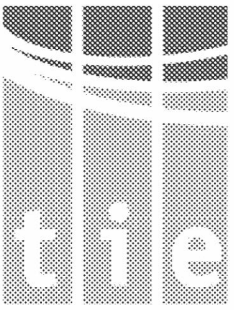

~~Working~~Final Draft (9)

Procurement Route VFM Assessment

The Edinburgh Tram Network

~~Graeme Dunn~~

~~25th Octo~~1st November 2005

Edinburgh Tram Network Procurement: PPP VFM Assessment

Executive Summary

Background

- Preliminary Financial Case and several versions of Outline Business Case submitted to Scottish Executive ('SE') and City of Edinburgh Council ('CEC') for consideration, but PPP/PFI decision kept open until now.

- This paper analyses choice on basis of 'VfM Assessment Guidance – Practical Application Note' with further direction supplied by Financial Partnerships Unit ('FPU') in SE.

- ***tie*** view the project procurement as a choice between an 'enhanced', ***tie*** designed, 'conventional' procurement process versus a PPP/PFI structure for the main 'Infraco' contract.

- Given the proposed ***tie*** methodology, there are many similarities between the two procurement methods being compared, particularly in terms of risk transfer.

- Edinburgh, as a location for a light rail/tram system, has some unique characteristics and therefore merits a non-standard/'enhanced' conventional procurement approach.

- Significant amount of **qualitative** analysis undertaken, to be considered alongside the **quantitative** data and financial models outputs, with a non-PPP/PFI approach viewed and demonstrated as being deliverable.

- ***tie*** will adopt a phased approach to the proposed procurement. Phase 1 of the planned construction has yet to be finalised but will be substantial. For purposes of quantitative analysis, we have used {Lines 1 and/~~or Lines 1 and~~ 2} but ***tie*** do not believe that either scope would alter the qualitative or quantitative analysis outcomes materially.

Conclusions Drawn

- V~~F~~fM assessment does create a prima facie case for the use of a PPP approach, given the scale and nature of this project (as might be expected).

- However, ~~strong~~ qualitative case for a non-PPP approach, having benefited from lessons learned in previous schemes and those currently ahead of Edinburgh and given ***tie's*** sector experience and expertise, coupled with a robust procurement strategy.

- ***tie's*** preferred procurement strategy incorporates a number of key distinguishing features including: ***early operator involvement*** and ***the separation of operations and systems delivery***.

- ***tie*** procurement strategy facilitated by availability of up front ~~g~~Grant funding from SE~~'~~. Availability of ~~g~~Grant up front, as compared with current lack of ongoing funding or PPP counterparty, favours 'enhanced' conventional approach.

- Preliminary assessment suggests that PPP option likely to be 'on' ~~balance~~ CEC ~~b~~Balance ~~s~~Sheet. SE will need to consider their accounting treatment of the ~~g~~Grant funding.

- The Practical Application Note criteria of ***Viability, Desirability*** **and** ***Achievability*** have been applied, in the context of the project, to compare the 'enhanced' conventional and PPP/PFI options.

- Options also tested against range of other related wider factors.

- Overall risk position similar as between 'enhanced' conventional procurement and PPP option; main difference is long term lifecycle.

- Overall qualitative assessment highlights similarity between options and suggests that 'enhanced' conventional option may provide better VfM given the higher cost of capital for PPP.

- Given extent of work completed to inform well-developed 'enhanced' conventional procurement strategy, ***tie*** considers that qualitative factors merit a relatively higher weighting than quantitative factors in informing the decision.

- However, limited **quantitative** analysis undertaken by PwC using simple HMT model and ***tie*** inputs, also supports non-PPP/PFI approach as providing better VfM.

- Preliminary conclusion suggests *prima facie* case for assessing PPP as investment approach but stronger qualitative and quantitative case for a bespoke 'enhanced' conventional procurement strategy, managed and controlled by ***tie*** tram project team, which maximises VfM, and manages risk appropriately, whilst utilising private sector capabilities.

- Assessment will need to be considered in light of optimal use of available funding.

