

**EDINBURGH TRAM NETWORK - DRAFT FINAL BUSINESS CASE**  
**TEL BOARD RECOMMENDATION TO CITY OF EDINBURGH COUNCIL**

*DRAFT 16 NOVEMBER 2006*

*FOR DISCUSSION PURPOSES ONLY*

**DRAFTING STATUS**

*The Tram Project Draft Final Business Case (the DFBC) will contain an executive summary and there are plans to produce a “layman’s” version for distribution to those not acquainted with the details of the project or the business case process.*

*There may be merit in preparing an additional document from the Chairman of TEL, approved by the TEL Board, which sets out the TEL Board’s recommendations to the Council. This follows the requirements of the governance model and will allow the business case documentation to be independent of any direct recommendation, simply setting out fairly the facts, judgements and forecasts. The text below provides a draft of how such a recommendation letter might emerge.*

*It should be noted that the draft below reflects implicit assumptions about some of the key outputs from the work which is currently in process and which influence the text of the recommendation. These matters will need to be monitored and re-assessed as work is completed.*

**INTRODUCTION AND BACKGROUND**

The information presented in the business case represents the culmination of considerable effort by many parties over a long period to assess the merits of a tram system for Edinburgh. The Tram Project Board (TPB) comprises representatives of the key stakeholders in the project and was given the challenge by TEL of ensuring that a fair presentation is made in the Business Case of all the key criteria. The information on which the Business Case is based represents the best estimation available of all the key variables. We believe it is fit for the purpose of concluding on the future of the project.

In this recommendation letter, references to the “Business Case” relate to the set of inter-locking documents comprising the Tram Business Case and its appendices, notably the TEL Business Plan and the STAG Report. The content and purpose of these documents are described in the body of this letter.

The tram line configurations under assessment are described as :

- Phase 1 : The Airport / Leith / Granton tram network
- Phase 1a : The Airport / Leith tram line
- Phase 1b : The Roseburn / Granton tram line

The next section of this letter sets out our recommendations along with a brief summary of the key supporting reasons. We then provide more detail on our rationale and describe some of the key parameters, which themselves are more fully explained in the Business Case itself.

## RECOMMENDATION

The TEL Board has concluded that there is a strong case in favour of proceeding with the Airport / Leith / Granton tram network to achieve the maximum benefit from the substantial investment involved. The Board also recognizes that a complex project such as this requires careful risk management, particularly to ensure that value for money is achieved and that costs are properly managed.

Accordingly our principal recommendations are as follows :

- 1) That the Council should approve the Business Case and proceed, in partnership with Transport Scotland, to work towards the delivery of the Airport / Leith / Granton tram network in a phased manner with work on Phase 1a – Airport / Leith commencing first.
- 2) That the Council should ensure that the following actions are taken to maintain control over the capital cost of the project :
  - A. That the enabling works, including utility diversions [Q : for Line 1b also] should be authorized to proceed according to a timetable which will not disrupt the construction programme for the network itself
  - B. That the negotiations with the bidders for the infrastructure and vehicles should continue with a focus on achieving a high proportion of fixed cost in the final contracted capital cost so far as the public sector is concerned
  - C. That the Council should continue to work with property developers across the tram network to ensure that an equitable contribution to tram costs is received from those developers where the tram contributes to the value of development
- 3) That the Council requires the contractual right to defer the construction of the Roseburn / Granton tram line, or to restrict construction to the Airport / Leith line, in the event that capital costs (net of additional developer contributions) do not ultimately fall within an acceptable affordability envelope.
- 4) That the Council should not commit to construction of line 1b until such time as there is confidence that the level of development at Granton Waterfront will reach that required to generate sufficient patronage for the Roseburn-Granton line to be financially viable..
- 5) That Council approval of the Business Case includes a condition that contractual commitment in due course will be conditional upon there being no significant adverse changes to the key criteria on which the Business Case is based.

The TEL Board believes that by following these five recommendations, the Council and Transport Scotland can reach an affordable contractual conclusion which will lead to the construction of the most desirable network of Airport / Leith / Granton.

