

Edinburgh Tram Project: Update

The City of Edinburgh Council

16 December 2010

1 Purpose of report

1.1 The purpose of this report is to update the Council on several tram related issues. Specifically, these are:

- the refreshed tram business case;
- progress on the emergency motion approved by Council on 18 November 2010;
- the governance arrangements for tram development and tram and bus integration; and
- powers for land acquisition.

2 Refreshed Tram Business Case

2.1 In June 2010 the Council called for a refresh of the tram business case to be prepared. The original business case was presented to Council on 25 October 2007 and can be accessed from the Council's committee papers on-line.

2.2 A commentary on the refreshed business case was included in a report to the Council in October 2010 and references were made to:

- the growth drivers in the city and the wider city region;
- the Council's vision for transport in the city in 2030 (eg the shift away from private car use);
- Edinburgh's growing population and the associated demand for road use; and
- development profiles for key areas in the city (eg West Edinburgh, city centre and Leith).

2.3 It was pointed out that as the refreshed business case contained commercially sensitive information on patronage assumptions (for buses and trams) the detailed figures would have to remain confidential. This "restriction" on the public reporting of the refreshed business case was debated in the Council and a number of concerns were expressed. The Council approved an amendment (from the SLD Group), with an addendum from the Green Group. The three decisions which relate to the refreshed business case were:

- to agree that the provision of commercially sensitive information on the current and future patronage and profits of Lothian Buses would represent an unnecessary risk to the company irrespective of whether or not there was a combined bus and tram operation in future;
 - to agree that a more detailed account of the updated Business Case, including further options as requested, will be made available to all members for the Council meeting in December (or earlier if there is a Special Meeting) while protecting the commercial interests of Lothian Buses but that members of each political group would be provided with access to the full update for scrutiny, subject to written undertakings by those individuals that they will not disclose commercially sensitive detail to any other individual or organisation; and
 - to agree that the updated Business Case and the report on governance issues would also include detailed information not considered to be commercially sensitive about the impacts, specifically on Lothian Buses, of the different options for moving forward with the Tram Project.
- 2.4 Following the decisions taken by the Council in October I asked Council officials, in conjunction with senior managers in TEL/tie and Lothian Buses, to review the refreshed business case with a view to ensuring that as much information as possible is made available to elected members, while safeguarding commercially sensitive information.
- 2.5 The result of this review is that a redacted version of the refreshed business case has been prepared and is attached as Appendix 1. The redacted version has been cleared by the Chief Executive of TEL/tie and the Managing Director of Lothian Buses.
- 2.6 In line with the Council's decisions an opportunity has been given to members of all political groups to have access to the unredacted business case. I also asked the Managing Director of Lothian Buses to make available the unredacted version of the business case to the Board of the Company and this was subsequently released to all Board members. Senior managers in Lothian Buses were involved in the production of the revised business case.
- 2.7 The refreshed tram business case contains information and analysis on:
- consideration and assessment of incremental delivery;
 - an update on the economic case for phase 1a;
 - a refresh of the TEL business plan;
 - expenditure to date; and
 - funding and affordability.

3 Emergency Motion

- 3.1 At its meeting on 18 November 2010 the Council approved an emergency motion moved by the Council Leader. For convenience, the motion is attached as an Appendix 2 to this report.
- 3.2 I wrote to the Managing Director of Bilfinger Berger Civil UK Limited on 15 November, in response to a letter he sent me on 13 October and a letter to all Councillors on 5 November. I agreed to his request to arrange a meeting between representatives of Infracore and Council officers and I indicated that the Council would be willing to listen to any matters they would like to discuss with us and to receive any information they wanted to present.
- 3.3 A meeting took place on Friday 3 December 2010 between senior Council officials and representatives of the BSC consortium. Unfortunately, because of the weather conditions, the representative from Siemens was unable to attend. The meeting was exploratory in nature and provided an opportunity for the consortium to raise a number of issues of concern to them. No new issues were raised which had not previously been identified by **tie**. At the meeting, BSC confirmed their willingness to explore resolution further with the Council and **tie** by way of mediation.
- 3.4 At the time of writing this report arrangements are in hand for the Chief Executive of **tie** and I to write to the Chairman of the BSC consortium. We will set out our views on a proposed timetable for mediation and suggest a number of options around selecting and agreeing a proposed mediator. We anticipate that the mediation arrangements will be agreed before Christmas and that detailed mediation discussions involving the Council, **tie** and the consortium will commence early in the New Year.
- 3.5 By their nature, mediation discussions have to be conducted on a confidential basis. It will not be possible to report in detail on the mediation process until it is completed or possible decisions emerge which require consideration by the Council.
- 3.6 While mediation talks are underway **tie** will continue to administer the contract. Mediation will be approached constructively but at the same time all strategic options will continue to be explored and developed by **tie** and the Council.

4 Governance Arrangements

- 4.1 The report to the Council in October contained a section on "Governance of Bus and Tram Integration". This was also referred to in my report to the Council in November (on appointments to the Boards of Lothian Buses, TEL and **tie**), when I said I would report further.
- 4.2 I am aware that concerns and requests for clarification over the proposed governance arrangements between TEL and Lothian Buses have been raised.
- 4.3 I have had a number of discussions with Council officers and senior representatives of TEL/**tie** and Lothian Buses. The following key points can be made:
- it is Council policy to support and see developed the Edinburgh Tram Project;

- it has long been a policy aim of the City of Edinburgh Council to develop an integrated public transport network delivering high quality bus and tram services;
- Lothian Buses supports the development of the Edinburgh Tram;
- the Council, TEL/tie and Lothian Buses all support the integration of tram and bus services;
- there is a recognition, at senior management level, that planning for bus and tram integration has to take place well in advance of the tram becoming operational. This will require clarity of roles and responsibilities at senior management level to ensure that key tasks are delivered; and
- there remains a clear need for thorough due diligence in relation to future governance arrangements (including, for example, issues relating to the Transport Act 1985, tax planning, shareholdings and the like).

4.4 In my report to Council in November I set out the rationale for the establishment of TEL in 2004. Its main purposes are:

- promoting, supporting and/or effecting the development, procurement and implementation of projects defined or referred to in the Council's integrated transport strategy;
- carrying on, promoting or developing any trade or business in the field of transport required in connection with the Council's integrated transport strategy; and
- the promotion of the integration of all modes of public transport in Edinburgh including, but not limited to, buses, trams and heavy rail.

4.5 TEL was established at a time when major investment in transport infrastructure was anticipated and a comprehensive plan for transport was taking shape. Key elements (then) included:

- tram line 1 (phases a, b and c);
- exploratory work on tram line 2;
- EARL (Edinburgh Airport Rail Link);
- improvements to Waverley and Haymarket stations; and
- the need for high quality interchanges at Waverley and Haymarket.

There was also some provisional discussion around the possibility of including the Council's park and ride and car parking operations within a wider "family" of transport related businesses.

4.6 It was envisaged that TEL would be at the heart of a new company group structure and organisational framework for the delivery of a range of transport services in and around Edinburgh.

- 4.7 Clearly, the vision of five/six years ago will not be realised in the near future and it is, therefore, understandable that clarification is being sought on the relationship between TEL and Lothian Buses. This is an important issue which needs to be considered but, before doing so, there is a need for further work on due diligence. This means that it is not possible to conclude on this matter for some time. There is, therefore, an opportunity for the proposals to be reviewed.
- 4.8 Currently, the focus is on resolving problems associated with the Edinburgh Tram Project and finding a way forward. This must be seen as the key priority at present. Given the current difficulties, it now seems unlikely that the estimate (middle of 2011) given previously for submission of the "final" report to Council on the integration of TEL, tie and Lothian Buses can be achieved. This will allow all concerned (the Council, TEL/tie and Lothian Buses) further time to reassess the operational and governance arrangements necessary to secure the integration of tram and bus services. It is proposed that this review should be undertaken by my successor, in conjunction with the Chief Executive of TEL/tie and the Managing Director of Lothian Buses. As agreed by the Policy and Strategy Committee at its meeting on 30 November, the review will be reported to Council within one year.

5 Powers for Land Acquisitions

- 5.1 The delays experienced in the project have meant that the powers within the Tram Acts to acquire land will need to be extended, if future sections are to be built. The powers to acquire land for the following Phases expire in April/May 2011:
- Phase 1b (Roseburn Corridor - Granton);
 - Phase 2 (Connecting the loop between Granton and Leith); and
 - Phase 3 (Ingliston to Newbridge).
- 5.2 Extending the powers to acquire land requires an application by the Council, as authorised undertakers to Scottish Ministers, who may, by order, grant an extension. Any such application must be made prior to the expiry of the current powers. The Tram Acts permit a land acquisition extension until 2016 (for line 1 – St Andrew Square, Granton, Haymarket Loop, and 2021 for line 2 – St Andrew Square west to Newbridge).
- 5.3 The Council previously took a decision to defer, but not cancel Phases 1b, 2 and 3. Whilst there is no defined timetable for the delivery of these sections, it would be prudent to protect those powers by seeking an extension from Scottish Ministers. It is therefore recommended that the Council write to Scottish Ministers, through Transport Scotland to request an extension to the land acquisition powers in accordance with the Tram Acts.

6 Recommendations

6.1 It is recommended that the Council:

- (i) notes the position in respect of the refreshed business case;
- (ii) notes the steps taken to date to take forward a mediation proposal;
- (iii) note that a report will be submitted (within one year) on the operational and governance arrangements necessary to secure the integration of bus and tram services; and
- (iv) agrees to request Scottish Ministers to grant an extension of the current land acquisition powers in accordance with the Tram Acts.



Tom Aitchison
Chief Executive

9/12/10

Appendices	Appendix 1: Redacted Version of the Refreshed Business Case Appendix 2: Liberal Democrat Emergency Motion – City of Edinburgh Council – 18 November 2010
Contact/tel/Email	Tom Aitchison – 0131 [REDACTED] e-mail - tom.aitchison@edinburgh.gov.uk
Wards affected	All
Single Outcome Agreement	
Background Papers	

APPENDIX 1



Edinburgh Tram – Business Case Update 2010

Edinburgh Tram – Business Case Update August 2010

Executive Summary

Background

This refresh of the business case was requested by motion of the Council on 24th June 2010. Its purpose is to refresh the assumptions made in the Final Business Case for Phase 1a of the Edinburgh Tram Project, as approved by the Council in October 2007.