Summary Conclusion

Having tested the comparative VfM of *tie's* 'enhanced' conventional procurement route and a PPP option through a tailored application of the SE's VfM assessment guidance as advised by SE's FPU, the 'enhanced' conventional option appears capable of delivering similar levels of contractual risk transfer and potentially better VfM than an 'on ~~b~~Balance ~~s~~Sheet' PPP option with its associated higher cost of capital.

Next Steps

[~~for~~For discussion with SE]

- SE FPU approve VfM assessment methodology in light of unique nature of project and validity of conclusions.
- SE to take a view on preliminary accounting treatment assessment.
- SE Transport approve assumption of continued 'enhanced' conventional procurement, subject to ongoing VfM checks.
- SE Transport/FPU to set out what further VfM assessment requirements should be put in place for ongoing checks, in particular with regard to monitoring of market and competition (VfM Guidance Stage 3).
- SE to consider options for reversion to PPP route should VfM position change.

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Introduction

The most recently submitted Interim Outline Business Case (IOBC) for the Edinburgh Tram Network ('ETN') deliberately left open decisions as to the case for a PFI element to the procurement (with the agreement of SE). The intention was that the case for PFI should be the subject of a separate analysis, to be completed ahead of the 'final' OBC, to inform ongoing work by ***tie*** on the procurement.

This paper summarises that further analysis. It is based on the application of the SE's 'VfM Assessment Guidance – Practical Application Note' supplemented by helpful advice from the FPU, as appropriate, for a 'unique' project[1] such as the ETN.

The structure of this paper is as follows:

Section 1 describes the project scope in the context of decisions which remain to be taken on Phase 1;

Section 2 describes (briefly) the process and options considered by ***tie*** for procurement;

Section 3 describes ***tie's*** current 'enhanced' conventional approach, and how this would translate into a PPP option;

Section 4 sets out why it remains appropriate to consider a PPP option: the 'prima facie' case;

Section 5 considers a *qualitative* comparison between the PPP option and a conventional model, which in this case is based on ***tie's*** 'enhanced' conventional model; the comparison is based on:

- The use of tailored versions of the qualitative tables contained in the Practical Application Note to test **Viability**, **Desirability** and **Achievability**; and
- An examination of the wider factors which may also further the case for PPP;

Section 6 analyses the appropriate cost inputs, and then makes use of the HMT model to provide a high level *quantitative* assessment, bearing in mind ***tie's*** view of the relative weighting between qualitative and quantitative factors;

Section 7 summarises initial conclusions

Appendices A and B are a reproduction of guidance from the FPU in the form of a letter and further email advice. **Appendix C** is an initial view on potential Balance Sheet treatment for the PPP option, provided by ***tie's*** financial advisors, PwC. **Appendix D** includes a short note on other issues raised by FPU, including the allocation of risk between CEC and SE.

[1] See paragraph 7, page 10 of Practical Application Note.

1. Project Scope

CEC and SE are currently working towards the final decisions regarding funding for the project in late 2006, when the decision may be informed by tender prices for the infrastructure contract ('Infraco' – see Section 5 later). For the moment, the only assumed funding from the SE is £375m which is not indexed. Given this assumption, the summary position at present, as set out in the IOBC, is as follows:

- Either of Line 1 or Line 2 can be delivered in its entirety without indexing of SE grant.
- Delivery of both Lines 1 and 2 in their entirety is unlikely in a first phase, even with indexing of the SE grant, without borrowing against future revenues.
- There are a number of options to defer the construction of one or more elements of Lines 1 and 2 in a first phase.

These assumptions are based on use of the grant as 'up front' capital. The IOBC also sets out examples of how the £375m may translate into annual revenue payments as would be required to support a unitary charge under a PPP contract (see Ssection 5, 'Affordability' on page 21[ ] ~~below~~).

tie appreciates that this degree of uncertainty on project scope, at this stage, is unusual. Nevertheless, it is ***tie's*** view that there is sufficient certainty as to the likely scale (substantial) of a first phase of the project, and of the project's key characteristics, to allow for a realistic assessment of the VfM of a possible PPP approach compared to the VfM of ***tie's*** 'enhanced' conventional model. In explaining this conclusion, it is considered worthwhile to set out below a summary of the thinking behind the phased approach (notwithstanding that this material is already set out in the IOBC).