With respect to Recommendation 3, our proposed approach is designed to ensure that control is retained over the ultimate capital cost while still delivering a transformation in the city's transport infrastructure through the construction of the Airport / Leith tram line which represents the spine of the network. The construction of the Airport / Leith line alone in the first phase, while not in our view the optimum ultimate outcome, is considered to be a feasible and prudent approach in view of the fact that a large majority of the projected patronage on the Roseburn / Granton line is dependent upon the development of the Granton Waterfront. It will also deliver many of the strategic

aspirations of the tram project, will be a powerful economic driver for the city and will be financially viable. By following this approach, we would anticipate that high quality construction management will deliver the confidence in capital cost budgets during the construction of the Airport / Leith line to justify the commencement of the Roseburn / Granton line. An additional feature of this phased approach should be the earlier delivery of the Airport / Leith tram line than would be the case if the full Phase 1 network is delivered in one package.

In making these recommendations, we have been mindful of the need to apply “reality checks” to the project, its aspirations and its costs. We have had the opportunity to meet with people involved in similar schemes elsewhere in the UK and in continental Europe and have noted that the Edinburgh project reflects some of the best features of the most successful of those schemes. The underlying rationale for a tram scheme has been tested and assessed many times in recent years and remains valid. Fundamentally, Edinburgh is a growing city which brings demand for transport infrastructure if it is to prosper and bring benefit to its citizens and to the country as a whole.

The TEL Board unanimously believes that “doing nothing” is not a credible option, that the proposed scheme will deliver sustainable long term transport and environmental benefits and that there is therefore every reason to proceed, but to do so in a risk-controlled and responsible manner as described in our recommendations above.

One further point should be noted.

Many people will be aware that plans have previously been developed for a tram line linking the city centre tram network to the developments in the South East of the city, including the University of Edinburgh, the New Edinburgh Royal Infirmary, the biomedical research park, the area of regeneration at Craigmillar, the retail and transport interchange facilities at Newcraighall and ultimately the new Queen Margaret College campus. We would recommend that the Council takes steps to prepare for the possible extension of the system to South East Edinburgh for the following reasons :

1. The work done previously on this tram line indicated a high likelihood of economic and financial viability.
2. Evidence from other cities, most recently Nottingham and Dublin, has consistently been that the successful introduction of a tram system is rapidly followed by plans for extension.
3. There are long lead times involved in such projects

In this context, the tram line linking Granton to Leith and the extension to Newbridge should also be assessed.

The TEL Board has ensured that all the key players have been involved in the preparation of the Business Case. This includes Council officials from the Departments of City Development and Finance, Transport Scotland officials and their advisors, Lothian Buses plc, Transdev (the proposed operator of the tram network), expert advisors and tie Limited who have the task of developing and delivering the project to cost and programme specification.

So far as the Board of TEL is aware, all of these parties are supportive of the recommendations in this letter.

## **MORE DETAIL ON OUR RATIONALE**

In assessing the economic, social and financial aspects of the project the methodology adopted has reflected :

- formal transport appraisal requirements established by the Scottish Executive
- the preparation of a completely new transport demand model reflecting the most up to date picture of Edinburgh's transport patterns
- rigorous financial modelling of the revenue and cost implications of the transport demand patterns established and verified in the model
- a completely refreshed view of capital costs reflecting market tender activity, benchmarked comparator tram schemes and expert advice on critical features

The specific features of the Business Case which we believe are most significant are set out below.

### **Transport appraisal guidelines and economic assessment**

A key element of this appraisal is the calculation of the economic benefit to cost ratio. The Phase 1 network produces a strong result at 1.63, indicating that every £1 of cost will produce £1.63 of benefit, a level which we understand is considerably higher than that generated by other comparable schemes. The net benefit is primarily driven by benefits to the users of public transport. In financial terms the aggregate value in today's prices of the net benefits driven by the Phase 1 network is £273m.