The Council's request is set against a backdrop of commercial disputes with the infrastructure contractor, which have resulted in significant programme slippage and increasing project costs. This increased cost and delay has come at a time of economic recession. Due to the increasing costs associated with the project an assessment of incremental delivery options has been undertaken with a view to managing the construction of the project within the affordability constraints.

The refresh of the business case focuses primarily on the following elements;

Consideration and Assessment of Incremental Delivery

Due to the cost and programme difficulties experienced there has been a requirement to consider completion of Phase 1a in incremental stages. The main focus of incremental delivery has been on delivering Airport to St Andrew Square as the first phase.

In order to arrive at a recommendation for Incremental Delivery consideration has also been given to the significant downsides of project cancellation.

The revenue and capital impacts of incremental delivery have been assessed as part of this process.

Updating the Economic Case for Phase 1a.

This section refreshes the validity of the economic case for tram, taking into account the impact of the recession.

Examination of this area has addressed both the full scope of Phase 1a and the impacts of Incremental delivery.

This section provides a recap on the Final Business Case and examines the project from the broader regional context. The Economic Case for tram looks at a refresh on patronage sources and growth drivers in the city, taking into account the development profiles for Leith, the City Centre and West Edinburgh and assesses the impact of the development of the Airport.

This document also evaluates the impact of areas that were not examined in the approved Final Business Case, including Gogar Station and the Edinburgh-Glasgow Improvement Plan.

The refresh of the Economic Case demonstrates that the full benefits of the tram project can only be achieved by delivering the full scope of Phase 1a.

Edinburgh Tram – Business Case Update August 2010

Refresh of the TEL Business Plan.

This section examines revised patronage forecasts for Phase 1a in total and assesses the impact of incremental delivery on TEL profitability in light of the revised forecasts. The revised forecasts for TEL are built on the recent experience of Lothian Buses and include the impact on patronage of the revised development assumptions set out in section 3. These forecasts have been profiled against incremental delivery to St Andrew Square to assess the viability of incremental delivery on the TEL business.

In addition, significant work has been undertaken to assess the positive and negative sensitivities in the Business Plan assumptions in the early years of tram operation.

Expenditure to Date

A large infrastructure project such as the Tram Project requires a substantial amount of work to be undertaken in advance of construction works.

The budget for tram infrastructure represented 46% of the overall project budget with the most significant construction elements within this expenditure to date related to Gogar Depot, the structures along the off-street section of the railway corridor and tram works along Princes Street. Significant progress has been made on the construction of the 27 tram vehicles. This part of the project represents 11% of the original project budget.

The diversion of utilities has resulted in a significant enhancement of the utility assets in the City including faster broadband services and cleaner water supplies. This part of the project has seen a significant increase in scope, largely as a result of outdated records and a number of unforeseen challenges under the streets along the tram route. The scope for the utilities diversions has gone from 27,000 linear metres to around 48,000 linear metres. This represents an increase of some 78%. There has also been an increase in cost relating to this scope increase. The original budget for this area of the project was £48m with the estimated final cost likely to be around £62m, an increase of 29%, compared to the scope increase of 78%.

The primary reason for undertaking these diversions is to ensure that tram and other traffic are not disrupted as a result of utility companies servicing assets or reacting to emergencies when the tram is in operation.

Costs relating to completed design and land account for 12% of the project budget expenditure to date.

Funding and affordability.

Given the increasing costs, it is critical to assess the current committed funding and affordability constraints of the project.

This section considers the affordability of the incremental delivery option and sets out potential funding options for delivering the full scope of Phase 1a.

This section also provides an update on the Council's current committed funding for the project and examines the cashflow impact the Council of both incremental delivery and delivery of the full scope of Phase 1a.

Edinburgh Tram – Business Case Update August 2010

Key Conclusions

The key growth assumption of mode shift from car to public transport remains strong in the updated business case.

The full benefits of the Tram Business Case are only delivered with implementation of the full Phase 1a.

The TEL business is demonstrably stronger in the medium to long term with tram added to the existing bus business even if the tram is only operated between the Airport and St. Andrew Square. This is due to the unique opportunity TEL has to combine bus and tram operations ensuring the combined entity is in a far stronger position than if bus and tram operations were in competition with each other. Furthermore, the addition of tram ensures TEL is in a stronger position to meet the passenger demand that is expected to result from long term growth in Edinburgh.

The analysis undertaken to refresh the Business Case for Phase 1a has confirmed the viability of the project, taking into account the downturn in development as a result of the recession.

While the impact of the recession on the pace and size of development in the city has been significant, most notably at the Waterfront, it is important to consider the long term view. The tram remains an important stimulant to development and regeneration in the West and North of Edinburgh.

Based on the work undertaken to date, the conclusion is that a first incremental phase from the Airport to St Andrew Square is capable of being delivered within the current funding commitment. Of the current funding CEC has committed £45m to the project, of which £25m comes from developers' contributions.

The slow down in development has impacted on the pace of developers' contributions received by the Council. Over the 20 year period set out in the Tram Developers contribution guideline, the £25m can be achieved. The current impact on developers' contributions from incremental delivery is £7m if the route is curtailed at St Andrew Square. This means that if the full route of Phase 1a is not delivered then CEC would have to fund this additional £7m as part of their £45m commitment. Whilst commitment remains to deliver the full scope of Phase 1a, affordability must be the primary consideration given the current level of funding and the forthcoming constraints on public sector spending. It is clear that the full benefits of tram cannot be delivered without the full scope of Phase 1a being delivered. Therefore, an important assessment of the benefits gained from constructing the full route of Phase 1a versus the capital cost and the availability of funding will require to be made at the appropriate time.

Summary

The tram project has faced many challenges since the start of construction. This has resulted in increased costs and significant delay. This has required options to be considered for delivering Phase 1a incrementally. This would be expected to allow construction of the tram to the city centre of Edinburgh and is capable of being delivered within the current level of funding. The impact of incremental delivery has a significant effect on the integration plan for tram and bus; however, this can be managed so that TEL will be a profitable organisation. The analysis undertaken also demonstrates the tram can be profitable as part of the TEL operation even through a curtailed service.

It is clear that the full benefits of tram cannot be delivered without the full scope of Phase 1a being delivered; therefore an important assessment will be required at the appropriate time to appraise the benefits gained from constructing the full route of Phase 1a versus the capital cost and the availability of funding.

Edinburgh Tram – Business Case Update August 2010

1. Purpose & Scope

- 1.1 In June 2010 the Council considered a report on the status of the project in the context of the ongoing contractual difficulties. The report outlined the funding strategy being employed by the Council and contingency planning, including incremental delivery, which may be deployed to ensure the investment in the project is realised by the delivery of a viable tram service integrated with bus services whilst preserving the entirety of the scope of Phase 1a (Airport to Newhaven) as detailed in the Final Business Case of 2007 (FBC).
- 1.2 The Council resolved that a refreshed business case be prepared to encompass options currently being investigated and reflecting a current view of economic growth and development and future growth in demand for public transport in Edinburgh over the life of the tram project.
- 1.3 This scope of this report is therefore to:
 - 1.3.1 Further detail the proposed incremental delivery approach which may be deployed to manage affordability and financial risk in light of the impact of the contractual difficulties on the forecast outturn costs for the delivery of Phase 1a in a single phase of construction.
 - 1.3.2 Provide an update on the FBC in the context of the anticipated delivery of the whole of Phase 1a over time, with an incremental approach to delivery as defined in Section 2. This update is provided against the three tests of viability examined in the FBC:
 - **Economic viability** (Section 3) - Economic benefits and costs, both qualitative and quantitative based upon a review of the appraisal by Steer Davies Gleave (SDG) prepared for the FBC.
 - **Financial viability** (Section 4) – The effects of the planned integration of bus and tram under Transport Edinburgh Limited (TEL) and the prospective short and longer term profitability of TEL.
 - **Affordability** (Section 5) – Management of financial risk via an incremental delivery approach, sources of finance to meet current funding commitments and potential sources of incremental funding to complete the project to Newhaven.

2. The Case for Incremental Delivery

- 2.1 Incremental delivery of Phase 1a addresses the imperative to manage the affordability risks of the project by contemplating flexible incremental delivery of the on- street sections. This approach will aim to ensure the investment in the project is realised by the delivery of a viable tram service integrated with bus services whilst preserving the entire scope of Phase 1a, as detailed in the FBC.
- 2.2 Incremental delivery allows the whole of Phase 1a to be delivered in stages and over a flexible timescale which is under the Council's control. The Council can ensure that the infrastructure being delivered at any point in time is affordable within the funding available from either the Council's own sources or from Scottish Ministers.
- 2.3 Consideration of incremental delivery has focussed on prioritising the section from the Airport to St Andrew Square and deferring the north-eastern (i.e. on-street towards Leith) sections of Phase 1a because:

Edinburgh Tram – Business Case Update August 2010

- The tram depot at Gogar is nearing completion
 - The tram connection to Edinburgh Airport was an integral part of the Scottish Government's decision to cancel the EARL project and provide capped Grant support for tram, and their subsequent commitment to construct a heavy rail/tram interchange at Gogar.
 - Construction of the structures and other infrastructure in the off street sections has now progressed to the point where it would be uneconomic not to complete these sections as part of the opening service on the tram.
 - The traffic management and construction phasing constraints related to the on-street works lend themselves better to an incremental delivery approach.
- 2.4 The choice of Airport to Newhaven as the first phase of delivery, and the development of the FBC were the result of over two years' examination, and remain valid. The tram is an investment in infrastructure on the city's heaviest trafficked corridor (which is predicted to become increasingly heavily trafficked) whose economic viability has been assessed over 60 years. It is rational to stage delivery in response to changing affordability parameters whilst ensuring that value is realised from the investment already made in the project.
- 2.5 The stages of incremental delivery evaluated are Airport to St Andrew Square and Airport to Newhaven.
- 2.6 A first incremental opening of tram services from Airport to St Andrew Square yields near-term benefits, provides a rail link between the city and Airport and is believed to be capable of being delivered within the currently available funding of £545m. A tram operating from the Airport to St Andrew Square also secures a high proportion of the economic benefits anticipated in the FBC and, crucially, is capable of being integrated with Lothian Buses successfully and being financially viable in the short to medium term. This is examined in sections 3 and 4 below.
- 2.7 Other advantages of an incremental delivery approach are:
- **Greater control over impact upon the City** – the Council will be in a better position to mitigate the impacts of temporary traffic diversions, avoid the critical embargoed periods, execute the works in a way which responds to the concerns of stakeholders and provide greater certainty as to start and completion dates.
 - **Control over scope change on-street** – building upon the experience on Princes Street, the Council should be in a better position to carry out due diligence on the extent and specification of road and pavement reconstruction and to respond to obstructions and unforeseen utilities works with fewer concurrent work areas to manage.
- 2.8 It is important to consider the affordability and value of funding to complete the entire project from Airport to Newhaven at the current time. If agreement to deliver the project in an incremental basis cannot be achieved, and the full Project is not deemed to be affordable nor to deliver value for money, the alternative of project cancellation or postponement presents considerable downsides for the Council, Edinburgh and for Scotland as a whole including:
- No immediate prospect of securing value (the benefits detailed in section 3 below) for the investment made to date.
 - An extended period of continued uncertainty and costs in pursuing commercial settlement with the existing infrastructure consortium.

