for money (TEE tables and BCR).

The outputs for each of these categories are shown in the tables below for all three options tested. While we have not undertaken a detailed review of the 2010 Financial Model, we have sought to reassure ourselves that the demand and revenue figures emerging from the current JRC work can be reconciled with corresponding numbers informing the 2010 financial assessment. This is because the level and profile of demand is critical to the financial performance of the scheme. It is important to ensure that changes and enhancements to the model for the purpose of the current tests have not given rise to a significantly lower set of demand forecasts, potentially contradicting earlier conclusions from the Financial Model in relation to the financial viability of the scheme.

For the two options where a direct comparison can be made, Phase 1a and St Andrews Square, the new demand forecasts are broadly in line with (or – in later years – exceed) the demand levels in the Financial Model, and are therefore consistent with the demand inputs to the Business Case Review of 2010.

In terms of overall public transport demand levels at 2011 we are also satisfied that these appear plausible relative to the observed figures that we understand to have been verified by Lothian Buses during a similar check undertaken at 2010.

In addition to the overall demand levels, we have also examined supporting material relating to the scale, distribution and source of demand. We found these outputs broadly plausible, but noted:

- The unusually high proportion of those forecast to use tram whose previous mode was car (for the St. Andrews Square option (of the order of 40%). This is only likely to be deliverable with the level of quality of service (both for those switching directly to tram, or those using P&R) envisaged within the model, in terms of comfort, journey time and reliability; and
- The prominence of 'counter-peak' movement with the St Andrew's Square option, with a significant element of demand travelling outbound from the city centre in the morning peak to access areas such as Edinburgh Park.

We have reviewed the emerging TEE tables (as set on the next page) and a number of supporting outputs relating to the level and distribution of impacts upon both users and non-users of the scheme. We have found these broadly plausible, but would make the following observations:

- The distribution of non-user impacts (impacts upon car users) appears broadly in line with expectations. However, in our experience the overall level is difficult to quantify, and we would view this as particularly the case with the tools used for this assessment, given some of the weaknesses in the highway element of the model. For this reason we would express caution in comparing the relative merits of options where non-user benefits form a key component. The JRC team has stated that no future junction optimisation has taken place to address specific points of congestion due to traffic re-assignment, and we accept that this may over-state disbenefits (particularly on the Phase 1a assessment).
- We believe the level and distribution of user benefits look broadly plausible. These benefits will however be driven directly by the level of demand for, and transfer to tram, and are therefore sensitive to issues such as future development and propensity to switch. This has been explored through sensitivity testing.

Treatment of costs

A benefit to cost ratio of less than one suggests that the economic return would be less than the investment, even when appraised over 60 years. The BCR of the options taking into account the full costs and benefits have been found in the current analysis to be less than 1. In other words completing the project will incur more expenditure with an overall return of less than one.

However, to abandon a scheme where such a large proportion of the costs have been sunk would represent a zero-return on a large investment. In this case when the analysis is being carried out after

sunk costs have occurred it is conventional and reasonable (as set out in STAG and WebTAG appraisal guidance)⁵ to account for sunk costs in the scheme appraisal for a fair comparison between investment opportunities.

The analysis if JRC’s updated business case also appraises the full benefits against only the costs of completion and operation then the BCRs for the three options are:

- The full Phase1a, Edinburgh Airport to Newhaven, **BCR = 1.33**
- Truncated Phase 1a, Edinburgh Airport to St Andrews Square, **BCR = 2.20**
- Truncated Phase 1a, Edinburgh Airport to Foot of the Walk, **BCR = 1.23**

We would however express caution in using the relative BCRs for the three options tested to inform decision-making on the relative merits of the alternative options, particularly in light of the significant differential performance in terms of non-user impacts , and the degree of confidence which can be attached to this element of the appraisal.

Updated TEE Outputs (Source – JRC, June 2011)

£m Present Value, 2002 prices	Revised Phase 1		St Andrews Square		Foot of the Walk	
	Full Costs	Minus Sunk Costs	Full Costs	Minus Sunk Costs	Full Costs	Minus Sunk Costs
Public transport user benefits	541	541	340	340	493	493
Other road user benefits	-196	-196	74	74	-156	-156
Private sector provider effects	81	81	68	68	60	60
PV of Scheme Benefits	427	427	482	482	397	397
PV of Scheme Costs	760	321	658	219	762	323
Net PV	-334	106	-176	263	-365	74
Benefit Cost Ratio to Government	0.56	1.33	0.73	2.20*	0.52	1.23

*Please note that following an update on the treatment of sunk costs in relation to St Andrew Square, the BCR for St Andrews Square should now read 1.85.

Risks & Uncertainty

The audit has established a number of areas in the business case where there is a degree of risk and uncertainty as with any modelling work. Below we set out our areas of concern and the outputs from the sensitivity testing that was undertaken to help quantify the impact of these risks on the business case.

Much of the future demand/benefit relates to **new committed development**, this is an area of inevitable uncertainty which could have a possible impact on revenue and the economic case for the tram scheme.

⁵ http://www.transportscotland.gov.uk/stag/td/Part2/Cost_to_Government/12.2
<http://www.dft.gov.uk/webtag/documents/expert/pdf/unit3.5.9.pdf>

A 'worst case' zero growth sensitivity has demonstrated that the tram demand would reduce by around one-third in 2031.

There is a risk that a bus operator could establish a service to run in competition with the tram between the city centre and the airport, and a sensitivity test has been undertaken to replicate this by using the Service 100 as a proxy for competition. The outputs suggest that tram revenue would decrease by around 6%.

Much will depend on the relative 'levels of service' the tram provides the travelling public. A sensitivity test has been undertaken to replicate a less favourable differential for the tram when compared with the bus, this shows that the tram demand and revenue could reduce by around 12%.

The relative impacts of these sensitivity tests on the BCR are presented below for St Andrew's Square.

Sensitivity Test Results (Source – JRC, June 2011)

£m Present Value, 2002 prices	St Andrews Square			
	Minus Sunk Costs	Mode Constant Increased	Competition	Zero Growth
Public transport user benefits	340	289	362	227
Other road user benefits	74	47	74	49
Private sector provider effects	68	64	76	45
PV of Scheme Benefits	482	400	511	321
PV of Scheme Costs	219	246	322	254
Net PV	263	154	190	67
Benefit Cost Ratio to Government	2.20**	1.63	1.59	1.26

**Please note that following an update on the treatment of sunk costs in relation to St Andrew Square, the BCR for St Andrews Square should now read 1.85.

Conclusions

Our overall conclusions from our review are:

- The tools and assumptions adopted and the outputs from the analysis are broadly fit for purpose, in line with our expectations, and comparable to experience on other schemes.
- We have identified a number of areas of risk and uncertainty. Sensitivity testing has been used to quantify the impact of these areas of risk and uncertainty on the business case for the St Andrew's Square option. Even allowing for these downbeat assumptions, once sunk costs are taken account of, there remains an economic case for the St Andrew Square option, on the basis that each of these pessimistic tests still delivers a BCR of greater than 1.

The City of Edinburgh Council Meeting, 25
August 2011, Item 8.2: [Edinburgh Tram
Project](#)

Edinburgh Tram Project

The City of Edinburgh Council

25 August 2011

1 Purpose of report

- 1.1 Further to the report to Council on 30 June 2011 on the Edinburgh Tram Project this report advises of progress made on the Council's instructions over the summer period and makes recommendations on the future funding options and governance arrangements.

2 Summary

- 2.1 In agreeing the Edinburgh Tram Report to Council on 30 June 2011, the decision of Council set out a number of actions for Council officers. The Chief Executive and Director of City Development were to report on the funding arrangements, and to report in detail on the risks being incurred, particularly in relation: to utilities in the Haymarket to St. Andrew Square section; the risks surrounding the potential sale or lease of tram vehicles; and, the method and manner in which the Haymarket to St. Andrew Square section has been de-risked.
- 2.2 A funding proposal has subsequently been prepared which would allow the Council to revenue fund the necessary borrowing, in a manner that would allow for refinancing options to continue to be pursued, whilst allowing the project to progress.
- 2.3 A detailed review of the key project risks has been carried out, validated by Faithful and Gould, construction cost management consultants, to ensure that appropriate risk management procedures are in place.
- 2.4 This report also sets out further detail on revised governance arrangements; the refresh of the 'Open for Business' programme; and updates Council on certain other Tram related matters.

3 Main report

- 3.1 At the Council meeting of the 30 June 2011 a report was presented on the Edinburgh Tram project. Following consideration of that report, the Council instructed the Chief Executive and the Director of City Development to prepare a further report to address how funding was to be provided for the Project going forward. The Council also sought a detailed explanation of project risk and how

it is to be managed; revised governance arrangements; and a refresh of the previous 'Open for Business' programme.

- 3.2 In addition, the Council instructed the procurement of road, pavement and public realm improvements for the Picardy Place to Newhaven section of Tram Line 1A, utilising funds set aside in the Council's capital programme for that purpose.

Progress since June Report

- 3.3 Since the June report significant progress has been made by the parties on the commercial terms of the Settlement Agreement. In addition, there has been good progress towards the completion of agreed priority works at Haymarket Yards, the A8 underpass the Tram Depot and test track.

