

Statement was submitted in June 2005 for each of the proposed route amendments to each Bill.

- 8.68 EIA in Scotland is governed by the Environmental Impact Assessment (Scotland) Regulations 1999. The EIA is a systematic process by which the environmental impacts of a proposed development, both during construction and operation, are assessed, reported in an Environmental Statement, made available for comment from statutory environmental authorities and the public, and taken into account in the decision making process. In addition, as part of the preliminary stage of the Private Bill process, the Environmental Statement and the supplementary Environmental Statement was subject to a peer review by Bond Pierce. In each case they were found to be adequate.
- 8.69 During Phase 2 of the Consideration Stage the Committee for each Bill amended the Bills to ensure that there was a statutory link between the Environmental Statement, the carrying out of the works authorised by the Acts and the likely residual impact of the works.
- 8.70 Accordingly, Section 67 of the Acts provides that the authorised undertaker is to employ all reasonably practicable means to ensure that the environmental impacts of the works are no worse than the residual impacts identified in the Environmental Statement and the supplementary Environmental Statement and that either the additional environmental mitigation measures identified in undertakings given to objectors or to the Committee are carried out, or that the environmental impacts of the construction or operation of the authorised works are no worse than they would have been had the mitigation identified in the undertakings been carried out.

Proposed mitigation

General

- 8.71 Various public documents have been developed in order to mitigate the likely impacts of both the construction and operation of the tram. These have either been subject to public consultation or tested and considered through the parliamentary process. Indeed, some of the documents were amended as a result of the evidence given to the Parliamentary committees to address concerns of the objectors.

Tram Design Manual

- 8.72 Given that the tram runs through various sensitive environments, including the World Heritage Site and conservation areas, the Tram Design Manual has been prepared by the Planning Authority. It was the subject of extensive public consultation and was subsequently approved by the planning authority in September 2005.
- 8.73 The Tram Design Manual is supplementary planning guidance which will be a material consideration in respect of each Prior Approval application. Both SDS and the Infracore are contractually required to comply with the terms of the Tram Design Manual.
- 8.74 In conjunction with the aims of the Tram Design Manual, the types of works which require Prior Approval was extended to give greater protection to the built heritage within the city centre and, in particular, within the World Heritage Site. For example, poles and building fixings require Prior Approval given their potential impact on listed buildings.
- 8.75 In addition, the grounds for refusing a prior approval, which are derived from the Town and Country Planning (General Permitted Development) (Scotland) Order 1992, are strengthened within the Acts again to try to give additional protection to the built heritage within the city centre. This recognises the sensitive nature of the World Heritage Site and the townscape of Edinburgh.

Code of Construction Practice

- 8.76 To minimise the likely adverse impacts of the construction, a Code of Construction Practice (CoCP) was developed and the Bills were amended to provide that the authorised undertaker must use all reasonable practicable means to ensure that the works are carried out in accordance with the CoCP. This obligation also includes any local construction practices which may be developed for particularly sensitive locations such as Murrayfield.
- 8.77 The CoCP governs many aspects of the construction including working hours, noise levels during construction, methods of minimising dust, vibration and other nuisance during the construction period, consultation requirements, how species and wildlife should be protected during the construction and traffic management.
- 8.78 Both the MUDFA contractor and the Infraco are contractually obliged to comply with the CoCP. In addition, while the Acts allow the CoCP to be amended, any amendments cannot reduce the standards of mitigation and protection contained in the CoCP dated 6 March 2006.

Noise and Vibration Policy

- 8.79 Again, this was developed during the parliamentary process and the Bills were amended to provide that the authorised undertaker must use all reasonably practicable means to ensure that the Noise and Vibration Policy (the Policy) is applied to the use and operation of the tram.
- 8.80 The philosophy behind the Policy is that, rather than relying on external mitigation like noise barriers, mitigation should be provided at source. Therefore the design of both the tram and the infrastructure should incorporate suitable measures from the outset to mitigate against noise and vibration, for example the type of track slab, the wheel / rail interface all require to be carefully considered and designed. The design work was also informed by noise and vibration surveys which were and are continued to be carried out at sensitive areas.
- 8.81 SDS, Tramco and Infraco are all contractually obliged to comply with the Policy. Further, the Tram Maintainer, the Infraco Maintainer and the Operator are also be required to comply with the Policy.

Landscape and Habitat Management Plan

- 8.82 A Landscape and Habitat Management Plan (LHMP) was developed during the Parliamentary process and this will continue to evolve as the project progresses. This relates to the Roseburn Railway Corridor only and was developed in recognition of the likely significant environmental impacts on the Roseburn Corridor and the change in its character.

Badger Mitigation Plan

- 8.83 As the LHMP only applies to the Roseburn Corridor, a badger mitigation plan was developed for the badgers at Gogar. These badgers are now relocated and a new sett was constructed. This was done in consultation with both Scottish Natural Heritage and Edinburgh and Lothian Badger Group to determine the necessary mitigation. Further survey work was completed to establish the location of the setts, the nature of the setts and the foraging areas of the badgers.

Site Specific mitigation

- 8.84 There are various locations around the route which will require specific mitigation. The authorised undertaker is to consult with the residents at Baird Drive and is to try to ensure that the proposed landscaping and screening is as effective as practicably possible from day one.
- 8.85 At the depot, any landscaping has to comply with the guidance issued by the Civil Aviation Authority on planting in the vicinity of airports, so as to avoid bird strike. This is due to the proximity of the depot to the airport and the flight envelope. The agreement with Edinburgh Airport Limited sets out what is required by way of compliance.