Edinburgh Tram – Business Case Update August 2010

- The costs associated with any reinstatement or safeguarding of incomplete works.
- A very significant revenue write off for the Council.
- Additional costs of reprourement and mobilisation of a new infrastructure provider if and when the project is restarted.
- Uncertainty about market appetite and required risk premia included in the pricing of a reprourement.
- Damage to the reputation of Edinburgh and Scotland as a place to do business with local and national Government.

3. Economic Case for Tram

- 3.1 The economic benefits of introducing tram were assessed and reported for the original Lines 1 and 2 during the Parliamentary process and for the present Phase 1a in the FBC of December 2007. The FBC was underpinned by an assessment of economic costs and benefits by Steer Davies Gleave (SDG) in accordance with the Government's Scottish Transport Appraisal Guidance (STAG).
- 3.2 The following narrative updates the examination of the economic benefits of introducing tram both from the STAG perspective and from the broader vision for Edinburgh's long-term economic future. The analysis provides an up-to-date forecast of future economic growth and development and consequent forecast growth in demand for public transport. The analysis focuses on the full scope of Phase 1a, but also highlights the benefits delivered by completing Airport to St Andrew Square as the first stage of incremental delivery.

Edinburgh's strategic position and the need for tram

- 3.3 Edinburgh's growing population: currently 477,660 expanding by around 1% per annum and forecast to reach 514,000 by 2020 and 543,000 by 2030. Just as significantly, the volume of commuters coming into the city to work from the surrounding city region and further afield was estimated at 85,000 per day at the 2001 census and is now perhaps around 100,000 per day and growing.
- 3.4 The growth in population and commuters correlates to the concentration of job growth in the city compared to other parts of Scotland. Edinburgh also continues to grow as a tourism and day visitor destination, second only in the UK to London as a destination for overseas visitors.
- 3.5 The city's growth has led to rapidly increasing demand for road use and increasing demand for public transport. Between 2000 and 2006, Lothian Buses experienced an increase in demand of 22.6 %, an average of 3.8 % per annum. Between 2000 and 2009, the growth has been 18.9% in total, which equates to 2.1% per annum. [REDACTED]
- 3.6 The city's bus services are world class and have continued to deliver the highest quality of service to a rapidly increasing patronage base. However the prospect of further rapidly increasing demand, especially in the high volume corridors already congested at peak times, gives rise to a need to consider a complimentary high capacity, reliable and attractive mode of transport on those corridors.

Edinburgh Tram – Business Case Update August 2010

- 3.7 Between 1999 and 2006, tram was identified and adopted as the preferred option to meet the increased demand and mitigate against the negative economic consequences of future congestion and tram lines 1 and 2 were approved by Parliament. Following affordability challenges presented by the rejection of congestion charging in February 2006, the tram from Airport to Newhaven (Phase 1a) was identified as the first phase of delivery with the addition of a spur from Roseburn to Granton (Phase 1b) should funding permit. This was the scope assessed in the FBC approved in December 2007.

Economic Regeneration and New Development

- 3.8 The tram from the Airport to Newhaven is considered to be a key stimulant to development and regeneration in the West and North of Edinburgh. The extent of new development forecast to be completed between the base year in 2006 and the commencement of tram operations is lower than was anticipated when the FBC was prepared in 2007 as a result of prevailing economic conditions. With the assistance of Council officials, an update of the likely timing of committed new development has been carried and is presented in the following table and compared to the original FBC profile.

	2012		2020		2031	
	Resid'l Units	Comm'l Sq M	Resid'l Units	Comm'l Sq M	Resid'l Units	Comm'l Sq M
FBC						
West	0	65,000	0	231,640	0	304,405
City Centre	960	132,070	3,695	290,135	4,245	335,885
North	4,000	41,480	11,800	299,600	26,000	337,000
Total	4,960	238,550	15,495	821,375	30,245	977,290
2010 Update						
West	0	33,460	0	276,055	0	474,905
City Centre	480	57,100	2,945	264,135	4,595	358,385
North	1,290	6,905	9,390	99,800	26,000	258,000
Total	1,770	97,465	12,335	639,990	30,595	1,091,290

- 3.9 Whilst the actual residential development in the North of the city and in Leith completed at commencement of tram operations is projected to be significantly lower than was originally anticipated, the Council is forecasting a recovery such that by 2012 30% of the original forecast will be completed, 80 % of the original forecast will be completed by 2020 , and by 2031 the residential development in North Edinburgh will have recovered and it is anticipated that the original development forecast will apply. These forecasts broadly anticipate a 4-5 year period of very slow development as a result of today's prevailing economic conditions, following which a return to growth will prevail.
- 3.10 In August 2009 an update to the TEL Business Plan was reported to the Council. The updated TEL Business Plan anticipated a significant element of the reduction in patronage in the early years of tram operations as a result of the slowdown in new development. The latest TEL patronage projections for combined tram and bus operations as detailed in Section 4 have been modelled using the 2010 Update profile in the above table.

Edinburgh Tram – Business Case Update August 2010

- 3.11 A first stage of tram services operating from the Airport to St Andrew Sq would stimulate, and serve the demand arising from, new development in the West and City Centre categories above, including new commercial space at Edinburgh Park.
- 3.12 The future completion of the project to Newhaven remains critical to support and catalyse the proposed redevelopment at Leith Docks by minimising dependence on private car for access to employment and retail areas, reducing congestion and underpinning the economic viability of North Edinburgh. Notwithstanding the current pause in development, the Council and Forth Ports plc continue to work in partnership towards the realisation of the full master plan. This is unlikely to proceed to the same extent without a commitment to complete the tram system to Newhaven as and when funding sources are identified and economic conditions allow the re-commencement of the new development.
- 3.13 The new development included in the above table comprises only that which has been committed or has achieved outline planning consent. It does not take account of the broader vision for West Edinburgh reflected in the Scottish Government's West Edinburgh Planning Framework 2008 (WEPF) which categorises the areas to the south and east of the airport as being of national importance and envisages more extensive new development including an International Business Gateway' (IBG) to the north of the A8 at Gogar together with expansion of the airport and associated commercial development, and relocation and expansion of the National Showground.
- 3.14 As a required action arising from the WEPF, the Council has completed a West Edinburgh Transport Appraisal (WETA) to examine the sustainable transport options infrastructure which may be required to realise the WEPF vision. The WETA was based upon 175,000 sq m of new development at the IBG by 2021, increasing to 225,000 sq m by 2031 (87% comprising offices) which the appraisal assumes will be served by a new tram stop between the Gogar depot and Ingliston Park and Ride. This new tram stop would be safeguarded on the route secured by a first phase of tram delivery from the Airport to St Andrew Square.
- 3.15 Development and passenger growth at Edinburgh Airport is a cornerstone of the WEPF. The airport currently handles 9.1 million passengers per annum and is forecast to rise to 13 million by 2018. The Aviation White Paper published by the UK Government in 2003 forecasts 26 million passengers per annum by 2031 following introduction of a second runway. The WETA identifies a number of road and bus priority improvements which would be required to meet the additional demand for public transport and other road users. The tram remains a key element to realising this vision.
- 3.16 There are rational grounds for concluding that the stimulating impact of investment in the tram on new development which has been experienced in many other cities in the UK and Europe, would also be experienced in Edinburgh, thereby contributing to Edinburgh's future economic growth and prosperity. It seems reasonable to assume that the increased commercial property values along and adjacent to the tram route, experienced following the introduction of many other tram projects, are likely to follow the introduction of tram services from the Airport to St Andrew Square.

Environment

- 3.17 The imperative of reducing the carbon impact of travel in the city by achieving a shift from private vehicles to sustainable public transport has become ever greater in the past two years and is a key element of both National Transport policy and the Council's own Vision 2030 for transport.

Edinburgh Tram – Business Case Update August 2010

- 3.18 The FBC identified the tram as a major contributor to a reduction in on-street emissions throughout the route and in particular through the heart of the city centre. The Council is addressing the issue of emissions through an Air Quality Action Plan (AQAP) in this area. Trams will contribute to the objectives of the AQAP by providing a large number of journeys through the city centre without adding to current levels of nitrogen dioxide.
- 3.19 The tram's contribution to mode shift as set out below will enable further progress towards objectives set in the Air Quality (Scotland) Amendment Regulations 2002 and to national objectives to reduce emissions of greenhouse gases.
- 3.20 The commencement of tram services from the Airport to St Andrew Square would do much to secure the environmental benefits to the west and in the city centre. In addition, completing the route to Newhaven will greatly assist in reducing general traffic emissions on the already congested Leith Walk corridor.
- 3.21 Since the FBC, the potential, in future, to power the tram from renewable energy sources has been brought into focus. The economic viability of procuring sustainable electricity for operations is already under discussion

Safety & reliability

- 3.22 The FBC identified personal security improvements (including CCTV and help points at all stops and use of inspectors on vehicles) as a benefit across the entire Airport to Newhaven route. Generally greater segregation from general traffic and priority at junctions reducing the variability of dwell time at stops compared to a bus-only services where there is the prospect of significantly increased number of bus vehicles to meet additional demand (It is envisaged that in the absence of tram it would be necessary to increase the number of buses along the Airport to Newhaven route by more than 30% by 2031).
- 3.23 Until now interventions and improved bus priority measures have maintained timetables and service delivery. It is unlikely that the types of intervention that have worked in the past can indefinitely be sustained into the future. Substantial future increases in bus provision would be likely to need supportive segregation and priority measures, which would impact adversely on road capacity and significantly increase congestion for other traffic.