Phased Approach

There are inherent risks associated with the cost estimates for a project of this scale and complexity, despite the detailed work that ***tie*** has carried out to ensure that the current estimates are the most accurate available using a ~~and the~~ range of benchmarking against outturn costs on completed projects.

tie is consequently proposing a 'phased' approach, to be applied to the procurement of Lines 1 and 2, as well as any possible future extensions which are subsequently identified. The aim of the phased approach would be to;

- Ensure maximum clarity around the likely costs associated with sections of the network.
- Allow for the option of retaining the same infrastructure contractor for each Phase, including later extensions.

- Ensure that, at each stage of phasing, the 'network' as defined, will be completely sustainable, should no further phases be undertaken for whatever reason.

This will allow CEC and then SE, to take decisions about the precise committed scope of Phase 1, in the light of actual prices competitively bid by the private sector, *before* any contractual commitments. The Infraco Contract will be set up to allow the incremental construction of the ETN. The Contract will also provide the possibility that future extensions can be facilitated by the same Infraco without the need for further costly procurement, thus avoiding potential issues associated with system interface and integration which could prevail if a different contractor was appointed.

Scope of Phase 1

The precise scope of each Phase is subject to further discussion but the aim will be to agree first with CEC, then with SE, the scope of a first Phase which should be reasonably affordable *within* the current affordability constraints (i.e. £375m without indexation). Specifically, this will be a scope which, on current estimates, builds in sufficient 'headroom', below £375m, to allow a high degree of confidence as to deliverability, allowing for prudent provision for any potential unforeseen cost increases.

In evaluating the options available for phased construction of Lines 1 and 2, there is an overriding requirement that any completed phase of either Line should present a high probability of generating an operating surplus, thereby being financially successful. To the extent that the agreed Phase 1 is neither the totality of Line 1 or of Line 2 (both of which have been subject to full STAG appraisals), but either a subset or combination of the two, ***tie*** will undertake a full review of the Appraisals of economic costs & benefits embodied in the existing STAG Reports.

The current funding constraints, described above, still mean that any first phase is likely to be in excess of £200m in terms of Capital. This represents a significant project both for conventional and PPP procurement. It is considered that marginal variation around this scale of project – as Phase 1 is finalised - should not materially alter the judgements set out below about the likely VfM of the alternative procurement routes[2].

Similarly, in terms of project characteristics, the scope of Phase 1 will also be, essentially, the same, whatever the precise definition: the procurement will still be focussed on the design, construction and maintenance of tram infrastructure in Edinburgh, with very similar risk profiles. Again therefore, it is considered that the absence of a precise scope for Phase 1 at present does not impact on the validity of the analysis in this paper.

For the purposes of the qualitative analysis, *tie* has therefore focussed on a project which may be either or both of Lines 1 and 2. The quantitative analysis (see Section 6 below) uses costing and other figures from the ETN Line 1 and 2

[2] If the scope of the project were to increase significantly in size, then market capacity considerations may need to be revisited. A PIN consultation by ***tie*** is currently underway which will provide useful feedback.

configurations. The results of the VfM analysis are consistent across all configurations.

2. Procurement Options

In developing the alternative procurement routes for the ETN, ***tie*** was focussed throughout, on achieving best VfM, but in conjunction with a number of other key objectives. In full, the aims of the procurement strategy are to achieve:

- Best VfM (for the public sector)
- Timely delivery of the system
- 'Win/Win' solutions for relationships with the private sector
- Meaningful integration of light rail and bus services; and
- Flexibility for future expansion of the network/phasing of delivery

Throughout, ***tie*** have been conscious of the lessons learned and experience available from other similar scale procurements by the public sector, especially within the light rail sector (including the application of PFI to previous schemes). In particular, ***tie's approach*** has been informed by the recent investigations by the NAO, Audit Scotland and HM Treasury. It also deals with issues specific to Edinburgh (including sensitivities of World Heritage site status for part of route).