Employer's Requirements in the Infraco contract

- 8.86 The ERs, which have been developed for the Infraco contract, include a section on the environmental requirements which are applicable to the construction and operation of the tram. Primarily, these requirements ensure that the Infraco complies with the documents mentioned above.
- 8.87 In addition, the Infraco must prepare the Ecological Design which builds on the ecological mitigation proposals set out in the Environmental Statements. It will include information on construction, aftercare maintenance and monitoring. In preparing this document, the Infraco will be required to update all of the ecological surveys prior to commencing the works in that area and the findings of these surveys will be incorporated in to the LHMP and the Environmental Management Plan.
- 8.88 The Infraco is also to prepare a Construction Environmental Management Plan including method statements, information on drainage, working times, noise reduction and abatement, pollution control, protection of retained vegetation, waste disposal, topsoil handling and site compounds. This will build on the CoCP and will reflect the Infraco's construction methodologies

Project management plans and controls

Project delivery strategy

- 8.89 The project will be delivered against a predetermined project lifecycle and assurance will be given at each phase review. Governance of the project dictates that certain activities cannot commence until appropriate levels of approval have been granted. For tram there are three types of gateway as follows:
- 1) Internal stage-gate review – this is determined by **tie** and relates to the lifecycle of the project. The procedure defines the type of information that should be available by the end of each stage of a project and the review process will check that these deliverables are in place before moving onto the next stage of the process;
 - 2) Government Gateway Review – **tie**'s client body and the key funders demand that OGC (Office of Government Commerce) gateway reviews are carried out before significant release of funding or entering into contracts; and
 - 3) Statutory approval processes – **tie**'s client and key funders have certain approval processes that must be met prior to the project moving from one stage to the next, or impose certain restrictions upon the project due to political reasons.

These gateways are fully aligned with the governance arrangements for the project as set out in section 6.

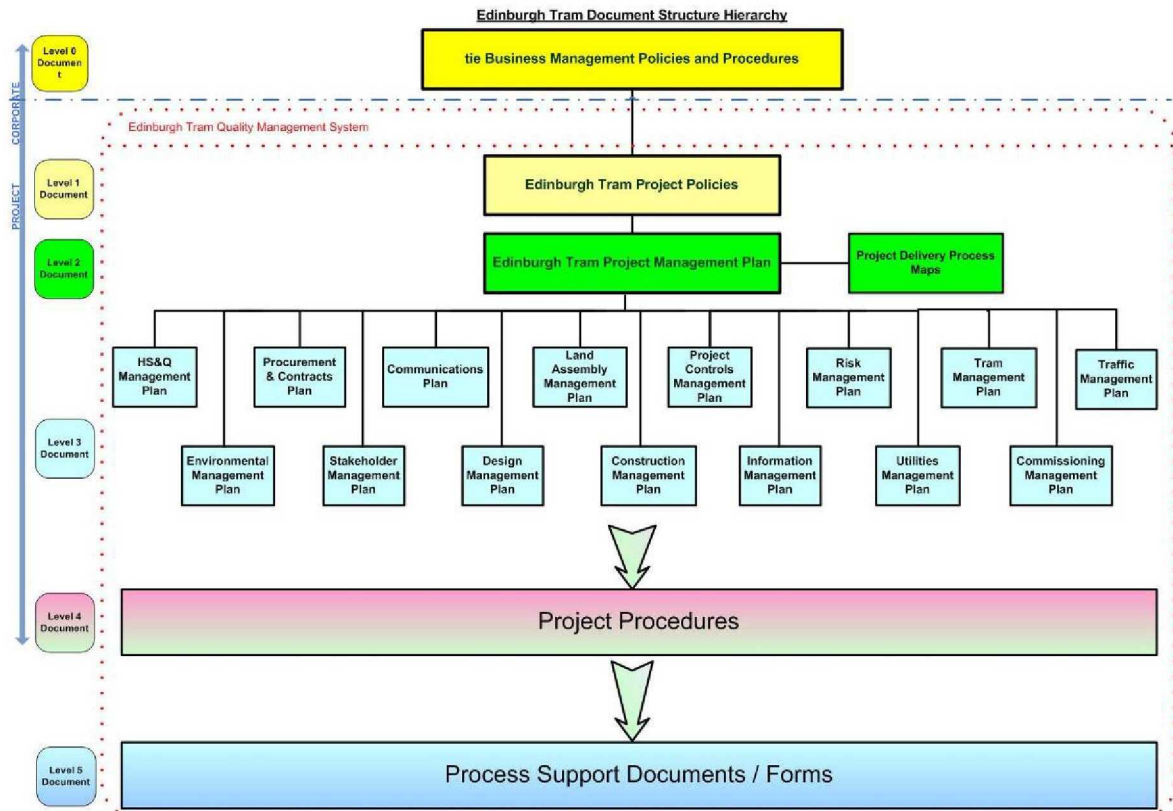
Project implementation and management plan (PMP)

- 8.90 **tie** have developed a Project Management Plan (PMP), which provides an overall framework for the management of the Edinburgh Tram Project (ETP) and is complemented by detailed functional plans, procedures and documentation. It covers the design, procurement, construction, commissioning and full integration of the tram network for Phases 1a (and potentially 1b) of the project.
- 8.91 The PMP is the working tool for all involved in the project to ensure that that the project is being managed professionally, effectively, efficiently and consistently throughout the life of the project. It sets out the project organisation and governance, the roles and responsibilities of all project team members and the way team members will work together and communicate with each other. It also describes what documentation, processes and systems have been developed and adopted by the project and why.
- 8.92 The PMP is supported by detailed, inter-related procedures for the individual management functions which provide in depth control over each area, taking full cognisance of the complexity of the ETN. These are all documented and monitored using a sophisticated

information management system and they are reviewed at regular intervals to ensure they meet the specific requirements of each of the phases of the project.

8.93 Figure 8.1 demonstrates and explain the hierarchy for the policies, procedures and controls underlying **tie**'s project management methodology.

Figure 8.1: ETP policy, procedure and controls hierarchy



8.94 Key processes and controls by which **tie** manages the successful implementation of the tram project are outlined below.

Project planning process

8.95 **tie**, along with its contractors, have developed an overall Master Project Programme. This master programme will fully reflect the agreed programme of construction from the Infraco. Each contractor is responsible for ensuring that services and works are organised and programmed to meet the overall requirements of the Master Project Programme. The programme is constantly monitored against predetermined project milestones that are reflected within the Master Project Programme. The purpose of linking all tasks to the programme ensures visibility to **tie** and individual contractors that the critical path is both defined and adhered to. Meeting the agreed programme dates is the responsibility of the Infraco, and the contractual payment mechanisms and incentivisation for Infraco places the risk firmly with the private sector, subject to pre-agreed contractual carve outs as described in section 7.

Cost management

8.96 Cost estimates which are fully aligned to the Master Programme, are developed to detailed workstream level, enabling the effective management of costs throughout the project lifecycle. These project cost estimates were and continue to be reviewed at principle points of the project as described in section 7 and they form the baseline against which the project manages expenditure. Detailed review and reporting of actuals against forecasts takes place on a 4-weekly basis through the defined governance structure for the project.