Risk

- 3.4 In June the Council asked for greater clarity about the risks being underwritten by the Council in relation to the project, to enable a fully informed decision to be taken as to the acceptability of any new funding commitment.
- 3.5 A further full review has been carried out of the key project risks against the proposed budget. This review has been validated by Faithful and Gould. The review considered the robustness of the financial assessment as presented to Council on 30 June 2011. This has been updated as new information has become available.
- 3.6 Faithful and Gould have both tested and validated the figures and the underpinning assumptions. A revised budget has subsequently been produced and is summarised later in this report.

Legal risks

- 3.7 In addition, a confidential schedule summarising the key legal risks in relation to the project has been prepared and will be shared on a confidential basis with Elected Members.

Utilities

- 3.8 Since June further investigations have been instructed on key sections of the on-street works between Haymarket and York Place, in particular to identify conflicts arising as a result of the finalised design, including the locations for Overhead Line Poles.
- 3.9 Trial bore holes have been opened up in known utility areas supplemented by radar scanning, which is ongoing, across the entire route covering both the immediate tram movement corridor and the adjacent locations of bases for overhead line equipment poles. These further investigations have identified circa 550 potential utility conflicts although it is not believe that all of these lie on the critical path.
- 3.10 The Utilities diversions have had a significant effect on the project, both in terms of programme delay and direct costs. The Faithful and Gould review of this area has considered lessons learned from the past and aimed to anticipate

how such difficulties might better be overcome as we move forward. In light of this an appropriate risk allowance has been included in the project budget to cover clashes between utilities and the infrastructure.

Funding

- 3.11 The report to Council on 30 June set out the requirement to identify additional funding for the project up to a value of £772m, being a base budget allowance of £695m plus a £77m risk provision. The current approved budget for the project is £545m, comprising Transport Scotland funding of £500m and £45m from the Council.

Scale of Funding Requirement

- 3.12 In the period since the Council meeting on the 30 June, Council officers have been seeking to validate the programme budget and provide further assurance on the project costs and required risk allowance.
- 3.13 The review of the budget has validated the base budget allowance for the project to York Place at £742m. The quantified risk allowance for the project has been validated at £34m, giving a total budget requirement of £776m. The review has also confirmed that the funding required for completion of the project to York Place is £231m in addition to the previous budget sum of £545m. Table 1 shows the resultant shift from the previous risk and contingency allowance into the current base cost and consequential reduction in risk requirement.
- 3.14 Every effort has been, and will continue to be, made in relation to finalising an outturn cost for the project. It is not possible to guarantee a fixed or maximum cost as the works, particularly the on-street section, carry inherent risks as highlighted above. However, Council can be assured that all reasonable steps have been taken to quantify the risks and make provision for these based on an assessment of their probability and impact, as reflected in the revised budget. This reflects best practice in project risk management.
- 3.15 The shift from the previous contingency sum to the base budget has resulted from greater certainty being achieved in relation to the cost of on-street infrastructure, greater knowledge of the utilities issues and further design completion. This has resulted in a move from the high level broad assessment of risk that was made in June 2011, to a more granular and detailed assessment of specified risk.

Budget Summary	Estimated Budget	Validated Budget
	As at 30/6/2011 (£m)	As at 25/8/2011 (£m)
Base Budget	695	742
Risk and Contingency	77	34
Current Programmed Budget	772	776
Table 1: Movement in Budget Figure following Review and Validation		

- 3.16 In order to achieve the most robust possible cost estimates Faithful and Gould have worked with Council Officers to validate the base budget for the works from Airport to York Place and have also completed thorough testing and validation of the proposed risk allowance. A confidential schedule summarising of the findings of Faithful and Gould Review has been prepared and will be shared on a confidential basis with Elected Members.
- 3.17 The validation exercise has involved a comprehensive review of the most up-to-date and relevant financial, legal and commercial information, to enable a detailed budget for the project to be produced.
- 3.18 In addition, Faithful and Gould have facilitated workshops with all relevant officers to assess the robustness of the project risk allowance on the basis of current available information. Bilfinger Berger Civil (UK) and Siemens plc provided information to assist with this assessment. The findings of this work have informed the quantified risk allowance for the remainder of the project.

Options Appraisal

- 3.19 The Council report of the 30 June estimated the costs of separation from the infrastructure contract unilaterally and resolving matters through the courts. This estimate was based upon detailed work conducted on behalf of the Council by legal advisors McGrigors LLP and validated by Faithful and Gould.
- 3.20 The specific agreement reached at mediation was that each of the Consortium members would prepare sealed envelope estimates of their costs for walking away from the contract in the event that the Council was unable to secure the necessary funding to complete the project. Further discussions now indicate, in the event that the Council is unable to secure approval of the funding to complete to St. Andrew Square, termination of the contract by this mechanism, resolving all related liabilities, as at the 25 August, i.e. some £80m below the costs of unilateral separation as previously calculated. However, it should be noted that this is currently **not** legally binding.

- 3.21 This option is **only** available if the Council is unable to approve funding to complete to St. Andrew Square/York Place. It is important that it is remembered that project cancellation would leave the Council with only a partial tram asset, and no tram operational revenue, and a significant revenue exposure for the balance of any termination in the year of cancellation.
- 3.22 In order to assess other avenues of funding discussions have been held with the Scottish Futures Trust. Inverleith Capital was also commissioned to appraise potential financing routes. Their analysis examined the pros and cons of options such as private sector equity / debt models, franchising, and Council prudential borrowing.
- 3.23 Inverleith Capital have concluded that, at this time, taking due account of criteria including deliverability and cost, the most immediately deliverable option is to use borrowing via the prudential framework to finance the remainder of the project. A 30-year repayment period has been assumed for the proposed borrowing with an interest rate of 5.1%. It should be noted that current rates are less than the 5.1%. The ratio of principal to annual debt servicing costs, at these interest rates, is estimated at 15:1. The Council's Long Term Financial Plan (LTFP) has been examined to identify potential revenue streams that could be used to meet the costs of prudential borrowing at this level.
- 3.24 The Council's LTFP makes specific provision for loan charges associated with Council borrowing. Additional borrowing will therefore have a direct impact on the plan. However, there remains scope to accommodate some additional borrowing within the existing limits of the LTFP. Table 2, below, identifies options for financing additional borrowing. In reviewing loan charge assumptions within the LTFP it has been identified that the following provision could be allocated to the Trams project: It should also be noted that changes to the national grant system is expected to benefit Edinburgh, these changes are highlighted below.
- Pro-active Treasury Management of the loans portfolio, together with current lower interest rates, has identified loans charges headroom of £3.9m per annum;
 - Unallocated revenue sums of £2m per annum have been provided to meet costs of infrastructure investments.
- 3.25 These items in addition to revenue from the TEL Business Plan and income from leasing of tram assets to the operator would leave a balance of £4.8m. This balancing item would represent a pressure on the Council's Revenue Budget, equivalent to approximately 0.34% of the Gross Revenue Budget. There may be further Treasury Management opportunities given the profile of current maturing debt to derive savings that would reduce this exposure.

	Revenue Impact £m	Capital £m	Cumulative Funding £m	Notes
TEL Business Plan	2.0	30.0	30.0	Previously Identified in Council's contingency planning
Infrastructure Provision in Budget	2.0	30.0	60.0	Previously Identified in Council's contingency planning
Loans Charges Headroom	3.9	58.5	118.5	
Income from Leasing of Tram assets to operator	2.7	40.5	159.0	
Additional CEC Revenue (Unbudgeted pressure)	4.8	72.0	231.0	

Table 2: Long Term Financial Plan (LTFP) potential revenue streams

- 3.26 In addition to the above revenue streams when the Council's Capital Investment Programme (CIP) 2011/15 was constructed prudent assumptions were made about resources available from capital grants. Once the spending review is announced later this year, there may be an opportunity to apply resources within the CIP, which would ease impact on the revenue budget.
- 3.27 The Council's gross expenditure in 2011/12 is £1.4bn. The annual revenue costs of the additional borrowing required by the Tram project is estimated at **£15.3m**, approximately 1% of the Council's gross budget. On this basis, the additional borrowing could certainly be sustained by the Council, albeit that it would place some additional pressures on the Council's budget.
- 3.28 To enable the Council to meet the £231m funding requirement the Council's prudential funding limits will need to be increased by this amount with the on-going borrowings costs met by revenue streams identified above.

Phasing of Funding Requirement

- 3.29 The Council will need to manage the cashflow for the project over several years. The funds in question will build up over a period of four financial years and the finance required will be managed within the context of the Council's treasury management strategy. The phasing of the project cashflow is highlighted in table 3 below.