Accessibility and Social Inclusion

- 3.25 An efficient, accessible public transport system is key to promoting economic growth in the local community and to improving its performance and competitiveness.
- 3.26 Levels of economic prosperity, employment levels and levels of educational attainment show a considerable variance across the city zones around Saughton and Balgreen in the west being identified as areas where socio-economic status is considerably lower than surrounding areas. Employment, income levels and car ownership tend to be comparatively low in these areas. Low car ownership also correlates to the areas of high population density in Haymarket and Gorgie. The tram will provide an additional public transport offering to these areas.

Edinburgh Tram – Business Case Update August 2010

- 3.27 Completion of the tram from St Andrew Square to Newhaven will connect the new residential development in Leith Docks to new job opportunities in the city centre and west Edinburgh, and will bring an enhanced public transport offering to the areas of lower socio-economic status and/or car ownership in Leith.
- 3.28 Throughout the Airport to Newhaven route, the tram vehicles and tram stops will be fully accessible by people with mobility impairments, those travelling with small children and the elderly. For these groups, and notwithstanding continuing improvements in access for people with mobility impairments on Lothian Buses, there is a relative advantage for trams over buses in terms of design specifications, ride-quality and reliable accessibility. Where the distance between tram stops presents a challenge to accessibility, the service integration patterns with buses have been designed to maximise the continuing accessibility of Lothian Buses for these groups.

Transport Integration

- 3.29 Integration of public transport modes remains a key objective of transport planning for national and local government in Scotland. Effective integration providing the public with a seamless multi-mode journey, with minimised connection times, is a key factor in improving satisfaction and building patronage on sustainable public transport. The objective is to create patronage growth not just on the routes covered by the tram but also demand for current and additional feeder services to the overall network.
- 3.30 The integration of bus and tram in Edinburgh under the umbrella of TEL is a unique opportunity to design the service patterns for Lothian Buses' services and trams in a way which best fits demand, makes use of tram on the high demand corridor through the centre of the city and provides effective interchange between bus, rail and tram at key points. An important advantage for TEL is that integration can be planned before the start of services. On the route from the Airport to St Andrew Square, interchange between bus and tram will be effective at Edinburgh Airport, Ingliston Park and Ride, Gyle Shopping Centre, Edinburgh Park Station, Haymarket and St Andrew Square, where the city's main bus and coach station is located.
- 3.31 Beyond St Andrew Square, the bus and tram integration plan in the FBC identified the Foot of the Walk as a key interchange point without which it would not be possible to reduce bus services and therefore congestion on Leith Walk. This is the cornerstone of the bus and tram integration plan that TEL will deploy for Phase 1a. This benefit will be secured when the route is completed to Foot of the Walk and beyond. When the new residential development is realised the tram will help ensure it does not contribute more significantly to city wide congestion. The existence of a tram service will help to avoid new development being diverted to less sustainable locations with less potential for effective transport integration. There remains a convincing case for tram on Leith Walk by virtue of the sheer volume of existing demand for public transport, further reinforced by forecast future growth in demand when new residential development is completed.
- 3.32 Integration between tram and rail is planned at Edinburgh Park Station, Haymarket Station (enhanced with planned access improvements) and at St Andrew Square for Waverley Station which is also planned to benefit from access improvements. Since the FBC, the Scottish Government has also committed to the delivery of a new railway station interchanging with tram on the Fife line adjacent to the A8 at Gogar (now called Edinburgh International Gateway).
- 3.33 Following the cancellation of EARL in 2007, Edinburgh International Gateway is a cornerstone of the Government's strategic imperative to provide rail based connectivity to Edinburgh Airport and for

Edinburgh Tram – Business Case Update August 2010

the realisation of the nationally important future developments in the WEPF/WETA area for travellers from Fife and Central Scotland. The additional patronage on trams which could be generated by the Edinburgh International Gateway has now been modelled by SDG and included in the TEL Patronage forecasts at Section 4 below, amounting to 1.2 m additional passengers in 2031.

- 3.36 Integrated ticketing is recognised to be an effective factor in encouraging people to use public transport and to interchange between modes. The ticketing strategy to be deployed by TEL will ensure integration between tram and bus with the same products (eg Ridacard) being used on both bus and tram and the Plus-Bus product for bus and tram with rail. In the longer term the Government has plans to greatly improve the integration of ticketing between all modes of transport nationally.

Mode Shift

- 3.37 Like integration, mode shift from cars to public transport remains a key plank of both local and national transport policy. Tram services along the route from the Airport to the City Centre is a significant factor influencing the predicted mode shift in the FBC from cars to public transport and connects to the existing Park & Ride sites at Ingliston and prospective new site at Hermiston Gait.
- 3.38 The evidence from other tram schemes in the UK and elsewhere is that there is greater potential for modal shift from car to tram than to buses (or guided buses) alone, especially if the tram is in operation before new development is constructed and travel patterns have been established.
- 3.39 Leith docks was one of the key areas of predicted mode shift from cars to tram, not by existing users but by future residents of the new developments who would be more likely to use their cars in the absence of tram. The impact of trams in Leith docks is forecast to generate up to 10% shift from car usage to public transport. Other areas where the SDG modelling exhibits mode shift of greater than 5% (encompassing significant areas of development and growth which otherwise would be associated with higher levels of car travel) included Roseburn, Sighthill and Edinburgh Airport.
- 3.40 Modal shift is also influenced by policy and aspirations. One of the major criticisms of efforts to improve modal share is that the alternative to car travel, better and more reliable public transport, is not provided in advance. The investment in tram helps provide that viable alternative to cars and the basis upon which the city can raise its expectations for further modal shift to public transport.

Quantitative Benefits & Costs to Government

- 3.41 STAG appraisal guidance requires that one of the balanced scorecard of measures to be addressed is the Benefit Cost Ratio (BCR) - a quantitative assessment of the ratio of projected economic benefits arising from investing in the scheme over 60 years to the investment (capital) costs of the investment. The BCR for tram from Airport to Newhaven was assessed by SDG and reported in the FBC as 1.77 as detailed in the following table. (NB all values have been converted back to 2002 prices by eliminating the effect of actual and forecast inflation over 60 years)

Edinburgh Tram – Business Case Update August 2010

£m - 2002 Prices	Present Value Benefits/Costs
Public transport user benefits	415
Other road user benefits	212
Private sector provider effects	(23)
Accident effects	(12)
PV of scheme benefits (incl. accidents)	592
Investment costs	390
Public sector provider effects	(55)
PV of scheme costs	335
Net PV	257
Benefit Cost Ratio to Government	1.77

- 3.42 Focussing on the highlighted principal elements of the calculation, the user benefits for public transport and other road users are the aggregate economic value (as prescribed by STAG) of the net saving in all journey times for all road users over a period of 60 years as a result of introducing the tram, compared to what would happen if the tram were not introduced. The investment costs align with the estimated capital costs of the tram at the time of the FBC, namely £498m. In essence any scheme with a BCR of greater than 1.00 is economically viable using this measure in isolation.
- 3.43 Whilst a complete reassessment of the BCR presented in the FBC does not fall within the scope of this Business Case refresh, it is possible to provide the following observations to demonstrate numerically by this measure the continuing robustness of the viability of the project if Phase 1a is completed in its entirety:
- a) If investment costs for Phase 1a were to increase by 25% then all other things being equal the BCR for the project would be reduced to **1.37**
 - b) In addition to the increase in capital costs at a) If we further presume that the downturn in new development and delayed patronage growth results in the discounted value of time travel benefits being reduced by 20%, the BCR for the project would be further reduced to **1.10**. This is in excess of the parity required to classify the project as viable by this measure alone.
- 3.44 A significant proportion of the monetised travel time benefits in the FBC originate in the Leith Docks area and will only be realised when the tram is completed to Newhaven.
- 3.45 The modelling also predicts that the introduction of Tram in the Leith Docks area would result in up to a 10% change in mode share from cars to public transport.
- 3.46 A tramway to Ocean Terminal would also deliver a direct tram service to the Scottish Executive building (which will be of value to the Government) as well as serving the destination of Ocean Terminal and its shopping and leisure attractions present and future.

Wider future vision for Public Transport in the City

- 3.45 The demand for private vehicle travel is growing beyond any capacity increases that are planned and this constraint, along with the vision to significantly improve public transport between now and 2030 as set out in the Transport 2030 Vision, is likely to result in a significant increase in the

Edinburgh Tram – Business Case Update August 2010

number and percentage share of public transport journeys. This pressure on road capacity and the resultant increase in car journey times and journey time unreliability along with the plans to base parking permit charges on vehicle emissions and more vigorous enforcement of public transport priority e.g. bus lanes, are likely to lead the car to become an increasingly less attractive form of transport. This coupled with the vision to improve public transport accessibility and interchange, increase park and ride provision, improve and extend the availability of public transport information, increase public transport priority including dedicated road space and priority at traffic signals will at the same time make public transport more attractive. It is likely that a shift away from private vehicles to bus / tram will be observed, while the improvements in the walking and cycling environment will also attract trips from both private vehicles and public transport. Aspirations for increased public transport and walking and cycling mode share in new developments coupled with tighter parking restrictions is also likely to encourage mode shift away from private vehicles. Future extensions to the tram system, also mentioned in the Transport 2030 Vision, are likely to significantly increase demand right across the tram network, rather than solely on any extension that is built.

- 3.46 Factors beyond the 2030 Vision that could also see the demand for public transport increase include increases in oil and petrol prices, increases in car duty e.g. a mileage driven scheme, the impact of potentially reaching peak oil production in the near future, tighter development controls, parking restrictions and costs, increased environmental awareness, better provision and access to public transport information and improvements in the perception of safety and quality of public transport services. All of these factors are likely to produce upsides in the forecasts for public transport usage in the future, although due to the uncertainty around each of the individual influences, they have not been included in the central forecasts for public transport demand.