Risk management

- 8.97 Project risks are identified and their mitigation is managed in accordance with predetermined agreed risk management procedure. The approach to risk management allows **tie** to:
- Promote and support proactive management of risk and opportunity;
 - Integrate risk awareness / management and not risk aversion into the project culture;
 - Manage risk in accordance with best practice;
 - Reduce risk exposure to acceptable levels;
 - Capitalise on opportunities;
 - Ensure that all identified risks are owned and managed by the party best able to manage them; and
 - Provide enhanced information to managers and stakeholders.

Human resource plan

- 8.98 The people strategy enshrined in the Human Resource (HR) plan underpins the PMP. **tie** will organise itself to ensure delivery of the requirements by the successful Infracore contractor and will do so by employing a philosophy for trams that will be one of "inspection not expectation". In essence, this means that **tie** will have a Tram Delivery team, resources and capability to manage the process required for good project and cost control and undertake sufficient inspection of what is being delivered. This will provide assurance to **tie**, and confidence in the end product delivery and quality to **tie**'s client and key stakeholders; TEL, CEC, TS and the Scottish Government.

Construction management plan

- 8.99 **tie** have developed a Construction Management Plan which will deliver the construction, testing and commissioning phases safely, within budget and programme and to the desired quality whilst minimising the disruption to the people of Edinburgh. The plan outlines the processes that **tie** will follow during the construction phase, detailing key responsibilities (proactive and reactive), performance indicators, tasks and deliverables.
- 8.100 Under the plan, **tie** is responsible for all aspects of audit, inspection, monitoring, measuring and checking against design, method statements, specifications, programme, regulations and applicable standards prior to signing off a test and commissioning certificate to the works.
- 8.101 The plan outlines and details, scope, responsibilities and tools required to deliver the project, and what the specific deliverables are throughout the lifecycle of the construction phase, from tender preparation and evaluation, through to construction, commissioning and finally project completion. Procedures have been determined and implemented to ensure that 'best industry practice' is followed at all times in order to ensure that the works that **tie** has procured, are of sufficient quality and standard to be fit for purpose and have been delivered to a standard and completeness, ensuring that the work has been satisfactorily completed to client specifications.

Health, safety, quality and environmental management

- 8.102 The health and safety and quality management plan has been developed to document how the project team manage health and safety and quality management on the ETP. The objective of the plan is to outline the overall strategy for health and safety and quality management and to provide adequate guidance from **tie**'s perspective to all those that require to work with the project team on the ETP.
- 8.103 The environmental management plan has been developed to achieve the overall Project Management Plan's environmental objective (to ensure that the ETP is designed, constructed and set to work with minimum environmental impact) within the timeframe specified by the Master Schedule. **tie** is committed to the provision of sustainable urban transport and reducing the impact of its activities on the environment. Accordingly, **tie** is implementing an

ISO 14001 Environmental Management System to continually improve its environmental performance both at its offices and in its various projects.

- 8.104 Both plans envisage a proactive approach to the review, monitoring, audit and improvement of contractors' health, safety, quality and environmental management systems and detailed implementation plans, in order to provide reasonable assurance to tie's stakeholders that contractors are discharging their contractual obligations and achieve compliance with legal requirements.

Traffic management

- 8.105 The measures that will be implemented in the traffic management strategy, as described above (8.21-8.36), will cause some disruption to the people of Edinburgh and its visitors during the construction period. However, the project team is committed to carrying out the works in a way which minimises disruption. All roadworks and closures will be signposted and alternative routes will be advertised. Bus services will continue to operate and stops affected will be temporarily relocated. Alternative loading arrangements will be provided so as to ensure that affected streets remain open for business in as near as normal way as possible.
- 8.106 As well as avoiding busy times of the year (the Festival, Christmas etc.), works on any road section will be limited to 200m on one side of the road only. It is not currently anticipated that any roads or junctions will be closed and weekend work may be carried out at key junctions to minimise disruption.

Wide area impacts

- 8.107 The finalisation of traffic modelling will include any necessary changes to wider area traffic arrangements that are indicated as being beneficial to the public. Traffic modelling work is currently underway to inform the TROs required for the tram scheme, and this includes an analysis of the extent and implications of road traffic displaced from the tram route corridor as a result of the scheme.
- 8.108 Emerging results from the High Level VISUM traffic model (which covers the full extent of the city) indicate that whilst there will be a significant reduction in traffic volumes at key locations along the tram route, this traffic will be dispersed and diluted over a wide area, rather than being concentrated at one or two off-line junctions. Several locations where some form of intervention to improve the flow of traffic through off-line junctions may be required, have been identified, and the final design will incorporate capacity improvements as necessary and include them within the definition of the TRO.

Public Realm

- 8.109 Tram design will be carried out in a way which allows future Public Realm improvements without affecting the operations of the tram. Initially, Leith Walk has been proposed as the priority for initial Public Realm improvements with the limited funds that will be available in the period to April 2010. Leith Walk is the focus of a vibrant community and commercial activity with a number of key conservation areas abutting the route. It is the principal linking route between the city centre and Leith, together with the new waterfront developments. As well as one of the most significant tram interchanges being located here, Leith Walk passes through, and connects, a number of spaces of great local importance, including the Foot of the Walk.

Test and commissioning management

- 8.110 As part of the design process, a test plan is developing in parallel, which will be implemented after construction has been completed. The purpose of the tests will be to verify that the requirements and functionality of the design have been successfully delivered. Testing will take place in a series of levels; factory acceptance tests (FAT's) prior to equipment delivery to site, site acceptance tests (SAT's) when equipment is installed, or delivered on site in the case of the trams, and type testing in respect of the first tram delivered to site before systems level testing commences.

- 8.111 The systems level testing commences with the energisation of the tram depot, followed by the commissioning of the section of line between the depot and the airport stop, before the full completion of Phase 1a to Newhaven. Training of the operational staff will be synchronised with these stages, firstly in the depot, then off-road and finally on-road driving. The control room staff will be trained and gain familiarisation in parallel.
- 8.112 It is likely that elements such as traffic signal timings and sequencing will need to be optimised during the testing to achieve the balance between tram runtime through junctions and impacts to other road users.
- 8.113 When the system testing achieves a certain stage, a three-month shadow running period will commence, during which a system performance demonstration test will be performed. This period allows for the operational and maintenance staff to become familiar with the system prior to commencement of operations, as well as the opportunity to practice emergency drills with and without the emergency services and failure recovery procedures.