Financial Year	Estimated Cashflow £m	Remaining Grant from Transport Scotland £m	Funding Required £m	Revenue Impact £m
2011/12*	157.01	12.00	145.01	3.738
2012/13	84.72	25.00	59.72	11.160
2013/14	25.72	25.00	0.72	13.600
2014/15	35.55	10.00	25.55	14.286
Risk assessment (remaining)				15.323
Full Year Annual Cost	303.00	72.00	231.00	

Notes: *Part year from full construction re-start

Table 3: Phasing of the funding requirement

- 3.30 The annual revenue charge of £15.3m does not take account of the time value of money. The UK government's discount rate of 3.5% at Net Present Value (NPV) would reduce the cumulative revenue charge from £459m to £291m. The discount rate is used to convert all costs and benefits to 'present values' so that proper comparison of time related cash flows can be made. Calculating the present value of differences between the stream of costs and benefits provides the NPV of an option.
- 3.31 In normal practice, the benefits of an investment would also be applied against the cash outflows. It is worth remembering that there are significant revenues derived from the tram project that would offset the costs of the project.
- 3.32 The allocation of the above revenue streams for the Tram project, whilst placing no immediate pressure on other Council services, represents an opportunity cost for the Council and will therefore reduce the options available to meet future service pressures in the context of demographic changes, price inflation and reduced government funding. However, even with the proposed additional borrowing, all the Council's existing capital commitments will be honoured.
- 3.33 However in the event of project cancellation, there would be a one year revenue impact of over £161m¹. The impact on Council Tax levels to finance this magnitude of revenue would be equivalent to a one year increase of 80%. The Council's current reserves, including earmarked reserves, would not provide the level of revenue required. This assumes that the Transport Scotland Grant to date would not have to be repaid.**
- 3.34 The reputational damage to Edinburgh and to Scotland of failing to complete the project would also be significant and could harm the City's future investment prospects. Failure to complete would also have significant environmental consequences, as explained in the 30 June Council Report.

¹ Amended (Wednesday, 24 August 2011) from the previously reported £180m.

- 3.35 As explained in the 30 June report, the proposed Edinburgh Gateway Station will facilitate the interchange of passengers from the central Scotland and Fife and North East Scotland (including Perth, Dundee and Aberdeen) rail networks to the tram, and onward to destinations across Edinburgh. Edinburgh Gateway is a Network Rail Scotland project funded by Transport Scotland, on behalf of the Scottish Government, and will be project managed by Network Rail Scotland, the ultimate client. It is a significant national project where integration of train and tram services will allow easy public transport access to Edinburgh Airport.
- 3.36 In recognition of the impact that allocating these funds for the Tram would have on future Council services, the Council's Chief Executive continues to seek dialogue with the Scottish Government on policy changes which could provide additional revenue resources to the Council. Topics for discussion with the Scottish Government would include:
- the SNP's manifesto commitment that no council should receive less government funding than 85% of the Scottish per capita average. It is estimated that an increase in Edinburgh's funding to the 85% level would provide additional resources for Edinburgh;
 - the dialogue between Scottish Government and COSLA about a Non-Domestic Rates Incentivisation Scheme. Variants of such a scheme, recognising Edinburgh's substantial annual NDR leakage, may provide an additional funding stream that could assist the Tram project.
- 3.37 It is important to note that there is no guarantee that this dialogue will produce additional revenue support, nor a clear timescale for their conclusion. Council officers believe, however, that there is a strong rationale for the Scottish Government to provide additional revenue support. Whilst recognising the political stance taken by the government, the tram is a Scottish project; the government have provided additional support to other capital projects. There is a strong possibility of progress on the initiatives in the bullet points above, notwithstanding any further discussions with the government on the tram project.

Alternative Borrowing Options

- 3.38 The increase in the Public Works Loans Board (PWLB) margin over Gilts to 1% announced in the UK Government's 11/12 Comprehensive Spending Review, opens up an opportunity to consider a Bond issue as an alternative to PWLB borrowing. The Greater London Authority recently issued a bond with an average maturity of just over 20 years at 5.017%, a discount of about 0.2% to the relevant PWLB rate at the time. A bond issue could be a cost effective option for raising the required borrowing. It is therefore proposed that the Council puts in place some of the pre-requisites for a bond issue such as gaining a credit rating for the authority and examining the appropriate risk management measures.

Future Options

- 3.39 Whilst, at this time, borrowing through the prudential framework appears to be the best means for the Council to provide the funds for the project there will be opportunities to re-finance the project in the future to ensure completion to Newhaven. Several companies have approached the Council about sale and lease back proposals and similar variants.
- 3.40 Council Officers will therefore continue to explore longer term options for re-financing that will enable the project objectives to be realised. This work will examine options for both re-paying the borrowing costs and also completing construction to Newhaven.
- 3.41 The 30 June report referred to the bid made by the Council and CAF to lease vehicles to Transport for London for the Croydon Tramlink. This bid was unfortunately unsuccessful. In light of this an assessment has been made as to the risk around the demand for any surplus tram vehicles elsewhere.
- 3.42 Firstly, an assessment has been made as to the likely demand for excess tram vehicles from Rolling Stock Operating Companies (ROSCO's). This is where the ROSCO's would take the surplus tram vehicles and lease on to another provider. Based on current knowledge and understanding of the market, demand from ROSCO's is unlikely, for the following reasons:
- ROSCOs were set up to own and lease passenger rolling stock. Although they have also financed freight locomotives and vehicles, none of them have financed tram vehicles in a manner which involves the assumption of residual value risk.
 - Even if, in principle, the ROSCOs were willing to take residual value risk on tram vehicles, without a creditworthy lessee who had committed to lease the vehicles for a reasonable term, purchase of the Edinburgh trams would in effect be speculative. While the ROSCOs have entered into speculative transactions in the past, these were for rolling stock that could be operated on a number of routes or for which there was a clear, albeit uncommitted demand. The ROSCOs current ownership structure makes a speculative purchase unlikely and we are not aware of any such purchases which have been made recently.
- 3.43 An assessment has also been made of the potential demand from Other Tram Systems:
- **Abbey Line – UK:** There is a project under evaluation by the Department for Transport on the Abbey Line (Watford - St Albans). The project is still live but moving slowly at present. A number of organisations have been short-listed to bid to operate the service. The original plan was for the operator to procure the trams, although Hertfordshire County Council may take responsibility for this. The procurement is for approximately 4 second hand trams from Europe. There may be an opportunity here, not in the short term, and there is as yet no committed funding for this project at this time. This opportunity would present Low Technical Risk but potentially high financial benefit, however as noted above, funding is uncertain.

- **Sheffield – UK:** South Yorkshire Passenger Transport Executive (South Yorkshire PTE) is holding a market consultation over the intention to purchase approximately 4 new trams to supplement the present Sheffield Supertram fleet. The new trams should be able to operate safely and efficiently on the existing tramway infrastructure. South Yorkshire PTE has not yet secured funding for this fleet extension. This opportunity would present a high technical risk due to the demanding gradients on some of the lines and the platform length on the infrastructure would require modifications to be made to Edinburgh's surplus trams. There is a potentially high financial benefit as looking for purchase or possible long term lease, however funding is currently uncertain.
- **Turkey:** There have been quite a number of developments with Light Rail in Turkey recently. However the opportunities are unknown at present.
- **Oslo:** Oslo's tram system has been suffering from temperature related unreliability problems with their fleet purchased during the last 5 years. Their requirement is relatively short-term, to cover a modification programme of around 2 to 3 years and the infrastructure is not well suited for Edinburgh trams without extensive works to each.

3.44 As demand is cyclical Council officers will continue to look for ways to obtain value from surplus tram vehicles as other cities expand their networks and replace their tram fleets.

Governance Proposals

- 3.45 The current governance arrangements for the Tram project are set out in the Operating Agreement and Memorandum of Understanding among TEL, tie Ltd and the Council. The scope of services originally assigned to tie Ltd and the current governance structure are reproduced in Appendix 1 to this report.
- 3.46 Audit Scotland in its interim report on the Edinburgh Tram Project of February 2011 made observations on governance matters, comments on shortcomings and complexity are reproduced in summary at Appendix 2.
- 3.47 The existing governance arrangements for the Tram project are complex have not been effective.
- 3.48 The governance arrangements for the delivery of the Tram project additionally have had to take account of the complexity of the arms-length bodies that were proposed to deliver an integrated transport service once trams become operational.
- 3.49 The Council report of 30 June proposed that the governance arrangements for the management of the tram project should be revised. In practice, there is a need to revise the overall arrangements to ensure effectiveness, accountability, probity and integrity going forward.
- 3.50 The Office of Government Commerce promotes a best practice model known as PRinCE2 (PROjects IN Controlled Environments) which is a process-based

method for effective project management. The PRinCE2 standard is used extensively by the UK Government and is widely recognised and used in the private sector, both in the UK and internationally, as a model of project governance. The key features of PRinCE2 are:

- Its focus on business justification;
- A defined organisation structure for the project management team;
- Its product-based planning approach;
- Its emphasis on dividing the project into manageable and controllable stages; and,
- Its flexibility to be applied at a level appropriate to individual projects.

3.51 The PRinCE2 methodology identifies a number of key roles for successful project management²:

- Executive/ Project Sponsor: the key investment decision maker responsible for overall control of the project.
- Project Board: responsible for overseeing project progress and deciding upon key issues that require to be escalated for resolution.
- Project Manager: dealing with the acceptance, execution and delivery of project work ensuring that work is authorised and agreed, team members and suppliers are clear as to what is to be produced in terms of costs, timescales and quality and that timely, accurate reports on progress are prepared and stakeholder expectations are managed.