4. Impacts on TEL Business Plan

- 4.1 As an integral part of the preparation of the FBC, TEL prepared a Strategic Business Plan which details the Company's objectives, its modus operandi, its relationship with the Council and tie. It analysed the opportunities and threats TEL will face in operating an integrated tram and bus business.
- 4.2 As part of the preparation of this refresh of the FBC, a review of the key assumptions and projections for the TEL Business Plan was undertaken. This review has confirmed that the outputs from the previous work remained valid for the whole of Phase 1a and also that the operation of an incremental delivery of Phase 1a from Airport to St. Andrew Square is sustainable without a negative impact on the TEL forecasts. This Business Plan remains under review each year and will be updated again in due course in subsequent years.
- 4.3 At the core of the TEL Business Plan lies an assessment of how TEL will integrate the tram into its operations and a detailed assessment of TEL's prospective revenues and profitability operating with the tram in place. This analysis is firmly grounded in TEL's involvement in the development of prospective integrated service patterns for tram and validation of the patronage and revenue projections which have flowed from the modelling process. What follows is a summary of the refreshed TEL Business Plan for full Phase 1a and partial opening from the Airport to St. Andrew Square.

Edinburgh Tram – Business Case Update August 2010

Rationale for TEL

- 4.4 Experience gained from a wide range of tram schemes has shown that integration with other modes of public transport, particularly bus, will greatly contribute to the success of trams as part of an integrated transport network. The principal bus operator in Edinburgh is Lothian Buses, which is wholly owned by the public sector and 91% owned by the Council. Lothian Buses operations currently hold a share of approximately 85% of Edinburgh bus patronage.
- 4.5 The Council has charged TEL with the delivery and management of an integrated bus / tram network that optimises service provision while maximising operational synergies. With the establishment of TEL, the Council are implementing their commitment to continuing to provide first class public transport in Edinburgh.
- 4.6 The approach to integration of the key local public transport modes, bus and tram, sets Edinburgh apart from other UK tram schemes. The integration of high quality bus and tram services will improve the attractiveness of the combined network to something greater than the sum of its constituent parts. The levels of demand projected by the JRC transport model indicate a significant profit potential for TEL operating with the tram over the period between 2012 and 2031:
- 4.7 This places TEL in a unique position of strength to capture and provide for the predicted overall growth in the travel market.

Financial forecast highlights

- 4.8 Table 4.1 provides a summary of the financial highlights from the forecast of TEL's profitability operating with bus and tram. This summary reflects the following:
- The overall operational cash flow profile will be positive once the tram and bus patronage has stabilised after a "ramp-up" period for both full Phase 1a and Airport to St Andrews Square only. On this basis the requirement to demonstrate that, over time, the integrated service will not require subsidy has been fulfilled;
 - The financial forecast includes taxation on forecast profits calculated at the prevailing rate of corporation tax. However, TEL will continue to examine opportunities for tax efficient cash flow planning.

Table 4.1 - TEL profitability with Phase 1a of tram (All £ figures inflated).

Tram in service Tram service pattern	Pre-tram		Phase 1a				
	n/a	n/a	6/12	6/12	8/16	8/16	8/16
Year	2006	2010	2011	2012	2016	2020	2031
Patronage (Pax m)							
Bus							
Tram							
Total TEL Patronage							
Total TEL Revenues							
Total TEL operating costs							
Pre-tax operating profit / (loss)							

Table 4.2 - TEL profitability with Airport to St. Andrews Square of tram (All £ figures inflated).

Edinburgh Tram – Business Case Update August 2010

Tram in service Tram service pattern	Pre-tram		Airport to St. Andrews Square			
	n/a	n/a	6/12	8/16	8/16	8/16
Year	2006	2010	2012	2016	2020	2031
Patronage (Pax m)						
Bus	[Bar]		[Bar]			
Tram	[Bar]		[Bar]			
Total TEL Patronage	[Bar]		[Bar]			
Total TEL Revenues	[Bar]		[Bar]			
Total TEL operating costs	[Bar]		[Bar]			
Pre-tax operating profit / (loss)	[Bar]		[Bar]			

4.9 Tables 4.1 and 4.2 reflect that following an initial period of tram patronage build up, the TEL business as a whole is profitable for Phase 1a and after one year the partial opening of Airport to St. Andrew Square combined operation will be profitable and in both cases the business will thereafter experience significant growth in profits. The forecast has been developed using the patronage forecast for both tram and bus developed under the JRC contract. The key assumptions used to develop this forecast with respect to fares strategy and the development of cost estimates are detailed throughout this section.

4.10 The forecast of patronage and revenues presented above remains very sensitive to the quantum and timing of new development in North and West Edinburgh.

TEL's objectives

4.11 The public sector ownership of TEL presents opportunities and challenges that are different to most public transport organisations. In particular, its ownership structure provides an opportunity, in the UK context, of delivering a truly integrated tram and bus network, such as has not been achieved in other UK tram schemes. Although achieving profitable operations and payment of dividends are key objectives, profit maximisation is not the primary objective. The majority shareholder, the Council, seeks a 'social dividend' in terms of fare and network / service strategies. The Council requires TEL to maintain lower fares and a more comprehensive level of service provision than would normally be the case for a transport operator seeking to maximise profit

4.12 The future challenge for TEL is to integrate the tram into its business in a manner which maintains long-term profitability and allows the economic, environmental, development, urban regeneration, social inclusion and transport objectives of the tram scheme to be achieved.

Edinburgh Tram – Business Case Update August 2010

Parameters under which TEL operates

- 4.13 Fares and route planning are currently determined by Lothian Buses with reference to its financial targets and the 'social dividend' objectives outlined above. TEL will continue this approach in the form of integrated ticketing for bus and tram under a common fare structure. With the introduction of the tram, TEL will carefully consider the varying requirements of its patronage base, bearing in mind the specific customer service responsibilities which flow from the high level of public transport demand experienced in Edinburgh to date and forecast for the future. The JRC modelling output predicts that for Airport to St. Andrew Square 73% of year 1 (2012) tram passengers will have transferred from existing public transport, predominantly Lothian Buses, with the remaining 27% being new to public transport, transferring predominantly from car, whilst for the full Phase 1a the figures are 88% and 12% respectively. To meet this requirement, service integration plans have been developed and the structure created for bus and tram to operate within a single economic entity in which both modes play complementary roles.
- 4.14 Building on Lothian Buses' current market position, the common control of Lothian Buses and tram means TEL is likely to hold a majority share of the public transport market in Edinburgh. This provides a solid basis for capturing significant portions of the projected demand increases. [REDACTED] Lothian Buses' services in the period prior to the introduction of tram and the envisaged TEL bus and tram services thereafter will be continuously reviewed and optimised to meet emerging demand and passenger requirements.

Patronage targets

- 4.15 Public transport patronage is the key driver for TEL's revenue forecasts. The projected patronage is fundamentally dependent on growth in the existing public transport market and the assumptions about future residential and commercial developments at key regeneration sites in Edinburgh.
- 4.16 As noted in section 3, significant residential and commercial development is planned at key sites in North and West Edinburgh. Assumptions about scale and rate of these developments, developed in consultation with the Council, underpin the JRC model, which allocates the resulting travel demand to the most appropriate mode of transport. Based on this allocation, forecasts for TEL patronage were estimated. Using the geographical analysis of where this forecast demand is likely to originate / terminate, TEL has developed a flexible service integration plan, reflecting planned tram services and bus services beyond the introduction of the tram.
- 4.17 The patronage forecasts have been reviewed, in light of historic public transport patronage growth, and an economic assessment of the uptake of planned developments. The starting position for the patronage projections has been validated against Lothian Buses' traditional growth per annum.
- 4.18 The JRC's forecasts for the period 2012 to 2021 reflect demand arising from planned developments, in line with the latest view of the CEC Structure Plan. The CEC Structure Plan covers the period to 2021. The period from 2022 to 2031 is based on an assumed growth rate of 2% per annum, which is in line with Lothian Buses' historical experience and with a reasonable expectation of future economic growth for the city as validated by Scottish Government economists.

Edinburgh Tram – Business Case Update August 2010

- 4.19 A considerable proportion of the projected tram patronage is expected to come from those not currently using public transport. In 2012, 27% of total tram patronage for Airport to St. Andrew Square and 12% for the full Phase 1a is anticipated to arise either through mode shift from car or from new trips generated as a result of the improved opportunity to travel. Experience with other UK tram schemes, and more recently Dublin, has shown that such a level of modal shift can reasonably be achieved, even within the context of Edinburgh's already high public transport usage.
- 4.20 It is anticipated that the introduction of the tram, and its integration with Lothian Buses bus services, will result in greater numbers of passengers than either bus or tram could hope to achieve independently.

Service patterns and interchange

- 4.21 A key element of the strategy to realise the above patronage forecasts is the implementation of optimised service patterns for both bus and tram and maximising the opportunities for effective interchange between bus and tram and between other modes of transport.

Tram service patterns

- 4.22 The tram network will serve major high-volume transport corridors in Edinburgh and thus build upon existing high levels of public transport usage. Providing sufficient capacity to meet the demand is vital, especially to ensure overcrowding does not dissuade passengers from using public transport or lead to longer journey times and reduced reliability.
- 4.23 The planned service patterns for opening of the tram are as follows:
- From opening in 2012, 6 trams per hour (tph) in each direction between the airport and Leith plus 6tph in each direction between Haymarket and Leith. This will provide 12tph in each direction between Haymarket and Leith..
- 4.24 The demand forecast indicates that, after the initial ramp-up of passenger growth, tram services will require to be increased to provide sufficient capacity, primarily to serve demand on the Leith to Haymarket section. Therefore the TEL Business Plan assumes that from 2013, the 6 / 12tph service patterns above will be increased to 8 / 16tph.
- 4.25 Being able to identify the routes and frequencies of services necessary to cater for demand is fundamental to TEL's success. The JRC modelling work, in conjunction with the service integration plan, provides patronage forecasts for the tram network and for TEL, in terms of geographical area and peak / off-peak requirements. This allows the tram and bus service plans to be validated and adjusted to ensure sufficient capacity is provided at an affordable level throughout the network.

Bus service patterns

- 4.26 Where the tram runs parallel, or close to, an existing bus route, amendments are envisaged to bus services to prevent unnecessary overlap of services. Where the tram route follows a different alignment, with no bus routes running parallel, or in close proximity, no reductions are anticipated. The principle is that bus service reductions are only applied where the tram offers an acceptable

Edinburgh Tram – Business Case Update August 2010

alternative level of travel. This approach allows TEL to match the most effective mode of transport to levels of demand and avoid competition between bus and tram, while the travelling public continues to benefit from high quality public transport provision.