Operational management

- 8.114 Throughout the development of the project, TEL will, in conjunction with the operator, the maintainers and CEC, mobilise their operational organisations to gain familiarisation and ownership of the Edinburgh Tram system assets. The start of shadow running will mark the transition of responsibility to the operational management regime, easing into the commencement of passenger operation at a lower level frequency of tram service which will be increased progressively as demand and familiarisation of the public and staff grows.

Ingliston Park and Ride

- 8.115 During the construction period there will potentially be a greater demand for the existing Park and Ride facility at Ingliston. The planned extension, in anticipation of tram operations, will be completed by April 2008. This will enable up to 1,315 vehicles to be parked, reducing congestion and disruption caused by the construction of the tram.

Stakeholder communication strategy

- 8.116 The communications strategy ensures that communication is ingrained into the project and that communication opportunities are identified. A detailed communication strategy was approved as integral part of the DFBC and, where applicable, has been implemented throughout 2007.
- 8.117 Given the size and complexity of the project, the communication management process must be suitably flexible to respond to any changes throughout the project lifecycle whilst maintaining core functionality, robustness and reasonable assessment of all identified project communications. It follows that, as the project progresses, this plan will be revised, where necessary, to reflect the present and future needs of the project at any particular time. The most recently revised strategy can be found at Appendix IV.

Open for Business

- 8.118 To support businesses affected by the tram construction works, **tie** will be producing advertising and marketing material to help ensure that the 'Open for Business' message is communicated clearly. Part of this programme is to ensure that information on construction works, including details on any diversions and road closures, is freely available to the public and businesses. This is communicated through face to face meetings, media, advertising, telephone helplines and the internet.

Business compensation

- 8.119 As part of the package available to support businesses affected by the construction works of the tram, a compensation package has been developed. This scheme has been put in place

to help mitigate the effect of the tram construction works on small businesses through the provision of a mechanism to give additional financial help to affected small businesses.

- 8.120 The scheme will be distributed in two ways:
- i. The Primary Support element – available to all small businesses based on turnover criteria; and
 - ii. The enhanced support element – available to businesses operating in construction ‘hot-spots’.

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9. Operational plan

- 9.1 As an integral part of the preparation of the DFBC, TEL prepared a Strategic Business Plan which details the Company's objectives, its modus operandi, its relationship with CEC and tie. It analyses the opportunities and threats TEL will face in operating an integrated tram and bus business.
- 9.2 For the DFBC, sensitivity testing was undertaken to assess the impact of EARL on TEL's patronage and revenue forecasts. These confirmed the premise that EARL and tram would serve different patronage markets and that, although without EARL, tram would gain some small market share, overall TEL revenues are net neutral as the absence of EARL results in an overall smaller public transport market within Edinburgh. Therefore this section has not been updated for the detailed impact of no-EARL.
- 9.3 The work undertaken for the DFBC also identified separately the impacts of operating Phase 1a of the tram without Phase 1b in terms of passengers and revenue. This data forms the basis for this section.
- 9.4 As part of the preparation of this FBC, a review of the key assumptions and projections for the TEL Business Plan was undertaken. This review confirmed that the outputs from the previous work remained valid and there were no indications of external events with a negative impact on the TEL forecasts. This Business Plan is under constant review and will be updated in due course.
- 9.5 At the core of the TEL Business Plan is 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 Phase 1a of the tram in place. This analysis is firmly grounded in TEL's involvement in the development of prospective integrated service patterns for tram and bus for the JRC models and validation of the patronage and revenue projections which have flowed from the modelling process. What follows is a summary of the TEL Business Plan included at Appendix I.

Rationale for TEL

- 9.6 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 (LB), which is wholly owned by the public sector and 91% owned by CEC. LB's operations are currently very successful, holding a share of approximately 85% of Edinburgh bus patronage and having experienced patronage growth of more than 25% since 1998.
- 9.7 CEC 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, CEC are implementing their commitment to continuing to provide first class public transport in Edinburgh.
- 9.8 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 (an increase of 61% (1.8% p.a.) between 2005 and 2031) indicate a significant profit potential for TEL operating with Phase 1a of the tram. 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

- 9.9 Table 9.1 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. On this basis the requirement to demonstrate that, over time, the integrated service will not require subsidy has been fulfilled;
 - The financial forecast reflects the increase in pension contributions required to meet the recommendations contained in the 2006 actuarial valuation of the LB pension scheme. This has the effect of eliminating the £20m net deficit and predicted future service costs and is unrelated to the introduction of the tram; and
 - 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 9.1 - TEL profitability with Phase 1a of tram (All £ figures inflated).

Tram in service Tram service pattern	Pre-tram		Phase 1a Only				
	n/a	n/a	6/12	6/12	8/16	8/16	8/16
Year	2006	2010	2011	2012	2016	2021	2031
Patronage (Pax m)							
Bus	108	117	112	114	125	132	147
Tram	-	-	11	14	18	20	25
Total TEL Patronage	108	117	123	128	143	152	172
Total TEL Revenues	88	109	119	128	167	216	356
Total TEL operating costs			120	126	156	194	312
Pre-tax operating profit / (loss)			(1)	2	11	22	44
Tram lifecycle costs			-	-	1	2	2
Notional taxation			-	-	3	6	12
Dividend payment			-	-	3	3	5
Net TEL cash surplus / (deficit)			(1)	1	4	10	25

- 9.10 Table 9.1 reflects that following an initial period of tram patronage build up, the TEL business as a whole will be profitable after one year of tram operations and 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.

- 9.11 The forecast of patronage and revenues presented above remains very sensitive to the quantum and timing of new development in North and West Edinburgh, as detailed in section 4. The sensitivity of the forecast to this and other factors is considered at 9.104 below.

TEL's objectives

- 9.12 The public sector ownership of TEL presents opportunities and challenges that are different to most public transport organisations. Although achieving profitable operations and payment of dividends are key objectives, profit maximisation is not the primary objective. The majority shareholder, CEC, seeks a 'social dividend' in terms of fare and network / service strategies. CEC 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

- 9.13 CEC promotes alignment of TEL's corporate objective to return sufficient post-tax profits to meet its investment and dividend obligations, with CEC's planning objectives and the Government's five key objectives for transport as detailed in the STAG2 report at Appendix II. These can be broadly summarised as:
- To support the local economy by improving accessibility;
 - To promote sustainability and reduce environmental damage caused by traffic;
 - To reduce traffic congestion and encourage mode shift;
 - To make the transport system safer and more secure; and
 - To promote social benefits.
- 9.14 The future challenge for TEL is to integrate the tram into its business in a manner which maintains long-term profitability, thereby allowing the economic, environmental, development and urban regeneration, social inclusion and transport objectives of the tram scheme to be achieved. The measure of success for TEL will be the overall performance in commercial, social, customer and financial terms of the integrated bus and tram network.