The Airport / Leith tram line creates the spine of a tram scheme through the city centre area that can be extended on an incremental cost basis and therefore bears a heavier burden of fixed costs. Despite this cost weighting, the Airport / Leith tram line produces a positive benefit to cost ratio in its own right of 1.10. This is lower than that of the full network because of the Roseburn / Granton tram line's relatively faster tram run-times, less congested road environment and the lower capital cost arising from economies of scale and relatively more off-road running.

The appraisal also encompasses :

- environment
- safety and reliability
- social inclusion and accessibility
- the integration of transport and land use

The main transport appraisal measures have been assessed extensively in the last few years, not least in support of the Acts of Parliament passed in April 2006. The earlier conclusions were that the project met and exceeded the requirements of the appraisal and the recent work has reinforced those positive conclusions.

In addition, when fully operational, the Airport / Leith / Granton network is projected to carry some 20 million passengers annually, a mixture of transfers from buses (circa 83%) and cars and new trips (circa 17%). The number rises to more than 30 million within 20 years, representing a substantial shift from car and bus use with positive implications for congestion control and the environment.

The work on these various critical features has been extensive and has been performed over a lengthy period. It is instructive that the conclusions have been broadly consistent over that period and this provides a strong degree of comfort as to their validity. Equally critical, however, are the financial constraints rightly imposed by the Promoter and Ministers.

### Capital costs and affordability

The project is at a sensitive commercial stage in assessing capital costs, with tenders awaited on the “Infraco” infrastructure construction contract and tender returns under assessment for the vehicle supply contract. This is a complex process and best value for the public sector will be achieved only with diligence and professional negotiation during the period to contractual commitment which is expected to be in October 2007.

The Business Case cannot disclose detailed internal cost estimates for reasons of commercial confidentiality, but our assessment is that those internal estimates have been performed with rigour, incorporate those tender returns and other known market costs available (amounting to some [60%] of anticipated risk-adjusted cost), have been assessed by peer professionals and have been analysed and reviewed by representatives of the principal funding stakeholders. The TEL Board is satisfied that they have been properly and prudently compiled and contain a rigorously developed level of risk contingency and therefore provide a robust basis for concluding on the Business Case.

The aggregate funding and costs of the project will provide the financial framework for a decision on next steps. The funding available for the project has previously been agreed in principle between the Council and Transport Scotland. The Council are committed to providing £45m toward the gross capital cost and Transport Scotland will provide a grant of £375m indexed to reflect an appropriate measure of inflation. This has previously been estimated at up to £500m providing a benchmark for affordability of up to £545m. Negotiations continue with property developers on contributions to the project based on the uplift in development value which arises when high quality transport infrastructure is provided

The current capital cost estimate for the Airport / Leith / Granton network is £592m, including a sum of £80m / £92m [subject to phasing] for the incremental cost of delivering the Roseburn / Granton tram line. The work scrutinised by the TEL Board provides reasonable confidence that appropriate contingency has been reflected and that affordability can be achieved. The variables include the finalisation of negotiated tender prices, the extent of developer contributions and the extent to which the benchmark affordability measure of £545m may be extended by the Council and Transport Scotland, on evidence that value for money continues to be demonstrated. These factors cannot be determined in the short term but will be determined prior to contractual commitment.

The estimates indicate that the capital cost of the Airport / Leith line is comfortably within the benchmark affordability measure. Accordingly, there is considerably more confidence at this stage in the affordability of this line but it should not be presumed that construction will proceed until such time as an acceptable contractual position has been reached with a preferred bidder.

In the TEL Board’s view, the willingness of developers to contribute to the tram cost is a key confidence-building feature in justifying construction of the tram to the major development areas in the city. This feature must be given due attention in making a final decision to proceed to contractual commitment and the logic applies to all phases of the tram network.

### Financial viability – operational cash flow

Edinburgh has an opportunity, virtually unique in the UK, to achieve effective service integration between its Council-owned bus company and the tram operations. The Business Case sets out how this will be achieved and also demonstrates the operational cash flow characteristics of the integrated bus and tram system.