3.52 In refreshing the project governance to fulfil the above roles, it is proposed that the Council's Chief Executive will become the Executive sponsor for the project chairing the Project Board and the current chair of tie Ltd will become Vice Chair. This Board will be constituted as a Joint Project Forum involving the Council, the main parties to the infrastructure contract – Bilfinger Berger Civil (UK), Siemens plc and CAF - and the proposed future operator of the tram network, Lothian Buses. The Joint Project Forum would meet bi-monthly and take high level management oversight of the tram programme, ensuring mitigation of key risks to the programme timetable and budget (see Appendix 3). Transport Scotland would also have a standing invitation to these meetings.

3.53 The Director of City Development would be the Senior Responsible Officer (SRO) acting for the Chief Executive in managing the operational delivery of the project, working with the Vice Chair and the Project Delivery Group into which the Project Manager and individual team managers would report. It is proposed that the Council's Traffic and Engineering Manager will fulfil the role of Project Manager, on a full time basis.

² Also of relevance is the OGC Achieving Excellence in Construction guidance: http://www.ogc.gov.uk/ppm_documents_construction.asp

- 3.54 It is proposed that the current chair of tie Ltd should chair the Project Delivery Group and become the Vice Chair of the Project Board. This would provide both continuity and resilience within the governance structure.
- 3.55 These new governance arrangements are intended to reflect the principles of project partnering and collaborative problem solving that were envisaged when the contract was first awarded. These arrangements will require a commitment by all parties to the contract to adopt different behaviours to those that have caused difficulties to date. Under the terms of the Settlement Agreement the infrastructure contractor will be obliged to continue to deliver work to a standard that meets the employer's requirements. A key change will be the introduction of an independent certifier to help ensure a speedier resolution of construction-related disputes.
- 3.56 An important question that has arisen since mediation is whether there is, any longer, a legitimate role that can be played by tie Ltd as an arms length company that could not be met by the Council itself.
- 3.57 The number of staff employed by tie Ltd has already been reviewed by the Director of City Development in consultation with the tie Chair and senior tie personnel. As a result a number of staff will leave tie Ltd over the next two months under a programme of voluntary redundancies which will reduce the staff headcount by over 50%. Staff taking up the voluntary redundancy option will receive their contractual period of notice plus one month for each year of service (most tie staff have between 3-4 years of service). The estimated cost of this is £1.3m.
- 3.58 In recognition of anticipated changes to the role of tie Ltd and TEL the independent non-Executive Directors of tie Ltd and TEL, with the exception of the Chairman, recently stood down from their positions. tie Ltd's Chief Executive has also left the company. Audit Scotland also expressed its views about the potential conflicts of interest faced by elected members who served on the Boards of tie Ltd and TEL and two elected members have also stood down as non-Executive Directors.
- 3.59 In order to ensure continuing corporate governance the Council's Director of City Development and Acting Director of Finance were recently co-opted as non-Executive Directors to the Board of tie Ltd to ensure additional scrutiny following the departure of the independent Directors and elected members.
- 3.60 To ensure effective oversight and delivery of the project going forwards the Council is in the process of engaging Turner and Townsend as project managers. They have previously been involved in advising on the project and have considerable experience of light rail projects. Indeed, they are presently project managing the delivery of the Nottingham Rapid Transit Project, the development of the Dublin Tram System and have previously overseen the Croydon Tramlink and others.
- 3.61 Turner and Townsend are in the process of being formally appointed to provide project management support to the project under a Government Procurement Service Framework. They are presently working with tie staff to look at how best to deliver the project in the future. Once a final organisational structure has been agreed it is proposed that any remaining staff of tie Ltd will be

managed in the appropriate manner, taking into account all necessary legal and human resource issues.

- 3.62 Plans are also in place to close the tie Ltd office at City point with the remaining staff relocating to Lochside at Edinburgh Park. Thereafter, the project would be directly governed by the Council with assistance from Turner and Townsend as external project management support. It is anticipated that the revised arrangements will deliver value in future years, once the one-off costs of restructuring tie Ltd have been paid. The Council will continue to retain services of Hg Consulting as Independent Certifier with a duty of care to the Council.
- 3.63 The importance of effective future arrangements for political scrutiny of the Tram Project is clear, and elected members need to have the opportunity to question the arrangements for managing the project and accounting for public funds. At the 30 June Council meeting it was proposed that a new Tram Project Audit Committee should be set up, chaired by the Leader of the Council and attended by Transport Scotland and elected members from each party group on the Council.
- 3.64 Having further reviewed the potential arrangements it is now recommended that the Council's existing Audit Committee should fulfil this role, given it already audits all other works of the Council. Transport Scotland would be invited to attend these review sessions, in an expert witness role, as well as involvement, as appropriate, with the Project Board.
- 3.65 The Project would additionally utilise a Stakeholder Forum to ensure that key business and community interests are kept fully informed of the project's progress.

'Open For Business' Review and Programme

- 3.66 At its meeting on 30 June the Council agreed that the 'Open for Business' programme should be reviewed and refreshed to improve the focus on support for small and medium sized businesses. Appendix 4 provides a summary of the evolution of the previous scheme and includes some examples of the successes during the period it was active.
- 3.67 Refreshing the 'Open for Business' programme will help give confidence to businesses affected by the works, and encourage footfall into the city centre. Work on this has already begun with a communications plan being implemented to promote the City while works take place in Princes Street. There have also been a number of meetings with city stakeholders and logistical support for issues such as access, deliveries and signage is planned to support business during the works.
- 3.68 It is proposed that a budget allowance of £210,000 be made in the tram project budget for both 2011/12 and 2012/13 to provide further support to businesses during tramworks this financial year. This would include direct funding for the three Town Centre Coordinators covering the City Centre, Leith Walk and the West End, supplemented by funding for the winter festivals and additional events during times when there are gaps in the City's existing events calendar.

- 3.69 There are opportunities to work with partners to maximise the promotion of the city centre generally during the period of tram works and beyond, and it is recommended that a cross-agency working set up for this purpose having where appropriate to Marketing Edinburgh.
- 3.70 Discussions have also been held with the Regional Assessor on the subject of possible business rates relief. The Assessor has confirmed that businesses affected by the tram works will again be entitled to apply for a revaluation of their business rates to gain a temporary reduction in rateable value, if they can demonstrate the rateable value of their property has been directly affected by the works programme.

Princes Street

- 3.71 As referenced in the May and June Council Reports, following the initial tram works on Princes Street, movement defects have appeared at the interface between the rails and the road. Detail of how the street closure will be managed is provided in Appendix 5.
- 3.72 In summary:
- A new design solution has been developed. The surface finish will be black coloured concrete with a brushed finish to match the asphalt on either side of the track;
 - The construction works will require the majority of Princes Street to be a construction site for the duration of the works. Access for loading will be permitted in the evenings for shops and premises (as currently exists) in the eastbound direction on Princes Street. Emergency access will be provided at all times and both footways will remain unoccupied during the works.
 - Detailed planning has been undertaken with key stakeholders to ensure the traffic diversion minimises the disruption to the City. The traffic diversion scheme is that previously used when the original tram works were carried out. This will be implemented over the weekend of 3 September 2011;
 - Enabling works on Charlotte Square, George Street and St Andrew Square have largely been completed, with a further programme of works, mostly of carriageway markings, being carried out from 20 August 2011;
 - Construction works will be suspended for the festive break and the road will be temporarily reinstated by 24 November 2011 to allow for the switch on of the Christmas lights. Princes Street will remain pedestrianised until 4 January 2012 when works will recommence. The traffic diversions and access arrangements for loading will remain in place;
 - A full logistics plan has been developed. This includes support to determine requirements for deliveries and access, refuse collections and loading requirements;

- Coordination with other developers carrying out works on buildings on Princes Street and on the local diversion routes has been carried out to ensure their needs are met, where practicable;
- A full communications plan has been implemented to inform those travelling in the City of the traffic diversion associated with the work programme; and,
- Throughout the construction works requests for events to take place on or around the tram construction work or diversion routes will be required to find alternate locations.

Road, pavement and public realm improvements

- 3.73 Following the instruction of Council, that road and pavement reinstatement work and public realm improvements should be carried out in the Picardy Place to Newhaven section of tram line 1a, the Director of City Development and Director of Services for Communities have met to agree a rectification plan. This will see work carried out to reinstate temporary surfaces in affected locations along Leith Walk and Constitution Street, co-ordinating Council led work with residual reinstatement work under the tram contract.
- 3.74 The Directors of City Development and Services for Communities have also discussed how public realm improvements can best be achieved along the route of tram line 1a in the city centre and Leith Walk. In addition to the planned improvements at St Andrew Square, both Princes Street and Leith Walk have been identified as priority locations for public realm upgrading work. Detailed design work will be carried out on public realm proposals and considered in the first instance by the Council's Corporate Asset Management Group and subject, thereafter, to appropriate consultation.