Parameters under which TEL operates

- 9.15 The statutory parameters under which TEL will operate are prescribed by the Transport Act 1985. TEL will carefully monitor any developments in the regulatory and legislative environment between now and 2011 which could impact on LB's (and thus TEL's) market position. TEL, with its integrated bus / tram system and public ownership, is in a unique position to mitigate the risks or maximise the opportunities arising from such regulation.
- 9.16 Fares and route planning are currently determined by LB 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 79% of year 1 (2011) tram passengers will have transferred from existing public transport, predominantly LB, with the remaining 21% being new to public transport, transferring predominantly from car. 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.
- 9.17 Building on LB's current market position, the common control of LB and tram means TEL will 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. The JRC modelling suggests that, in a non-regulated market, the proposed bus / tram service integration plan limits opportunity for a commercially viable competitive challenge. LB 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. This is especially so in light of the significant growth projected to arise from West Edinburgh and the airport and development areas in Leith Docks, Western Harbour and potentially Granton Waterfront if Phase 1b is built.

TEL governance structure and operational arrangements with CEC

- 9.18 Governance and operational arrangements for TEL have evolved since its inception in 2005. The process is driven by the desire to establish a strong leadership function for TEL and the need to clarify and codify the roles of the principal parties involved in the development of the tram project (CEC, TS, TEL, tie and LB). Details of how governance will evolve during the phases of the project are detailed in section 6 of this FBC.
- 9.19 TEL has appointed a Board of Directors including two independent non-executives (including the Chairman). The Chief Executive of LB has been appointed as Chief Executive of TEL. The governance structure of the Tram project has now been amended, such that TEL has

clear accountability for planning and implementing the integrated transport business with tie (advised by Transdev) charged with delivery of the tram project. The central forum of project governance is the TPB on which TEL directors sit alongside representatives of CEC. This structure has been implemented such that clear and full accountability to the Council as Promoter of the tram project and majority owner of LBs is sustained.

- 9.20 The role of the TEL Board is focused on its statutory stewardship function and its overall responsibility to deliver an integrated public transport network for Edinburgh. In this role, the board has fiduciary duties to its shareholders and stakeholders with clearly defined responsibilities to fulfil these. They include matters relating to board membership, statutory reporting, internal controls, health and safety, and oversight and management of operational risks.
- 9.21 The operational relationship between TEL and CEC will be governed by an operating agreement between these two parties. The focus of this agreement will be the continued cooperation of CEC and TEL to further the integration of bus and tram services. It will emphasise the need for TEL to act commercially within the framework of its public ownership and sets out the parameters for CEC's support to TEL in terms of policy implementation.

Patronage targets

- 9.22 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. In addition, certain aspects of the service provision that affect the transport experience of the travelling public will also impact on the levels of patronage that can be achieved.
- 9.23 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 CEC, 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.
- 9.24 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 LB's recent experience which has been consistently above 2% growth per annum.
- 9.25 The JRC's forecasts for the period 2011 to 2021 reflect demand arising from planned developments, as per the CEC Structure Plan. The assumptions for the phasing of this new development have been reviewed by independent commercial property advisors. The CEC Structure Plan covers the period to 2021. The period from 2022 to 2031 is based on an assumed growth rate of 2% pa, which is in line with LB's historical experience and with a reasonable expectation of future economic growth for the city as validated by Scottish Government economists. Given the inherent uncertainty of growth in demand, especially with a relatively distant planning horizon, the TEL Business Plan assumes 1.5% per annum growth in patronage from 2031 to 2041. However, recent experience of economic growth in Edinburgh and actual experience of LB passenger growth shows these assumptions to be conservative.

9.26 Table 9.2 summarises the projected TEL patronage levels for key years.

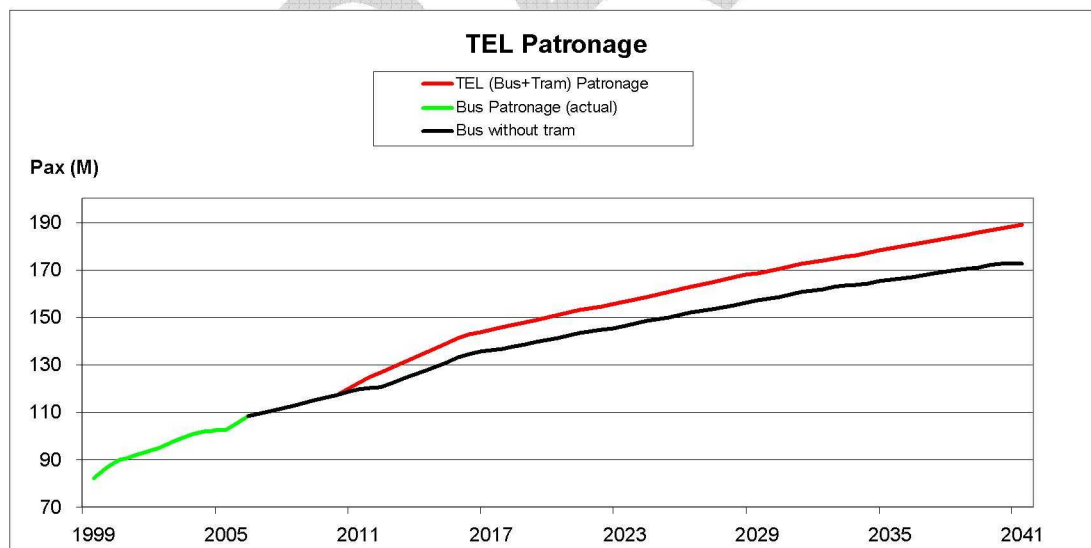
Table 9.2 TEL patronage projections with Phase 1a of tram.