It should be recalled that the modelling requires estimation of economic activity, property development, demographics and transport demand patterns which commence in some 5 years' time and run through a period of 30 years. The resulting projections can only ever be regarded as that – projections – and there can be no guarantee of their delivery. That feature however is common to any major capital infrastructure project and cannot of itself be a barrier to progress.

To provide as reliable a basis for the projections as possible, a completely new and highly sophisticated transport model has been built to reflect the specifics of Edinburgh's projected transport demand. The work was carried out by independent experts who have reported on their work and their conclusions. As with the capital cost estimates, extensive and rigorous consultation has taken place with officials of the primary funding stakeholders and with officials of Lothian Buses and Transdev, who have provided essential input to the integrated bus and tram service pattern.

Economic development assumptions are a critical influence on the model's output. The growth assumptions in the transport model are consistent with the Council's existing development models.

The projections incorporate the patronage and revenue estimates from the transport modelling and the operational and maintenance costs of bus and tram operations. The overall profile is that the operational cash flows will be positive once the tram and bus service patterns have settled down after a normal "ramp-up" period of around 3 years and in later years significant surpluses can be demonstrated. On this basis the TEL Board believes that subject to the projected levels of development taking place as planned the requirement to demonstrate that, over time, the integrated service will not require subsidy has been fulfilled.

There are two other key features affecting operational viability.

- The genesis of the tram project was related to the regeneration of the North West and North East of the city. The Roseburn / Granton tram line attracts relatively lower patronage than more heavily populated areas of the City such as Leith Walk. However, it is an objective of the tram project that it will reinforce the regeneration of North West Edinburgh and help fulfil specific social policy aspirations such as accessibility of relatively poorer areas to areas where employment prospects are brighter. The modelled results reflect this backdrop with substantial dependence on the scope and pace of development. This represents a significant risk to financial viability with 32% of total revenues dependent on planned development occurring at the time and to the extent projected. Although the underlying economic development plans are now reasonably well-advanced and the creation of the tram network should in itself reinforce the pace of development, this risk factor cannot be ignored and is a key influence in recommending proceeding initially with Phase 1a,.
- The ramp-up period brings particular challenges as travellers adapt to new patterns of public transport provision. This is a common feature of any new tram system and the evidence from many other cities is that patterns stabilise some 2-3 years after introduction. Cash flow is invariably negative in this early period, but the Board believe that limited borrowing facilities will support this period, to be repaid from subsequent positive cash flows. The projections take account of the interest costs incurred. Longer term dividend planning will be necessary to take account of this ramp-up period.

## **CONCLUSION**

The TEL Board was given the responsibility of overseeing the work required to produce a Business Case and supporting documents which describe the facts, judgements and forecasts relating to the proposed Airport / Leith / Granton tram network and to make recommendations to the City of Edinburgh Council on the appropriate way forward.

Taking all of the relevant factors into account, the TEL Board recommends approval by the Council of the Business Case for the Airport / Leith / Granton tram network. We also recommend that the Council and Scottish Ministers, should they accept the Board's recommendation to approve the Business Case, incorporate in their approval some key conditions which will assist their agents to retain control over costs and funding and ensure that value for money is manifested in the final contractual documentation.

This phased approach will serve to minimise risk and ensure appropriate pressure is maintained on contractors prices and developers contributions in the run up to the point of contractual commitment. This will serve to maximise the opportunity to develop the full Phase I network on an affordable basis and could result in an earlier delivery of the Airport/Leith tram line.

We believe this approach is a responsible, risk controlled approach but one which promotes efficient execution of a high-quality improvement to the transport infrastructure of Edinburgh, with substantial economic and social benefit to the City and to the Scottish economy.

We would also emphasise that efficient execution of the project from this stage depends on allowing the scheme Promoter and its agents to move matters forward without undue interference, all the while remaining within the conditionality agreed at this stage. Any other approach will inevitably lead to delay and increasing cost.

**DAVID MACKAY**  
**CHAIRMAN**  
**TRANSPORT EDINBURGH LIMITED**  
On behalf of the Board of Directors  
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