4.27 Key areas where bus services are planned to change are:

Full Phase 1a

- Foot of Leith Walk to St Andrew Square – significant reduction planned. However, services are retained to cater for those passengers for whom interchanging and the greater distance to the tram stop pose a deterrent to using public transport;
- St. Andrew Square to Haymarket – limited reductions as the tram route does not offer an alternative to most cross-city links provided by bus;

Full Phase 1a and Airport to St. Andrews Square only

- Haymarket to Airport – some frequency reduction on Airlink although some service will be retained for the intermediate stops not served by tram; and
- Saughton to Broomhouse – some frequency reduction, while maintaining services where no tram is parallel or the stop is too far to walk.

Interchange between bus and tram

4.28 It is TEL's aim to protect its patronage by offering as near seamless a journey through the network as possible. By minimising the requirement for interchange for the maximum number of passengers making short to medium length journeys, the inconvenience of interchanging will be minimised. Further, the integration plan for bus and tram seeks to achieve optimal alignment of service patterns at interchanges making interchanging as simple as possible. This will ensure that entry to, and use of, the TEL network is as easy and convenient as possible and the risk of loss of patronage is minimised.

4.29 The design of first class interchange facilities is critical to minimising any potential negative impact of interchange. The following locations have been identified as requiring first class interchange to allow TEL to meet these aims:

Full Phase 1a

- Foot of Leith Walk – Key to allow the curtailment of buses from Great Junction Street or Duke Street; and

Full Phase 1a and Airport to St. Andrews Square only

- St Andrew Square – Required as an interchange point with tram for buses reaching the city centre from points west and south of the West End.

Interchange between air travel and TEL services

4.30 Edinburgh Airport provides the opportunity for interchange for passengers arriving and departing by air with local public transport. Tram, together with a reduced frequency Airlink bus, will provide air passengers with a first rate option for travelling to and from the city centre, promoting a favourable first impression of Edinburgh.

Edinburgh Tram – Business Case Update August 2010

Interchange between heavy rail and TEL services

4.31 Facilitating easy interchanges between heavy rail with bus and tram supports national and local objectives of reducing the reliance on private car travel. Rail patronage has increased significantly over the last few years, which offers a great opportunity for TEL to increase revenues by providing onwards travel to rail passengers. Key opportunities for integration between heavy rail and bus / tram are:

- Haymarket;
- Edinburgh Park;
- Princes Street / Waverley; and
- Edinburgh Gateway at Gogar.

Park and Ride

4.32 Interchanges between private car and bus / tram are vital to the patronage and revenue projections for TEL, especially in terms of encouraging modal shift. With the right facilities, park and ride can offer an attractive alternative to bringing cars into the city. Such facilities include information provision, public safety features and comfortable customer amenities, as well as frequent and reliable public transport services to and from the sites.

4.33 Key park and ride sites for TEL services are currently located at Hermiston and Ingliston. These sites are ideally situated to cater for cars travelling to Edinburgh from West Lothian, where significant residential growth is predicted. The Council are currently assessing further opportunities for additional potential park and ride sites and expansion of existing sites as funding availability allows.

Integrated ticketing with other operators

4.34 TEL is committed to promote wider use of public transport within Edinburgh, a key to which is integration with other operators. Aside from TEL's fare and ticketing strategy for 'red buses' and 'red trams', a number of product offerings exists to facilitate integration of public transport throughout Edinburgh, and across Scotland. Key ticket products offering an element of integration are:

- One-Ticket – South-East Scotland region-wide ticket offering travel on FirstBus, TEL, Stagecoach, most smaller bus operators and on rail services'; and
- Plus Bus– Rail+Bus ticket currently available from any UK rail station, combining special rail tickets to / from Edinburgh with unlimited travel on TEL services on day of validity.

Revenue targets

4.35 TEL's target revenue levels are directly correlated to the outputs from the JRC model in terms of patronage on TEL services. JRC have prepared revenue forecasts based on the current yield per passenger being achieved by Lothian Buses, discounted to take account of an increased risk of fare evasion on trams (compared to buses) and inflated in accordance with the principles of TEL's fare and ticketing strategy, as explained below. The fares underlying the yield calculation are based on a flat fare structure; the same fare applies regardless of the distance travelled. A pro-active

Edinburgh Tram – Business Case Update August 2010

management of the revenue yield per passenger will provide further opportunities for increased profitability for TEL in the future.

- 4.36 The forecast patronage and revenues for 2012 to 2014 have been reduced to take account of a ramp-up period, as it is common practice to assume that new services will take some time to be fully adopted by users. However, it may be expected that a significant proportion of the forecast patronage discounted in the ramp-up adjustment would otherwise travel by bus. Therefore, the effect of ramp-up on tram revenues may be slightly understating the potential total TEL revenues during those years.

Fares and ticketing strategy

- 4.37 TEL's fare and ticketing strategy is driven by its objective to achieve a balance between the attractiveness of price, flexibility and simplicity of use. This planned degree of integration between tram and bus is rare in the UK, outside London, and the exceptional experience it offers will further enhance the public transport image in Edinburgh.
- 4.38 TEL will set fares at a level necessary to allow it to cover network operating and lifecycle costs and pay any required dividends to shareholders. The fare structure will be a single, fully integrated, flat fare, regardless of the distance travelled (with the exception of journeys to and from the airport and night services) and will be common to both bus and tram. The principles of the existing Lothian Buses fares structure, which will migrate to form the TEL combined network fare structure are:
- Child, adult and concessionary travel categories;
 - Fares products paid for at time of travel, pre-purchased from pavement mounted ticket machines or Ridacards purchased in advance; and
 - Premium fares levied for journeys when the value of service provided is discernibly higher, or the cost of service provision is discernibly greater.
- 4.39 The impact on individual fares will vary year on year due to necessary considerations of public demand for specific tickets, practicality of applying specific fare increases, and the history of increases on a particular ticket product.
- 4.40 TEL's ticketing strategy is based on the principle of providing services through a single ticketing system, where all tickets are fully inter-operable on TEL bus and tram. This means no additional costs of travel arise from any interchange between bus and tram, or vice-versa, and will enhance the perception of a fully integrated transport network.
- 4.41 Lothian Buses' current ticketing strategy encourages wide use of pre-paid and / or multi-journey types of tickets, by offering discounts to the standard fare, and TEL is committed to continue and further enhance this approach. Advance payment for ticketing products has benefits from a financial perspective (income is secured, risk of fare evasion / ticket fraud is reduced), whilst improving customer loyalty and delivering operational benefits, such as reduced boarding times.
- 4.42 It is a fundamental assumption that TEL bus and tram will both participate in the national concessionary ticketing scheme. The relevant agreement has not yet been finalised, although TS have given support for this assumption in the preparation of the TEL Business Plan. Under the terms of the scheme, operators receive payment of 67% of the price of an adult single for each journey by concessionary travel holders and this currently applies to approximately 20% of Lothian Buses' patronage. This level of recompense is assumed to continue.

Edinburgh Tram – Business Case Update August 2010

- 4.43 Lothian Buses currently participates in multi-operator ticketing schemes 'PlusBus' and 'One-Ticket'. These products encourage greater use of public transport through ticket integration across a number of operators and modes (bus and rail). The TEL Business Plan assumes that both products will be expanded to include tram in due course and the current level of recompense received by Lothian Buses will be receivable by TEL.

Other income opportunities

- 4.44 The experience of Lothian Buses and other UK transport operators, including existing UK tram schemes, is that attractive additional income may be derived from other activities in addition to patronage driven revenues. TEL with its combined bus / tram network offers attractive opportunities to generate additional revenues in the following categories:

- Advertising;
- Small scale commercial development; and
- Marketing and tourism driven revenues.

- 4.45 The financial projections in the TEL Business Plan include a prudent assessment of the income which might be earned from these additional sources, based primarily upon the existing experience of Lothian Buses.

Benefits realisation plan

- 4.46 The benefits realisation plan is concerned with the way TEL will contribute towards realising both the financial and wider benefits associated with the introduction of tram, where TEL is able to exert an influence. TEL's corporate focus is determined by its ownership structure, as well as by the commercial environment in which it operates. Considering how these benefits can be realised at the planning stage is sound business practice, as it promotes alignment of operational strategies with the goals of the business.

- 4.47 Many of the benefits associated with the introduction of tram and the establishment of TEL essentially depend on achieving the target patronage levels, particularly through mode shift from car and the generation of new journey opportunities.

- 4.48 Closely aligned to the provisions of the Operational Performance regime below, the benefits realisation plan outlines the strategies and practical measures which TEL will adopt in order to achieve the highest levels of patronage. Specifically, this relates to how TEL will ensure:

- The highest quality of transport offering in terms of frequency, affordability, reliability, cleanliness and comfort;
- Comprehensive geographical accessibility;
- Optimal physical accessibility for all passengers;
- Maximum integration of modes, services, fares and tickets; and
- Enhanced actual security of the TEL public transport network and passengers' perception thereof.

- 4.49 The benefits realisation plan is strongly supported by TEL's strategic marketing, communications and stakeholder management strategies. Effective initiatives in these areas will foster dialogue and,

Edinburgh Tram – Business Case Update August 2010

most importantly, ensure that the integrated bus / tram services are understood by the travelling public. The strategic marketing approach will raise and cultivate awareness of the TEL network through advertising and promotional initiatives. These will be combined with targeted communications and stakeholder management activities which will pro-actively engage Edinburgh's public, media and stakeholders at every opportunity.

- 4.50 TEL will not be a brand visible to the general public. Instead, TEL will be the background legal entity, fulfilling its legal and statutory obligations as a public transport provider whilst all branding, marketing and communications activities will focus on "Trams for Edinburgh" and "Lothian Buses".