4 Financial Implications

- 4.1 Following further due diligence on the programme, budget and risk allowance it is now calculated that the overall programme budget should be adjusted to £776m, being comprised of a firmed up base budget of £742m and a risk allowance of £34m. The budget represents a figure of £231m above the currently approved budget of £545m.
- 4.2 It is proposed that the additional £231m would be funded by prudential borrowing, which would represent an annual revenue cost of £15.3m over a 30 year period. Table 2 earlier in this report identifies the proposed sources of revenue support to be used for repayment of the prudential loan.
- 4.3 The phasing of the borrowing requirement is such that the Council can continue to explore alternative funding arrangements as well as future options for re-financing the project once complete.
- 4.4 The Princes Street works are being carried out at no cost to the Council, but there will be a loss of parking income on George Street which is estimated at £730K, which will be managed through the Council's Revenue Monitoring process.

- 4.5 Mitigation measures, in the form of parking spaces on the Mound (when the Mound is closed) are being proposed. The required Traffic Regulation Order will take several months to promote, but work has begun on this and it may be possible to recover up to £100K from these parking spaces during the works.
- 4.6 However as noted earlier in the report, in the event of project cancellation there would be a one year revenue impact of over £161m³. The impact on Council Tax levels to finance this magnitude of revenue would be equivalent to a one year increase of 80%. The Council's current reserves, including earmarked reserves, would not provide the level of revenue required. This assumes that the Transport Scotland Grant to date would not have to be repaid.

5 Equalities Impact

- 5.1 The proposals and recommendations described in this report could contribute to the public sector general equality duty to: (i) advance equality of opportunity. There is no distinct relevance in respect of the general duties to; (ii) eliminate unlawful discrimination, harassment and victimisation, or; (iii) foster good relations.
- 5.2 The relevance score for the specific proposals and recommendations described in this report is: (i) one for relevance to equalities legal duties; (ii) three for level of public concern expressed by equalities groups, and; (iii) one for relevance to significant negative impact on the quality of life of equalities groups.
- 5.3 Consequently, matters relating to this report will be included in the ongoing full equalities impact assessment that is being undertaken of the Edinburgh Tram project.
- 5.4 It should also be noted that due care has been taken with regard to accessibility issues arising out of the proposed Princes Street works. In this regard, an Equalities Statement and Accessibility Statement has been published on the Council's website and distributed to relevant partner organisations.

6 Environmental Impact

- 6.1 As reported to Council previously, The Council's local transport strategy (2007-2012) emphasised the important role that a modern transport system would play in supporting the economic, environmental and social development of the city and the key contribution of the tram network to the city's future.
- 6.2 A full Scottish Transport Appraisal Guidance (STAG) review was undertaken at the Parliamentary Approvals Stage in 2003; this demonstrated how the Council, as promoter of the tram, had satisfied government objectives in terms of environmental, safety, integration, accessibility and economic concerns.
- 6.3 An updated STAG report, in 2006, concluded that despite the predicted increase in the city's population and traffic growth to 2026, there would be a net improvement in air quality across the City as a whole, as a result of the introduction of the tram.

³ Amended (Wednesday, 24 August 2011) from the previously reported £180m.

- 6.4 The STAG report acknowledged that within this overall net improvement there would be areas where air quality would deteriorate as a result of the displacement of traffic from the tram routes.
- 6.5 The Council remains committed to ensuring that any such air quality issues are properly monitored and addressed.
- 6.6 As a result of concerns expressed by residents of the Moray Feu, following the temporary diversion of traffic during the MUDFA utility works, additional air quality monitoring has been carried out on Great Stuart Street since July 2009 and, following the Tram Sub Committee meeting of 28 February 2011, additional air quality checks have been introduced in this area to include monitoring on building facades and at basement level.
- 6.7 The data from the existing and additional air quality monitoring levels in this neighbourhood will become available in the first quarter of 2012.
- 6.8 Monitoring of nitrogen dioxide levels in air is carried out on a monthly basis, in accordance with guidelines published by the Department of Environment, Food and Rural Affairs (DEFRA). Monitoring is carried out to determine the annual average concentration of this pollutant. Owing to the inherent variability of the test method, it is not suitable for determining monthly nitrogen dioxide values, or for establishing monthly trend data from individual monthly samples. The Council's monitoring procedures have been endorsed by DEFRA, Scottish Government and by Professor Laxen, an independent expert advisor on air quality to DEFRA.
- 6.9 The tram itself has no carbon emissions at the point of service delivery and has the potential to contribute to the City's strategy for low carbon growth as electricity generation in Scotland transitions from fossil fuels to renewable energy sources.
- 6.10 As part of a broader sustainable transport strategy within the city the tram will, therefore, make a positive overall contribution to the environment by encouraging modal shift from private vehicles to public transport and mitigating the impacts of population growth and commuter and visitor generated traffic.
- 6.11 Air quality, especially in neighbourhoods which may receive traffic displaced from the tram route as a result of traffic regulation orders, is being carefully monitored and analysed so that any issues can be dealt with and properly mitigated.

7 Conclusions

- 7.1 As noted above, the decision of Council on the 30 June set a number of actions for Council officers. This report has responded in detail on the options available at this time and the current optimum funding arrangement to meet the requirements to take the project forward
- 7.2 In providing this, the report has also explained the risks that the project retains particularly in relation to utilities in the Haymarket to St. Andrew Square section and, the risk mitigation that has been possible since June. A detailed review of

the key project budget risks has been carried out, and validated by Faithful and Gould, to ensure that appropriate risk management procedures are in place.

- 7.3 In reviewing the governance of the project a revised and simplified model is now proposed with the project directly governed by the Council and managed with Turner and Townsend as external project management support.
- 7.4 The refresh of the 'Open for Business' programme and the operational approach to be used for the management of Princes Street have also been explained.

8 Recommendations

8.1 That Council:

- a) Agree the funding proposals as set out in the report;
- b) Agree that the Council's prudential funding limits be increased to take account of the funding proposals.
- c) Note the risks highlighted in the report;
- d) Agree the governance arrangements as set out in the report;
- e) Note the appointment of Turner & Townsend;
- f) Note that the Council will continue dialogue with the Scottish Government on a further contribution to the tram project and policy changes which could provide additional revenue resources to the Council; and
- g) Note the works to be undertaken as part of a refreshed 'Open for Business' programme, and the traffic management and related logistical works associated with the Princes Street Works.

Dave Anderson
Director of City Development

Appendices	<ol style="list-style-type: none">1. tie Ltd Operating Agreement and Memorandum of Understanding2. Audit Scotland February 2011 Report - Extract3. Indicative Governance Diagram4. Open for Business Re-fresh5. Princes Street
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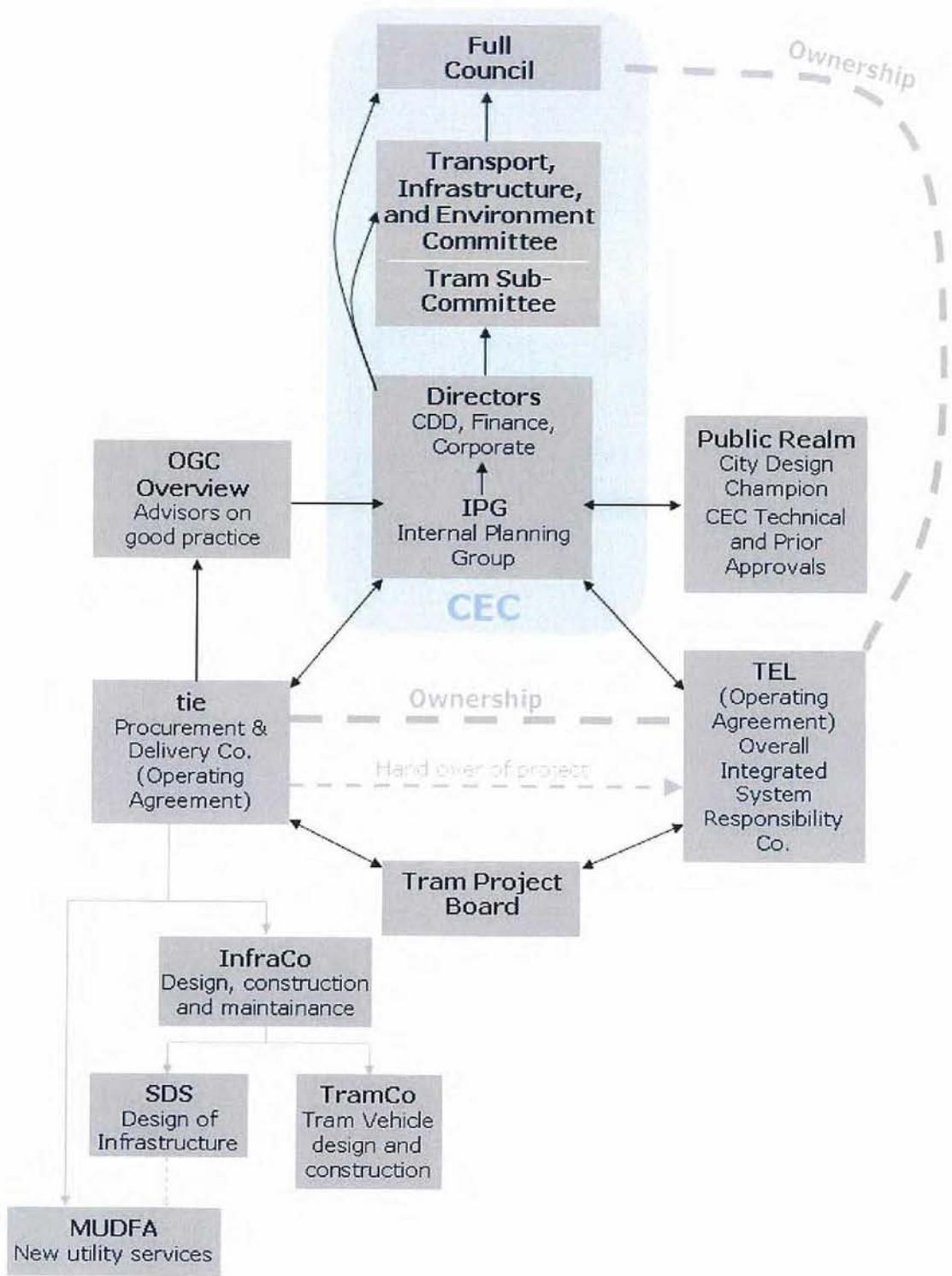
Contact/tel/Email	Dave Anderson, Director of City Development dave.anderson@edinburgh.gov.uk Tel 0131 [REDACTED]
Wards affected	All
Single Outcome Agreement	<u>National Outcomes:</u> <ul style="list-style-type: none">• National Outcome 1 - We live in a Scotland that is the most attractive place for doing business in Europe• National Outcome 10 - We live in well-designed, sustainable places where we are able to access the amenities and services we need• National Outcome 12 - We value and enjoy our built and natural environment and protect it and enhance it for future generations• National Outcome 14 - We reduce the local and global impact of our consumption and production.
Background Papers	<ul style="list-style-type: none">• The City of Edinburgh Council Meeting, 30 June 2011, Item 8.2: <u>Edinburgh Tram Project</u>• The City of Edinburgh Council Meeting, 16 May 2011, Item 2.1: <u>Edinburgh Tram Update</u>• The City of Edinburgh Council Meeting, 16 December 2010, Item 8.2: <u>Edinburgh Tram Project</u>• The City of Edinburgh Council Meeting, 14 October 2010, Item 8.1: <u>Edinburgh Tram Update Report</u>• The City of Edinburgh Council Meeting, 24 June 2010 Report, Item 8.2: <u>Edinburgh Tram Project - Update Report</u>