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Bus	108	117	112	114	125	132	147
Tram	-	-	11	14	18	20	25

9.27 A considerable proportion of the projected tram patronage is expected to come from those not currently using public transport. In 2011, 21 % of total tram patronage for Phase 1a (rising to 26% in 2031) 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. Mode shift from car is directly linked to reducing congestion and associated environmental benefits, and is one significant benefit associated with the introduction of the tram. TEL’s tactical, operational and marketing strategies are all aligned to facilitate achieving the predicted targets for patronage and mode shift.

9.28 Ultimately, the introduction of the tram, and its integration with LB’s bus services, will result in greater numbers of passengers than either bus or tram could hope to achieve independently. Figure 9.1 shows the predicted levels of patronage in a “with” and “without” tram future.

Figure 9.1 - TEL patronage with and without tram.



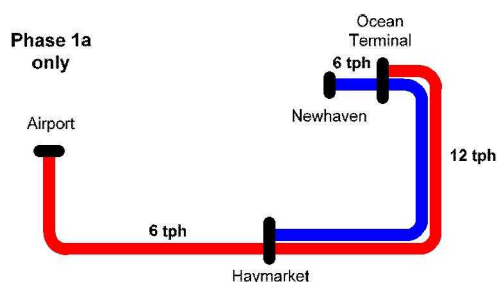
Service patterns and interchange

9.29 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

- 9.30 The tram network will serve major high-volume transport corridors in Edinburgh and thus build upon on 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.
- 9.31 The planned service patterns for opening of the tram are detailed in section 5. In summary, these services, depicted in Figure 9.2 below, are as follows:
- From opening in 2011, 6tph 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.

Figure 9.2 – 2011 tram services for Phase 1a.



- 9.32 The demand forecast indicates that, after the initial five years of 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 2016, the 6 / 12tph service patterns above will be increased to 8 / 16tph. A further strengthening is likely to be required after the year 2027 to provide sufficient capacity to serve demand on the Haymarket to Edinburgh Park section of the tram network.
- 9.33 Being able to identify the routes and frequencies of services necessary to cater for demand is fundamental for 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.
- 9.34 The first and last tram services and initial frequencies for 6 and 12tph are based on the following assumptions and conditions;
- The provision of a total of 12tph in 2011 is required during the daytime to match demand on Leith Walk;
 - Short workings between Edinburgh Airport and St. Andrew Square are dependent on the ability to turn trams at St. Andrew Square. The precise location and feasibility of the turnback is currently under review;
 - Service proposals are based on the requirement of always having a tram present at the airport; and
 - Operating hours for the tram result in a maximum overnight servicing window of 3hrs 45min. Future demand on the early and late services will be reviewed to allow greater optimisation of this service window.

Bus service patterns

- 9.35 Full details of the planned bus service patterns operating in an integrated manner with Phase 1a of the tram are provided in the TEL Business Plan at Appendix I. 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 being that bus service reductions are only applied where the tram offers an acceptable 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.

- 9.36 Key areas where bus services are planned to change are:
- 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;
 - Haymarket to airport – significant reduction on Airlink although some service will be retained for the intermediate stops not served by tram; and
 - Saughton to Broomhouse, including Fastlink section – some frequency reduction, while maintaining services where no tram in parallel or stop is too far to walk.

Interchange between bus and tram

- 9.37 In order to achieve TEL's objective of providing a truly integrated public transport system a small number of bus / tram interchanges are essential. 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 where necessary, will be eliminated. 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.

- 9.38 The design of first class interchange facilities is critical to minimising any potential negative impact of interchange. The JRC has analysed the sensitivity of the patronage and revenue targets to the provision of effective bus / tram interchange (in 2005 prices). It is forecast that the impact of optimising the interchanges can improve revenue by approximately £0.5m in 2011, rising to £1.1m by 2031. The following locations have been identified as requiring first class interchange to allow TEL to meet these aims:
- Foot of Leith Walk – Key to allow the curtailment of buses from Great Junction Street or Duke Street; and
 - St Andrew Square – Required to accommodate buses reaching the city centre from points west and south of the West End.

Interchange between air travel and TEL services

- 9.39 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. Further, enhancing the option to use public transport to and from the airport reduces the reliance of air passengers on taxi and private car travel.

Interchange between heavy rail and TEL services

- 9.40 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 Airport.

9.41 In the absence of EARL, a proposal may be developed to link heavy rail with tram at an additional stop at Gogar, confirming trams strategic position as the fixed rail link to Edinburgh Airport and providing additional interchange opportunities for people travelling from wider areas in Scotland.

Park and Ride

9.42 Interchanges between private car and bus / tram are vital to the patronage and revenue projections for TEL, especially in terms of 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. All new park and ride sites in Edinburgh (existing or planned) will feature high quality facilities which support the current positive achievements and future success expectations.

9.43 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. There is also an interchange between private car, rail and bus at Newcraighall, managed and maintained by ScotRail and CEC, and additional park and ride sites are under development at Sheriffhall (opening December 2007) and Straiton (opening late 2008). CEC are currently assessing the opportunities for additional potential park and ride sites, particularly at Hermiston Gait Retail Park and Saughton House. Further potential sites are also under investigation.

Information provision

9.44 Integrated transport needs integrated information; the right information, provided at the right time, by the most appropriate means, putting the needs of the user first. TEL will ensure that the information it makes available to the public results in reliable and straightforward travelling experiences. Well presented information is of essential value to transport users – it helps them to complete their journey efficiently and in greater comfort. Well informed customers will ultimately lead to increased patronage and revenues.

9.45 Multi-operator information is provided by telephone and internet through Traveline, the national travel information system. TEL will also maintain its own in-house telephone and web-based information services. LB existing travel shops will provide information, not only on TEL products and services but, on One-ticket and services provided by other public transport providers. Further opportunities for the combination of road-side information in the form of real time information, passenger information displays and other information at stops are reviewed at the regular integration meetings with public transport providers in Edinburgh, ensuring that any future benefits that may arise from a more integrated approach are captured.

Integrated ticketing with other operators

9.46 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 and some smaller operators plus rail service in East Lothian and Edinburgh; and
- Plus Bus and Tram – 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.

3rd party responses

9.47 Good relations between TEL and 3rd party operators are considered essential. Integration with 3rd party operators will offer potential opportunities for TEL if the combined network is perceived by the public as part of a wider public transport provision within Scotland.

Revenue targets

9.48 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 management of the revenue yield per passenger will provide further opportunities for increased profitability for TEL in the future. Table 9.3 summarises projected TEL revenue levels for key years.