Operational targets and strategies

- 4.51 TEL's operating cost projections are based on
- The current experience of Lothian Buses, scaled for the planned future level of bus services with the tram and the number of bus vehicles that will be needed;
 - A detailed assessment of tram operating costs based upon the planned service patterns and required number of tram vehicles.
- 4.52 Effective control over all aspects of operating costs is essential for TEL to achieve its profit objectives. However, the public's perception of the quality of services translates directly to patronage and revenue generation. Therefore, TEL must balance opportunities for cost savings against the impact this may have on the quality of services provided.
- 4.53 Operating cost projections have been developed for TEL's bus and tram operations based on current experience and benchmarked against other schemes. The primary driver for these estimates has been the capacity required to meet demand, based on the patronage growth projected by the JRC modelling. An iterative review process has allowed TEL to take an overarching view of the projections, avoiding cost duplications in the operational set-up and a number of opportunities for synergies have been identified. The resulting cost projections are a reflection of the integrated system which TEL will operate, and an attempt has been made to merge activities where possible.
- 4.54 The majority of tram operating costs are based on the DPOFA cost model and maintenance contracts with BSC. Key operating costs outside the scope of that model, which must be paid by TEL, include electricity, insurance and marketing costs. All of the estimates have undergone an iterative process of evaluation and are benchmarked against other schemes to gain a high degree of confidence. Tram operating costs include regular and lifecycle maintenance of the trams and the infrastructure included in the contracted out maintenance arrangements of the Infraco Agreement.
- 4.55 Bus operating cost projections are based on Lothian Buses experience and take into account the requirements of the service integration plan for the introduction of tram, from which reductions in bus services are assumed to flow. Bus patronage is a variable in the cost projections that will flex the peak number of bus vehicles, operating hours and miles required to meet demand.
- 4.56 Lothian Buses management and administration costs form TEL's overheads reflecting the assumption that most of TEL's corporate management activities will be performed by the current Lothian Buses head office functions. The costs shown as TEL Head Office costs relate only to additional costs which are specific to tram.

Edinburgh Tram – Business Case Update August 2010

Lifecycle costs and replacement costs

- 4.57 The capital investment and lifecycle costs provided for in the TEL Business Plan relate primarily to the purchase of new buses to renew and / or expand the existing bus fleet and to the heavy maintenance expenditure on the tram (infrastructure and vehicles) necessary to ensure the tram assets reach the end of their useful lives.
- 4.58 The projected life of the elements of tram system will vary. Replacement of many of the major elements, including the tram vehicles will be required soon after it has been in operation for 30 years. The TEL Business Plan provides specifically for the expenditure required to achieve the life expectancy of the system over the first 30 years of operation and to ensure the system performs effectively throughout. During this period, regular heavy maintenance and renewals must be implemented and will take place at pre-determined time intervals dictated by the specified performance criteria for the individual elements of the system. These costs are significant and, particularly the half-life refurbishment of tram vehicles after approximately 15 years, will require careful planning to balance cash flow availability with servicing needs.
- 4.59 The TEL Business Plan does not specifically provide for the major replacement expenditure which will be needed after 30 years, including replacement of the tram vehicles.

Distribution policy

- 4.60 The Council currently receives a dividend of c£2m per annum in respect of its 91% shareholding in Lothian Buses. The TEL Business Plan adopts the payment of this level of dividend by TEL as a continuing requirement in the period beyond the commencement of tram operations when TEL will become the majority shareholder in Lothian Buses.
- 4.61 The TEL Business Plan assumes this dividend policy will be applied prudently and that the annual dividend might be reduced or foregone for short periods in response to lower profits or short-term demands on TEL's cash-flows.

Risks to patronage and revenues

- 4.62 In consultation with TEL, TfL and other stakeholders, JRC has carried out a series of tests on the sensitivity of the forecast TEL patronage and revenues to changes in key assumptions. The results are summarised below.

Development and economic growth

- 4.63 The tram is an investment to encourage and facilitate the new development planned in North and West Edinburgh and to stimulate economic growth in the city. However it is important to recognise that the forecast of future TEL patronage and revenues, both for bus and tram, is highly sensitive to the level and timing of new development and the underlying level of economic growth. Five tests were carried out as part of the work for this refresh as follows:

- Patronage: a decrease of passengers by 1m reduces profit by circa £1.5m (2012).
- Electricity: a 5% increase in electricity costs impacts Operating profit by £1.5m (2012)

Edinburgh Tram – Business Case Update August 2010

- Fuel: *a 5% increase in fuel costs impacts Operating profit by [REDACTED] (2012)*
- Labour: *a 5% increase in labour costs impacts Operating profit by [REDACTED] (2012)*
- Yield: *a 5% increase in yield above inflation increases profit after tax by [REDACTED]*

In the event of slower than expected development or a longer than anticipated duration of the current general economic downturn, TEL would plan and implement services to match the reduced demand.

- 4.64 The patronage assumptions for the incremental opening stage of Airport to St Andrew Square predict that 27% of tram passengers will be new to public transport. By way of sensitivity analysis, if only 50% of the assumed patronage were to be achieved, this would reduce revenue by circa [REDACTED] in 2012.
- 4.65 A further key sensitivity relates to Bus Service Operators' Grant (BSOG). This is at present subject to a 3 year deal with Scottish Government but is likely to be impacted by the Governments spending review. Therefore, it is unlikely to continue in its current form until the nominal end of the present arrangement in April 2013. If the scheme were to be removed without replacement, the cost could amount to circa £8m.

Edinburgh Tram – Business Case Update August 2010

5. Funding and affordability

Delivery to St Andrews Square

- 5.1 As previously explained in section 2 of this document a number of options have been explored for incremental delivery of Phase 1a. This has been considered against a backdrop of commercial difficulty with the current Infraco contractor and the need to consider affordability within the current funding constraints.
- 5.2 The negotiations over recent months with the Infraco contractor, have been with the aim of achieving cost and programme certainty to provide a guaranteed maximum price for the scope of works to the east end of Princes Street. This contractual arrangement would facilitate the first section of incremental delivery for Phase 1a and would provide an operational tram system to St Andrew Square.
- 5.3 Given the increase in cost for the whole of Phase 1a due to the impact of the contractual disputes and as a result of design changes on the cost of the project, it is considered that the section from Edinburgh Airport to St Andrew Square should be the first section of incremental delivery. As set out in section 2 of this document, this section is believed to be capable of being delivered for the current funding of £545m.
- 5.4 Whilst commitment remains to deliver the full scope of Phase 1a, it is important to balance the desire to complete Phase 1a with the current funding constraints and the availability of further funding given the current economic climate and forthcoming constraints in public sector spending.
- 5.5 It is envisaged that completion of the Airport to St Andrew Square section of the tram project can be completed by the end of 2012/start of 2013. This would mean that a tram system could be operating to the city centre within these timescales, potentially, with no additional funding being required at this time. This would allow greater cost certainty to be achieved with the current Infraco contractor for delivery of this section and would allow time for important decisions to be made with regard to further funding considerations for the full route of Phase 1a, as more information will be available on the developer contributions and other sources of finance than is available today.

Completion of Phase 1a

- 5.6 When construction of the Airport to St Andrew Square section of Phase 1a is nearing completion, decisions would then be needed on how the full scope of Phase 1a is completed. The timing of starting the construction of the next section would be dependant on the availability of funding and political commitment at that point in time to extending beyond St Andrew Square.
- 5.7 It is currently envisaged that the remaining scope of Phase 1a would be completed when suitable funding becomes available. This approach would allow construction to be matched to the availability of funding.
- 5.8 The completion of Phase 1a from St Andrew Square to Newhaven, or incremental points in between (Foot of the Walk or Ocean Terminal) would enable greater control to be taken of construction.

Edinburgh Tram – Business Case Update August 2010

Current Position on CEC Funding of £45m

- 5.9 This section focuses on the Council's current commitment of £45m to the tram project in terms of what has been achieved to date and the forecast for future developers' contributions and capital receipts.
- 5.10 The Council's original commitment of £45m was made up from a variety of sources. The table below shows amounts forecast from each of these sources and the current position against the overall planned total.

CEC Contribution Breakdown	Planned Contribution	Current Position v Plan
Council Cash	£2.5m	£2.5m
Council Land	£6.2m	£6.2m
Developer Contributions – Cash	£25.4m	£4.9m
Developer Contributions – Land	£1.2m	£1.2m
Capital Receipts (Development Gains)	£2.8m	£0.0m
Capital Receipts	£6.9m	£2.0m
Prudential Borrowing (in advance of developers' contributions)		
Total	£45.0m	£16.8m

- 5.11 The Council's actual contribution to the project to date is £34m. £25m of this has been borrowed under the Prudential Framework in advance of receipt of developers' contributions and capital receipts.

Developers Contributions

- 5.12 Recent analysis undertaken by the Council's Planning Division shows that certain future developments would enable the Council to realise the required contributions for the tram project. These future developments are the first and second phases of the Leith Docks development, Princes Street development and the West Edinburgh Planning Framework. The potential total contribution from these developments could be upwards of £26m.
- 5.13 Currently there are £16m of contributions in the planning cycle. However, these contributions have been heavily discounted against the total value from these developments, taking a pessimistic view on the pace and size of these potential developments to take account of the effect of economic circumstances.
- 5.14 Based on these assumptions and the potential uplift in capital receipts, the Council could still achieve the required developers' contributions in the 20 year time frame even if the scope of the project was reduced in the short term.

Capital Receipts

- 5.15 No receipts were received during the last financial year, and the forecast timescale for disposals is that nothing is expected before 2013, based on the current tram programme. It is likely that the

Edinburgh Tram – Business Case Update August 2010

level of developer interest in the residual sites will increase when confidence on the completion of the tram project increases, as works are completed and test running commences.

- 5.16 The best value for most of the sites is based on residential value. ESPC reported in April 2010 that house prices in Edinburgh are rising at 11.6% pa, with a 37% increase in transaction volume. This is, however, still below pre-credit-crunch levels.
- 5.17 The improvement in house selling prices will cascade into increased development value, and a positive differential between land value increase and borrowing rate interest. The prudent advice remains to consider the sale of these development sites when the unit value increases. This is expected as both the general housing market improves, and the tram works near completion.
- 5.18 The achievement of increased value remains less risky than the alternative of marketing now and seeking a share of value increases through an agreement – commonly known as gold clauses – which are difficult to enforce with reluctant partners.