SCHEDULE 1

Scope of Services

1.	Procurement and contract award of all contracts required to deliver the tram project, including the Council's obligations
2.	Provide accurate and current information to Tram Project Board, Transport Edinburgh Limited and the Council for appropriate decision making and approvals
3.	Provide efficient and effective project management services for the Project including cost, financial programme, risk, contract and change management
4.	Provide traffic management expertise to effectively implement and manage both temporary and permanent traffic management alterations, including the Traffic Regulation Order process
5.	Comply with Health and Safety requirements and act as the Construction Design Management Regulations co-ordinator, provide Health, Safety, Quality and Environmental management and expertise to ensure effective approvals through the The Railways and Other Guided Transport Systems (Safety) Regulations process. This should include protecting the Council's interests
6.	Ensure the design is assured, and provide the necessary quality of design for technical and prior approvals in a timeous manner
7.	Develop and agree a communication strategy with the Council and provide effective communications, consistent with this strategy
8.	Provide and demonstrate to the Council that appropriate site management services are in place to ensure quality is delivered
9.	Ensure a continued focus on value engineering and deliver any agreed initiatives
10.	Manage the interface with TEL in order to deliver a smooth handover for operations
11.	Manage project land in accordance with the tie/CEC licence
12.	Ensure and demonstrate to the Council that all contracting parties meet their obligations (including protocols, traffic management, contract conditions, employers requirements, site supervision and testing etc)
13.	Manage all third-party agreements in an effective manner and demonstrate that they are in the Council's interest
14.	Carry out other duties as instructed by the Council in relation to the Project
15.	Act on efficiently and effectively all formal instructions issued by the Council in relation to the tram project

Existing Governance Structure



Edinburgh trams - Interim report by Audit Scotland Prepared for the Auditor General for Scotland and the Accounts Commission:

February 2011

Audit Scotland in its interim report on the Edinburgh Tram Project of February 2011 made the following observations on governance matters:

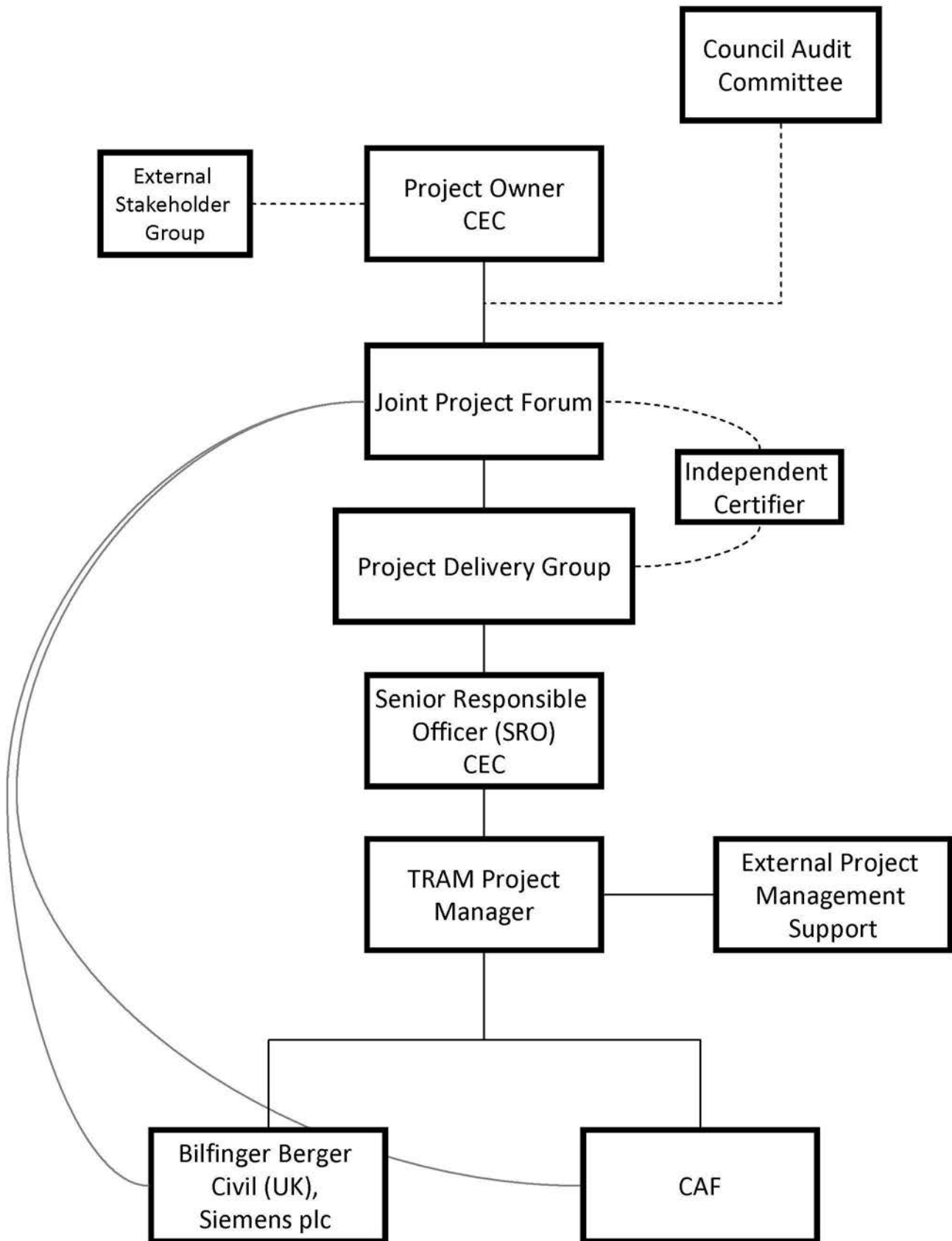
- Elected members of the current ruling coalition at CEC hold differing views of the Edinburgh trams project and considerable debate is generated at council meetings when the subject is discussed. This has made it more difficult for CEC as a whole to present a unified commitment to the project.
- CEC's 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.
- Some members of the project's main governance body, the Tram Project Board, are also members of tie's own board. CEC's Director of Finance and Director of City Development also exercise a number of different oversight roles in the project.
- Transport Scotland considers its need to be represented on the Tram Project Board ended in June 2007 when, following a Scottish Parliament debate and vote, Ministers announced that the Scottish Government's contribution should be capped at £500 million. Transport Scotland does not consider that it has the same oversight role for the trams project as it has for other Scottish Government transport projects because it is neither the promoter of the project or has a contractual relationship with any of the private sector bodies engaged in the project's construction and delivery. Transport Scotland does, however, hold quarterly meetings with CEC where the project's progress is reviewed.
- 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 BBS 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.