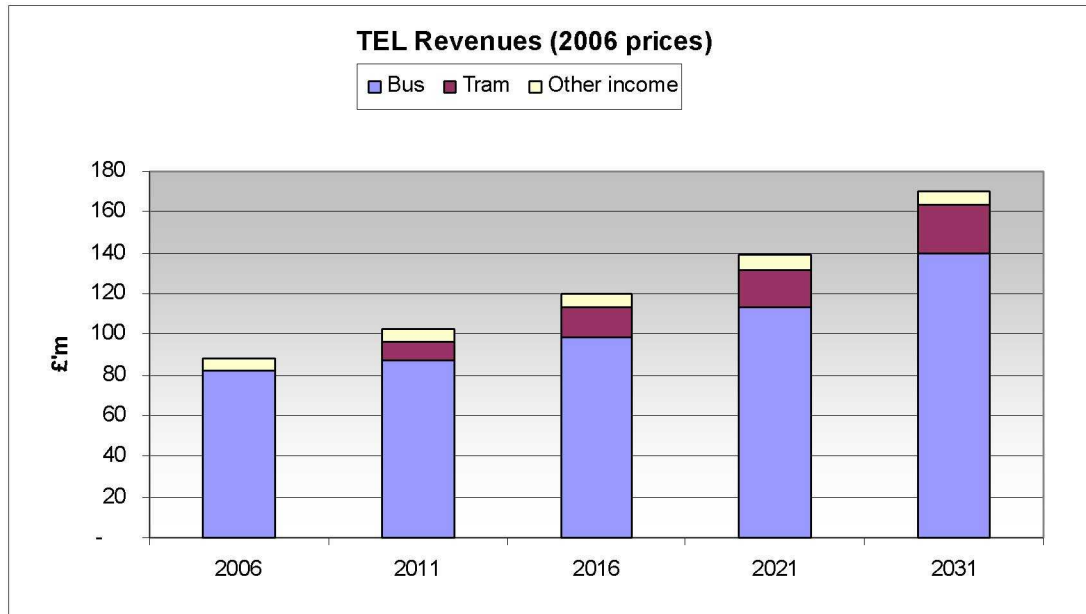
Table 9.3 TEL revenue projections with Phase 1a of tram (All figures inflated).

Tram in service	Pre-tram						
	n/a	n/a	6/12	6/12	8/16	8/16	8/16
Tram service pattern (see below for explanation)							
Year	2006	2010	2011	2012	2016	2021	2031
Patronage (Pax m)							
Bus	108	117	112	114	125	132	147
Tram	-	-	11	14	18	20	25
Total TEL Patronage	108	117	123	128	143	152	172
Revenues and costs (£m)							
TEL Revenues	88	109	119	128	167	216	356
TEL operating costs			120	126	156	194	312
Pre-tax operating profit / (loss)			(1)	2	11	22	44
Tram lifecycle costs			-	-	1	2	2
Notional taxation			-	1	3	6	12
Dividend payment			-	-	3	3	5
Net TEL cash surplus / (deficit)			(1)	1	4	10	25

NB All £ figures inflated

9.49 The forecast patronage and revenues for 2011 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. Figure 9.3 outlines how revenue contributions from tram increase in total over time as well as in percentage terms of the total TEL revenue.

Figure 8.3 - TEL revenues with Phase 1a of tram (2006 prices).



Fares and ticketing strategy

9.50 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.

9.51 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 LBs 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, 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.

9.52 The yield per journey resulting from this fare structure forms the basis of the revenue projections for TEL. The yield will be managed by TEL to achieve revenue targets based on patronage projections and the current assumption is that the average yield for TEL will be increased at the rate of the RPI +1% growth per annum, which translates into average annual fare increases of no more than RPI + 1%. This is in line with historical increases in fares by LB, meets political and stakeholder expectations, and supports TEL's aim to provide transport services at an affordable price. The impact on individual fares will vary year on year due to necessary considerations of public demand of specific tickets, practicality of applying specific fare increases, and the history of increases on a particular ticket product.

- 9.53 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. Tram tickets are to be purchased off-board and ticket machines will be provided at all trams stops and a number of bus stops. The only tickets to be sold on-tram are to be adult and child single tickets which will be priced at a premium above the price from ticket vending machines.
- 9.54 The ticket machines themselves are based on a parking meter style, which are simple to use and have been shown to be very reliable and possess high resilience to vandalism. Initial ticket machines are currently being trialled for bus tickets. Reliable ticket machines are essential for TEL to promote customer confidence and to the principle of enforcing on-board premium fares. Administration of the ticketing system, including collection, counting and banking of the revenue is part of TEL's forecast overhead costs.
- 9.55 LB 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.
- 9.56 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 73.6% of the price of an adult single for each journey by concessionary travel holders and this currently applies to c20% of LB patronage. This level of recompense is assumed to continue.
- 9.57 LB 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 LB will be receivable by TEL.

Revenue protection

- 9.58 In devising a revenue protection strategy, TEL aims to achieve a balance between attractiveness of price, flexibility and simplicity of use. Applying a strict and consistent fare enforcement policy will allow TEL to provide a safe, secure, positive and equitable travelling environment, encouraging increased patronage through modal shift and minimising the revenue loss arising from fare evasion.
- 9.59 Fare evasion and fraud on the existing LB network has been limited following the decision to remove centre doors from buses, the introduction of smartcard period tickets, the simplification to a flat fare, regardless of journey length, and the elimination of cash handling by all but Airlink drivers and travel shops. Trams, with multi-door boarding, require active processes in place to limit the opportunity for fare evasion, and fraud in general, as well as the particular need to enforce the premium airport fare.
- 9.60 The principal elements of the revenue protection regime which will be adopted by TEL for the trams, is a combination of placing inspectors on each tram and providing ticket machines at all tram stops, with a significant price incentive to buy a ticket off-tram. This provides the advantage of achieving a high level of ticket compliance, supported by the necessary infrastructure for providing passengers with both the opportunity, and financial incentive, to pay before boarding the tram.

9.61 In addition to the quantified benefit associated with ticket inspection, the presence of a member of staff on board has been shown to promote a sense of security for passengers and be an effective deterrent to anti-social behaviour. The additional costs of providing inspectors on all trams is therefore off-set, not just by increased revenues, but also by reduced costs for graffiti / vandalism damage repairs and increased patronage, due to a heightened sense of security in passengers. The revenues reflected in the TEL Business Plan have been adjusted to reflect an assumed 3% fare evasion rate.