Incremental Delivery

- 5.19 One of the contingency plans to ensure the affordability of Phase 1a is to construct the route on a phased basis.
- 5.20 As mentioned previously, the total amount of developers' contributions in the Planning System total £16m.
- 5.21 Should the tram be constructed in an incremental delivery fashion, from west to east, there may be implications for the receipt of developer contributions from developments towards the east. However, under the terms of the Tram Developer Contribution Guideline, the Council has until 2020 to utilise contributions received to date, meaning that as long as the full scope of the scheme from the Airport to Newhaven is constructed by 2020, the Council will not be required to repay contributions to developers at the eastern end of the route.
- 5.22 Of the £16m currently in the planning system, £7m relates to developments in the Leith area, although it should be noted that the development guideline means that if the development is within 750 metres of the tram line a contribution is triggered.
- 5.23 However, various developers would have contributed on the basis that the tramway was very close to the development. Any change in these conditions may result in developers trying to renegotiate, or even ask for contributions to be waived, if the delivery of the tram is delayed.

Prudential framework v commercial borrowings

- 5.24 As previously stated, the Council fund their commitment of £45m to the Tram project through the Prudential Borrowing Framework, in advance of recovery from developers and capital receipts. This is managed as part of the overall treasury management of the Council.
- 5.25 Should the tram project require additional funding over the committed funding of £545m alternative means of funding will need to be considered.

Edinburgh Tram – Business Case Update August 2010

- 5.26 A report to the Full Council meeting of 24th June 2004 suggested that it would be prudent for the Council to make contingency plans up to a level of 10% above the approved funding.
- 5.27 The Council's contingency funding has been identified primarily from two areas. The Council has made an allowance of £2m within its Long-Term Financial Plan (LTFP) to cover additional infrastructure development costs. This provision would allow the Council to borrow £24m under the Prudential Framework. This commitment would represent an opportunity cost for the Council but would have no impact on projects already identified in the Council's capital programme. Headroom within the existing budget for loan charges may also allow future investment in infrastructure beyond this sum if required, but this will form part of the Council's future budget considerations.
- 5.28 Further borrowing, should it be necessary, could be financed from the future profits of Transport Edinburgh Limited (TEL). Based on the full scope of Phase 1a, TEL's forecast cumulative net profit from 2013 – 2031 would allow the Council to prudently borrow additional money to fund the balance of costs up to a level of circa £600m. Potential for incremental delivery options to be considered to the Foot of Leith Walk or Ocean Terminal could be considered subject to the appetite for further investment and prevailing economic conditions.
- 5.29 Consideration has been given to alternative methods of additional funding such as leasing of tram vehicles and corporate borrowing by TEL from financial institutions.
- 5.30 Initial figures have been obtained from financial institutions for borrowings of £58m. The cost of these funds from an external financial institution is significantly more than the Council can obtain under the Prudential Framework.
- 5.31 The table below demonstrates the cost differential between prudential borrowing and corporate borrowing;

	Corporate Borrowing	Prudential Framework
Rates for 25 year borrowing (%)	6.15	4.10
Margin + Interest (£m)		37.5
Repayment (£m)		58.0
Total Repayment (£m)	122.0	95.5

- 5.32 The cost of funds for 25 year borrowing provided by the external finance provider is 4.4% with a 1.75% margin, giving a total cost of 6.15%.
- 5.33 The current rate for 25 year borrowing under the prudential framework is 4.1%. To put this in context the repayment and interest costs of £58m under corporate borrowing would total £122m. Under the prudential framework, over a 25 year period, the total cost of repayment and interest is £95.5m. This clearly demonstrates that the Prudential Borrowing Framework is the cheapest source of funds available, should the project require additional funding.

Edinburgh Tram – Business Case Update August 2010

Cash Profile for Phase 1a and Incremental Delivery

- 5.34 As previously stated, it is forecast that the section of the tram project from the Airport to St Andrews Square can be delivered for £545m.
- 5.35 Therefore, there would be no requirement to commit additional funding to the project at this stage.
- 5.36 It is envisaged that completion of this part of the infrastructure can be completed by the end of 2012/start of 2013. This will allow time to consider further funding requirements based on the economic landscape at that time. Based on the current assumptions for the entire route of Phase 1a, the Council would require to fund 100% of project expenditure from Period 10 of financial year 2011/12.

Sunk Cost – What have we got for the Expenditure to Date

- 5.37 A large infrastructure project such as the tram project requires a huge amount of work in advance of physical construction works.
- 5.38 The budget for tram infrastructure represented 46% of the overall project budget. The expenditure to date on Infrastructure works is £162m. The most significant construction elements within this expenditure relate to construction of Gogar Depot, the construction of structures along the off-street section and construction of tram works along Princes Street.
- 5.39 Significant progress has been made on the construction of the 27 tram vehicles. This part of the project represents 11% of the original project budget. The shells of all 27 trams vehicles are now complete and are at various stages of testing before they are delivered to Edinburgh. Given the mature stage of this work stream, there is minimal financial risk exposure in this area.
- 5.40 A major element of the project relates to diversion of utilities. Work to divert utilities is now substantially complete and therefore represents minimal further financial risk to the project.
- 5.41 In order to undertake construction of the tram infrastructure there is a requirement to divert utilities that exist under the road surface. The primary reason for undertaking these diversions is to ensure that tram operations are not disrupted as a result of utility companies servicing their assets or reacting to emergencies requiring them to dig up tram infrastructure.
- 5.42 The diversion of utilities has also resulted in a significant enhancement of the utility assets in the city.
- 5.43 One of the benefits to the city of this enhancement will be to reduce future disruption to the city brought about by utility companies having to dig up the road to enhance or replace ageing assets.
- 5.44 In addition, the upgrade of these utilities will also bring the benefit of faster broadband services across the city.
- 5.45 The expenditure to date also includes a substantial sum for design and the cost of acquiring land on which to build the tram infrastructure. Work on these elements of the project is now almost complete, therefore representing minimal financial risk to the project. Costs related to these items made up 12% of the project budget.
- 5.46 In order to manage a project of this nature, significant project management resources are required. This item represented 13% of the original project budget, although additional resources in this area have been required as a result of the dispute with the infrastructure contractor.

6 Conclusions.

- 6.1 The analysis undertaken to refresh the Business Case for Phase 1a has confirmed the validity of the project, even taking into account the down turn in development as a result of the recession.

Edinburgh Tram – Business Case Update August 2010

- 6.2 The project has faced a number of challenges such as commercial disputes; increasing costs and a general slow down in the developments that the project would serve.
- 6.3 Due to these issues consideration has had to be given to incremental delivery of Phase 1a to preserve the affordability of the project while safeguarding the commitment to Phase 1a as a whole.
- 6.4 The first important consideration in delivering the project in this manner is affordability. Based on the work undertaken, the conclusion is that a first incremental phase from the Airport to St Andrew Square is believed to be capable of being delivered within the current funding commitment.
- 6.5 While the impact of the recession on the pace and size of development in the city has been significant, most notably at the Waterfront, it is important to consider the long term view. The tram remains an important stimulant to development and regeneration in the West and North of Edinburgh.
- 6.6 Whilst the actual development completed at the commencement of tram operations is projected to be significantly lower than originally thought, the important conclusion is that there is expected to be a recovery such that by 2020, 30% of the original forecast will be completed and 80% complete by 2031. This means that in the longer term the viability of tram is safeguarded.
- 6.7 In addition, the anticipated passenger growth at Edinburgh Airport will provide significant demand for tram with projected growth rising from the current level of 9.1m to 26m passengers in 2031.
- 6.8 A critical part of the business case refresh is the update of the TEL Business Plan. This is further emphasised by the impact incremental delivery could have on the business.
- 6.9 A significant amount of work has been undertaken on this area, including updates from JRC and Lothian Buses.
- 6.10 The conclusion is that following an initial period of tram patronage build up the TEL Business as a whole is profitable for Phase 1a and is profitable within one year of partial opening to St Andrew Square.
- 6.11 Although both scenarios experience significant growth thereafter, the full benefits of integration and the profit levels that follow cannot be achieved without completion of the full scope of Phase 1a.
- 6.12 Whilst commitment remains to deliver the full scope of Phase 1a, affordability must be the primary consideration given the current level of funding and the forthcoming constraints on public sector spending.
- 6.13 The current funding the Council has committed to the project is £45m, of which £25m comes from developers' contributions.
- 6.14 While the slow down in development has impacted on the pace of contributions received by the Council, over the 20 year period set out in the Tram Developers contribution guideline, the £25m can be achieved. The current impact on developers' contributions from incremental delivery is £7m if the route is curtailed at St Andrew Square. This means that if the full route of Phase 1a is not delivered, the Council would have to find an additional £7m to fund the £45m commitment.

Edinburgh Tram – Business Case Update August 2010

- 6.15 As reported to Council on 24 June 2010, the Council have undertaken contingency planning up to a level of 10% above the current project funding. These plans rely on the ability to borrow under the prudential framework which remains by a distance the cheapest source of borrowing available to the Council.
- 6.16 In conclusion, the tram project has faced many challenges since the start of construction. This has resulted in increased costs and significant delay. This has required options to be considered for delivering Phase 1a incrementally. The impact of incremental delivery has a significant effect on the integration plan for tram and bus; however, this can be managed so that TEL will be a profitable organisation. The analysis undertaken also demonstrates the tram can be profitable as part of the TEL operation even through a curtailed service.
- 6.17 However, it is clear that the full benefits of tram cannot be delivered without the full scope of Phase 1a being delivered; therefore an important assessment will be required at the appropriate time to appraise the benefits gained from constructing the full route of Phase 1a versus the capital cost and the availability of funding.

The City of Edinburgh Council – 18 November 2010

Liberal Democrat Emergency Motion

Council notes that:

- (i) the Chief Executive wrote to the Managing Director of Bilfinger Berger Civil UK Limited on 16 November to offer a meeting with Council officers;
- (ii) the Council Leader and Chief Executive later that day met the Cabinet-Secretary for Finance and Sustainable Growth at which they discussed the possibility of mediation as a means of progressing the tram project;
- (iii) the Council Leader will take all appropriate steps to facilitate mediation and asked the Chief Executive to take forward a mediation proposal;
- (iv) the Chief Executive subsequently discussed with the Chief Executive of **tie** the potential for using mediation or any other form of dispute resolution; and
- (v) the Tram Project Board on 17 November agreed to support an independent mediation process.

Council instructs the Chief Executive to continue to make preparations with **tie** and BSC for mediation or other dispute resolution processes.

Council requests that the Chief Executive report back on progress in these matters.

Signature of proposer

Councillor Jenny Dawe

Date

18 November 2010