Table 1: Audit Scotland in its interim report February 2011 - Extract

The full report is available at:

<http://www.audit-scotland.gov.uk/media/article.php?id=162>

Indicative Future Governance Structure



PROPOSAL FOR A BUSINESS SUPPORT PACKAGE FOR AREAS AFFECTED BY TRAM WORKS – AUGUST 2011

INTRODUCTION

From September 2011 the Edinburgh Tram project will resume the programme of on-street works to build the first phase of the tram line from Edinburgh Airport to St Andrew Square in the heart of the city centre.

Integral to ensuring this programme is successful is the on-going support for stakeholders whilst works are underway. This will maintain and enhance confidence in the city as an attractive place to shop, visit and do business and that the construction works will lead to a dynamic, public transport system for the city in the coming years.

BACKGROUND

The City Council is planning ahead for future population growth and as part of that a progressive, integrated public transport solution is required. Serving two of Edinburgh's key growth areas, the west and centre of the city, the introduction of a tram line will help ensure the city can manage the projected population growth.

Trams show that a city is a modern and well-connected place to do business, which can lead to more investment, new jobs, regeneration and greater prosperity.

Trams are able to carry large volumes of passengers, quickly along their route and are not hampered by general traffic, they also create a cleaner environment for the future as they are electrically powered, so there are no vehicle emissions.

Construction of the Edinburgh Trams Project has now been underway since 2007. A well documented contractual dispute and additional utility works have meant that the programme has been extended beyond that which was originally planned.

Funding issues have meant that the original route from Edinburgh Airport to Newhaven will now be delivered in phases. The first phase, currently under construction, will be from the Airport to St Andrew Square in the heart of the city centre.

During the initial phase of work, support packages were put in place to aid businesses who were adversely affected by works. A small business support scheme was in place

There was also a Business Rates Relief scheme implemented by the Lothian's Assessor which was carried out. It is anticipated that the first scheme will not be replicated as it was carried out only for the lifespan of the utilities diversion programme. However the Lothian Assessor will still look at applications for rates relief as this was for the life of the project.

A successful communications and marketing campaign was also undertaken to promote areas where work was taking place. Open for Business ran for three years and developed over the course of that time from providing city wide marketing

campaigns to more localised versions and finally providing one-to-one support and advice to businesses in locations along the tram route.

Some examples of the type of activity undertaken through Open for Business include:

- Funding and creation of the I Love Leith and West End village promotions to strengthen the brand identity of the areas
- Dine Around – encouraging customers to Leith restaurants
- Audit and dressing of empty shop units
- Creation of the award winning Business Hub within McDonald Road library in connection with Business Gateway to deliver free workshops for businesses
- Shoppers promotions, branding opportunities, website development, media promotions

This covers just some of the activity specifically undertaken by the original Business Co-ordinator for Leith Walk/West End who was in post from April 2009, with support from an external public relations contractor. As part of the evolution of Open for Business, it was agreed that the tram project would contribute funding to employ three Town Centre Co-ordinators to provide ongoing one-to-one support for businesses in the three main affected areas of on-street works (Leith, City Centre and the West End)

These co-ordinators are based within the Council's Economic Development unit and they also provide support for other town centre areas in the city. Funding is committed up until the end of the next financial year.

AIMS AND OBJECTIVES

In accordance with the accepted Motion to Council from 30 June, the Open for Business programme should be refreshed in order to improve the focus on support for small and medium sized businesses.

The aims and objectives will be:

- To give confidence to businesses affected by tram works that they have support during the period of construction
- To find new and innovative ways of supporting small and medium sized businesses in affected areas
- To illustrate to shoppers, commuters and visitors that Edinburgh is still a vibrant shopping, business and leisure destination during the tram works and encourage footfall
- To work with partner organisations to promote areas affected by works
- To promote the benefits of the coming tram line

PROPOSAL

To meet these aims and objectives it is proposed that any additional funding from the Tram Project to support businesses during construction should be distributed in the following way:

Town Centre Co-ordinators (TCC)

Currently the three TCCs are supporting businesses along the tram route & delivering high profile, low cost projects. The TCCs have worked hard to establish one-to-one relationships with businesses in each area.

To ensure that the Council continues to deliver what communities & SME's require, the largest survey of town centres in UK was organised by the Physical Development Team, working in partnership with SfC's Neighbourhood Partnerships & external partners (every business was visited & on street surveys & survey monkey - 2,000 responses). This exercise provided powerful data to inform individual action plans for each of the nine town centres which are now being implemented.

It is proposed that to maximise the relationships that are already in place that the tram project provides further financial support to the TCCs to undertake activity in areas where works are taking place. This would be managed under the current arrangement and there is capacity for additional workload. Regular meetings with the Tram Communications Manager will take place to understand how budget is being spent and to allow feedback to the Tram Animation Group.

Events Strategy

Events are widely recognised to increase footfall in and around the areas where they are held. There are already a number of events due to be held within the city centre and it is proposed that a matrix of all of those within the city centre is collated (Karen Stevenson has already begun this process but continued input from Marketing Edinburgh and Essential Edinburgh as well as the Council's Events team is crucial).

To supplement the existing events it is proposed that a series of additional events be undertaken to ensure that there are no significant periods of times where events are not taking place somewhere within the city centre.

This can be managed in one of two ways, firstly through agreement with the Council's Events Unit to allow them to procure services of existing events contractors. Alternatively there could be an agreement put in place to procure events through Essential Edinburgh's contract with Unique Events.

PR Strategy

While not essential, this activity could be supplemented by a Public Relations contractor who is fully focussed on promoting the activity of the Town Centre Coordinators working to secure local and regional broadcast, newspaper and online coverage.

It is not felt that the Tram Communications Team could fully focus on achieving this type of coverage given the rationalisation of the team and up-coming workload associated with the upcoming work programme.

If required then this contractor would have to be employed through a procurement process.

COSTS AND FEES

It is proposed that the costs for this additional work be split in the following way:

Additional activity funds for town centre co-ordinators to cover the work programme in Leith, City Centre, West End/Haymarket – £20,000 for each area per year.

Annual events strategy of £50,000 per annum

One year only additional support for Edinburgh's Christmas and Edinburgh's Hogmanay programmes of £70,000 to maximise the empty space available on Princes Street during the winter roadworks embargo period.

Costs for PR support have to be confirmed but would not be expected to exceed £30,000 per annum.

This would require a budget of circa £210,000 for 2011/2012 with a similar commitment the following year. This is in addition to the annual contribution of £90,000 for the Town Centre Co-ordinators which is already coming from the Tram budget bringing the total to £300,000 annually for business support.

Edinburgh Tram – Princes Street Remedial Works

Introduction

This appendix provides the Council Management Team with an update on the planned tram remedial works to be carried out on Princes Street.

Revised Design

Following the initial tram works on Princes Street, movement defects have appeared at the interface between the rails and the road. The contractor has claimed quality control, including adverse weather conditions and detailed design issues as the contributing factors and has agreed to carry out repair works at no cost to the Council.

The detailed design has been reviewed by the Contractor and a new design solution has been developed. In an effort to ensure consistent results the Contractor has carried out several trial panels of the proposed new design to develop a new working method that will improve the quality of construction including weather protection. These trial panels will allow new procedures to be developed prior to the remedial works being carried out and will allow the Contractor to finalise the new design submission that will be presented to the Council officials for approval by 19 August 2011.

The construction works to be carried out, whilst not as intensive as the initial works, will require the majority of Princes Street to be used as a construction site for the duration of the works. The surface finish for the new design will be black coloured concrete with a brushed finish to match the asphalt on either side of the trackform. Consultation has already been carried out with Historic Scotland and Edinburgh World Heritage to ensure that the completed finish meets with the Planning requirements.

Traffic Management and Logistics

Access for loading will be permitted in the evenings to allow loading for shops and premises (as currently exists) in the eastbound direction on Princes Street. Emergency access will also be provided at all times and both footways will remain unoccupied during the works.

Several months of detailed planning, with the assistance of Lothian Buses and Lothian & Borders Police, has been carried out to ensure the diversion minimises the disruption to stakeholders. The traffic diversion had previously worked well when the original tram works were carried out and a similar diversion will again be used.

The traffic diversion will be implemented over the weekend of 3 September 2011. As previously carried out, enabling works are required to be undertaken on Charlotte Square, George Street and St Andrew Square to allow buses to transfer onto the diversion route. The enabling works include the installation of traffic signals, the removal of parking bays, new bus shelters and bus tracker equipment and the relocation of loading bays to adjacent side streets. A copy of the bus diversion route and site extents is shown in Appendix 1.

The majority of the enabling works are complete, with a further programme of works, comprising mostly of carriageway markings, being carried out from 20 August 2011.

A full logistics plan has been developed to ensure that the work programme causes minimal disruption to businesses and residents throughout the worksite area and also

the diversion route. This includes support to determine requirements for deliveries and access, refuse collections and loading requirements.

There has also been coordination with other developers who are carrying out works on buildings on Princes Street and on the local diversion routes to ensure their needs are met, where practicable.