Other income opportunities

9.62 The experience of LB 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.

9.63 A key target for the tram and TEL is to achieve modal shift away from cars through the provision of an efficient, affordable and high quality public transport system. A system which takes account of the demands of its users will stand a better chance of being successful. TEL will assess any opportunities for other income sources, being mindful of the added customer service benefits they may provide. In pursuing these opportunities, it is recognised that TEL's first and foremost purpose is to provide public transport services and, as such, TEL will only engage in activities which are complementary to its core-activities. Consequently, operational requirements for all activities are limited and carry minimal operational risks.

9.64 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 LB.

Benefits realisation plan

9.65 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 unique 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.

9.66 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. This is true of the financial and operational benefits, as well as the wider benefits such as social inclusion, support to economic development and environmental benefits as outlined at 9.12.

9.67 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.

9.68 KPIs will be adopted with which the success of TEL in realising these benefits can be measured. These KPIs will be incorporated into the relevant contracts and operating agreements with service providers to TEL, primarily with Transdev the operator of the trams and with the maintenance providers for the infrastructure and tram vehicles.

9.69 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, 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. Effective communication will have significant influence over the public perception of the integrated services and will be critical in creating a positive image to assist increasing patronage, particularly from those who are not currently users of public transport.

9.70 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".

9.71 The approach to strategic marketing and communications builds on the successes of the existing marketing function within LB and the comprehensive and consistent strategies developed by tie for media, stakeholder and community engagement. In the period leading up to and post commencement of tram operations, TEL will provide integrated marketing and communications support for both tram and bus to ensure consistency of messages and to maximise synergies.

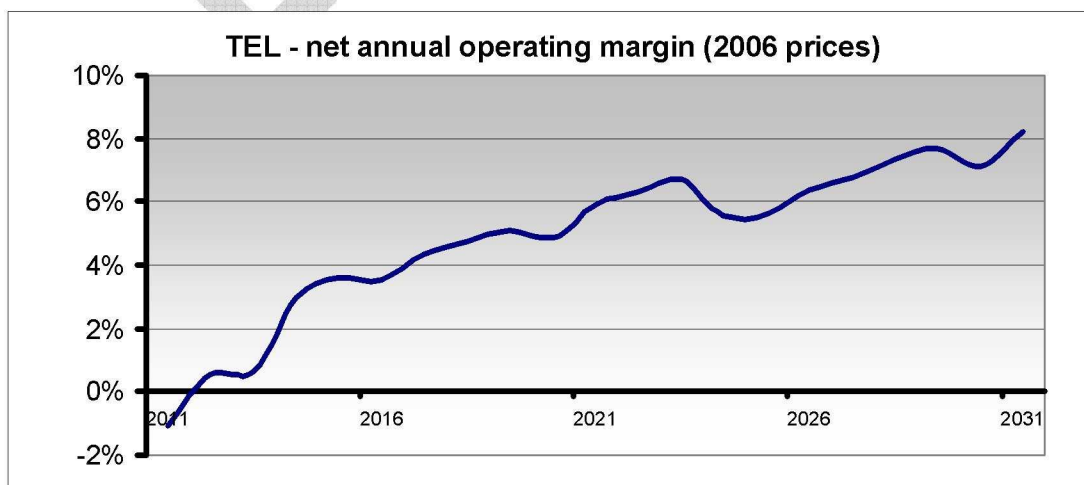
Operational targets and strategies

9.72 TEL's operating cost projections are based on

- The current experience of LB, 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, validated by Transdev, and subjected to a thorough review and benchmarking process; and
- Updated information from the Infraco and Tramco bidders confirm these cost estimates.

9.73 The forecast combined operating margin for TEL (figure 9.4) reflects the significant opportunity which TEL has to operate as a highly profitable business.

Figure 9.4 - TEL annual operating margin with Phase 1a of tram (2006 prices).



Operational performance regime

- 9.74 Transdev, the future operator of the tram under DPOFA, will operate the tram and, ultimately, will be in day to day control of the quality of service provided to the public. Similarly, the day to day management of LB will rest with its management team. However, certain elements, such as fare and ticketing strategies, as well as strategic marketing, will be retained by TEL as the overarching body.
- 9.75 To address performance issues for the tram, the DPOFA contract incorporates a payment mechanism which offers the operator an appropriate risk / reward balance. In summary, the operator will be incentivised under a regime based upon clearly defined and understood KPIs set against the required service specification.
- 9.76 The reliability and availability of the tram fleet are crucial to provision of the high quality tram service required to encourage modal shift from private car to public transport. Maintenance of the tram vehicles is being procured under a tram maintenance contract which covers vehicle maintenance services and vehicle spare parts. This contract provides that 30% of the annual maintenance services fee is a performance related payment subject to an 85% minimum payment, based on a punctuality and availability monitoring regime.
- 9.77 An infrastructure maintenance contract is currently being tendered which covers the infrastructure maintenance services, including lifecycle maintenance. Similar to the tram maintenance contract, it provides that 30% of the annual maintenance service fee is at risk based on performance in relation to punctuality and availability. To incentivise the service provider to maintain high presentational standards, an additional 7.5% of the annual maintenance fee is calculated based upon inspectors making qualitative assessments against established criteria, such as cleanliness, display presentation, CCTV functionality, public address and help points. A further 2.5% of the annual maintenance fee is dependent on fault correction times and performance reports being delivered in a timely manner
- 9.78 Detailed requirements of the operational performance regime are included in the relevant reference bids currently being tendered and are detailed in section 7 of this FBC

Operating costs

- 9.79 Table 9.4 summarises TEL's projected operating costs with Phase 1 of the tram in operation

Table 9.4 TEL operating cost projections with Phase 1 of tram (2006 prices).

		£m (2006 prices)				
		Phase 1a				
		2006	2011	2016	2021	2031
OPERATING COSTS						
	Bus	68.4	88.4	97.2	105.2	127.7
	Tram	0.0	14.8	15.5	15.9	17.1
	TEL total operating costs	68.4	103.2	117.2	125.3	149.1
	Bus costs / mile	2.76	3.76	4.12	4.29	4.94
	Tram costs (equal capacity) / mile	-	4.23	3.82	3.92	4.22
	Tram costs (absolute) / mile	-	11.00	9.94	10.19	10.96

- 9.80 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