Traffic will be diverted from Princes Street from 4 September 2011 until July 2012. A construction phasing diagram is attached as Appendix 2. In summary, the works will commence at both ends of Princes Street and work towards the middle at the Mound. The extent of the track work required will not be known until the rail is exposed and testing on stray current is completed (which will be one of the early operations carried out). The programme developed by the Contractor is based upon the assumption that 200m of the rail is required to be lifted out and remedial works carried out on the rail. Until the actual condition of the rail is determined it is not possible to confirm the Contractor's programme.

Winter Festival Period

Construction works will be suspended for the festive break and the road will be temporarily reinstated by 24 November 2011 which aligns with the switch on of the Christmas lights. Princes Street will then be pedestrian only until 4 January 2012 when works will recommence. During the period, the bus diversion will remain on George Street and the Mound will remain closed. Access for loading will remain permitted at night.

Communications

A full communications plan has been implemented to inform those travelling in the city of the traffic diversion associated with the work programme. This includes newspaper, radio and online advertising, use of Twitter and variable messaging signs. A diversion map will be handed out on-street, in shops and other key locations. Directional signage will also be provided around worksites.

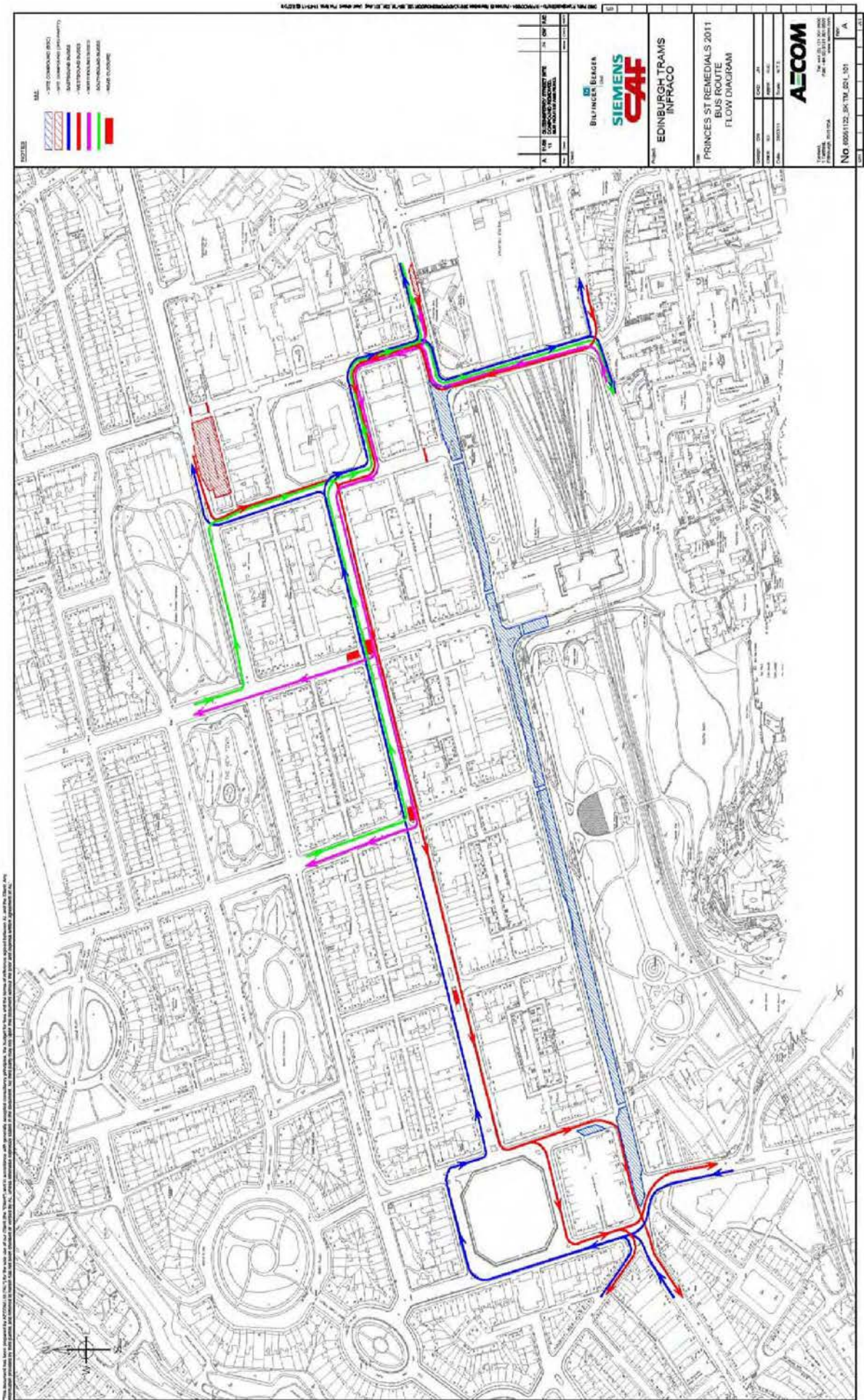
A wider communications initiative to ensure footfall in the city centre remains buoyant while works are underway has also commenced. This follows on from a stakeholder workshop held on 27 May 2011 which saw around 50 key city stakeholders come together. One of the key outcomes was to ensure the city is promoted during the works programme and a Tram Animation Group has been set up, chaired by the Head of Transport, to determine how this can be achieved.

Throughout the construction works there will likely be many requests for city events to take place on or around the tram construction work or diversion routes and serious consideration should be given to them before approval is given by the Council. Any delays to the tram project caused by events would have a serious financial implication for the Council.

Appendices

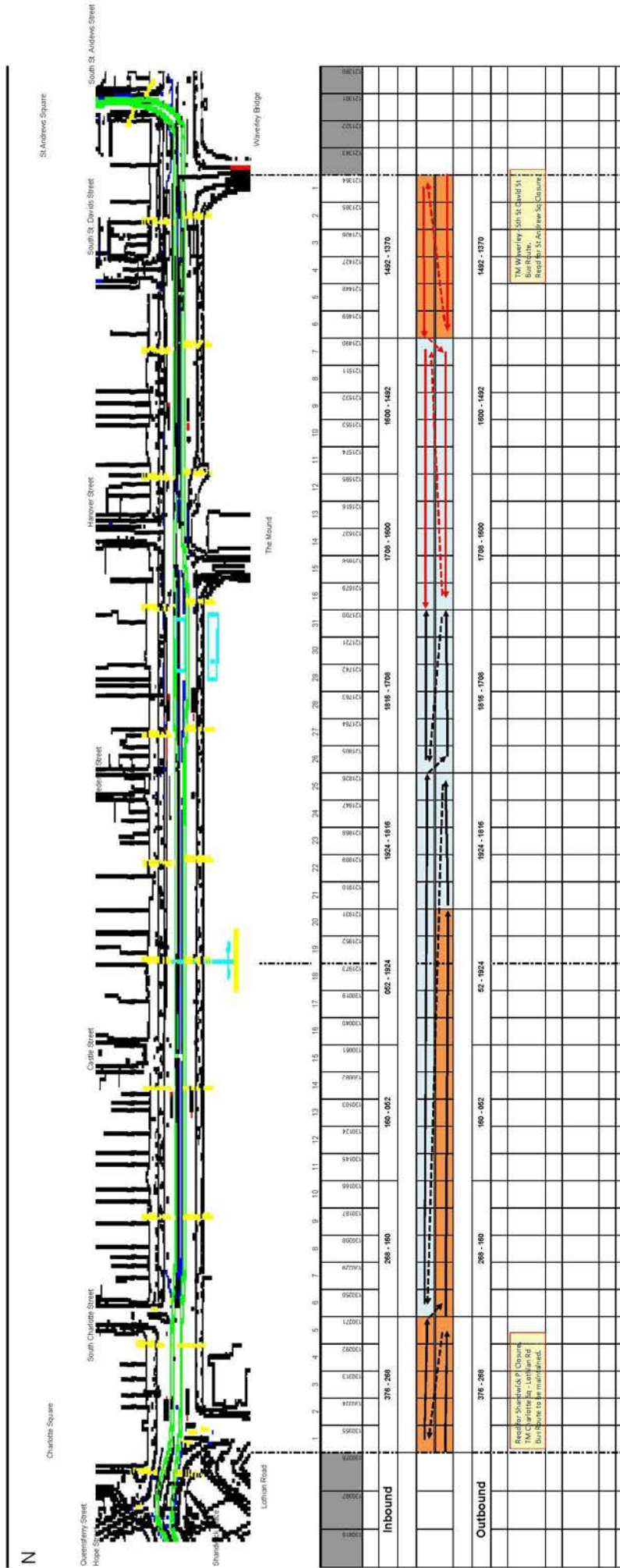
1. Diversion Route Diagram
2. Construction Programme Diagram

Appendix 1 – Bus Diversion Diagram



Appendix 2 – Construction Phasing Diagram

**Edinburgh Tram Project
Princes Street Road/Rail Joint Enhanced Design incl Outstanding Works
Construction Programme - Commence Works with Full closure from 05 Sept 11
Target Completion 05 July 12**



KEY

Area started after 05 Sept. and finished before Christmas Embargo

Area started after Christmas Embargo