A full description of the development of the procurement strategy is set out in Section 5 of the recent IOBC. To summarise for this paper, the development falls into two stages.

Early Operator Involvement

A decision to select the potential operator for the system well ahead of the completion of the Parliamentary process and the letting of the main construction contract was taken in early 2003. The decision, based on a full analysis carried out by ***tie's*** procurement working group[3] ('PWG') at the time, was in the context of ***tie's*** own lack of operating expertise and the difficulties manifested on recent light rail procurements in handling operational and revenue risks. In particular, early involvement of the operator:

- Allows ***tie*** to use the operator's knowledge and experience during the Parliamentary approval, business case, planning design, and commissioning phases, to ensure that the system will be capable of operating effectively;
- Allows input from an experienced operator on fares policy;
- Facilitates proper planning of an integrated service network, especially with bus operations; and
- Facilitates a phased build out of the system, as has been successful on the Docklands Light Railway.

[3] Comprising ***tie***, Partnerships UK, Grant Thornton (***tie's*** financial adviser at the time), ***tie's*** legal adviser, DLA and ***tie's*** technical advisers.

Transdev were appointed as the designated operator in May 2004 and since that date have been working closely with ***tie*** on the development of the scheme (for a fuller description of the operator's contract and risk transfer, see Ssection 3 ~~below~~).

Infrastructure and Vehicles

The early appointment of an operator, and consequent separation of the operations of the system from construction, set certain parameters for the options considered for the procurement of the infrastructure and the vehicles. The process was again conducted through the PWG, following the principles of best practice set out in guidance for the public sector[4] but recognising the unique complications of the proposed ETN scheme. The group agreed a series of key criteria, identified a shortlist of 6 possible options, and tested each against the criteria. Again, full details are set out in the IOBC but, to summarise, the 6 options assessed were:

1. **Full Consortium Option** – single consortium to deliver all design, infrastructure works, and vehicles.
2. **Infrastructure and Integrator Consortium Option** – two procurement exercises: design, infrastructure works and systems integration; and vehicles (a contract ultimately novated to infrastructure provider).
3. **Infrastructure Consortium Option** – as 2 but with separate systems integrator procurement.
4. **'Arranged' Joint Venture Option** – separate procurement of consortia members who then form JV.
5. **Infrastructure Development Partner Option** – partner conducts letting of all required contracts.
6. **Traditional Procurement Option** – conventional procurement by ***tie*** of all required contracts.

One of the key criteria applied to the assessment of each option was 'flexibility of finance' which specifically referred to maintenance of all options for financing, and in particular, the possibility of some form of PFI. This flexibility[5] was available for Options 1, 3 and the preferred Option 2. As the process of developing and testing Option 2 as the preferred strategy has continued over the last 18 months or so, the possibility of applying a PPP solution to Option 2 has remained. The culmination of this process is the analysis contained in this paper.

In comparing a PPP option with a 'conventional' procurement option, it is therefore a comparison between ***tie's*** preferred procurement strategy (the 'Infrastructure and Integrator Consortium Option') *either with or without private finance.* Given the scale of work carried out, ***tie*** would describe the model in a form without private finance as an 'enhanced' conventional procurement. The private finance version is, in a sense, a constrained PPP option in that it reflects earlier decisions on the project, in particular the separation of operations, and the thinking that lay behind the choice of Option 2

[4] For example, the Scottish Procurement manual, OGC guidance

[5] In the sense that each of these options contained a single contract of significant size that would be capable of being structured on the basis of output specifications and an availability payment regime.

(including the provision of a degree of 'early' work). The model and its PPP variant are described in more detail in the next section.

3. 'Enhanced' Conventional Procurement and comparison with PPP

As highlighted earlier~~above~~, and described in more detail in the IOBC, ***tie*** has developed a procurement strategy, which is firmly based on lessons learned from past tram procurement exercises. The extent of the work already carried out to inform the current strategy can therefore itself be viewed as representing a significant qualitative analysis.

Again, whilst the detail is set out in the IOBC, it is relevant to describe the 'enhanced' conventional approach, now developed as part of this paper, given its importance in informing the way ***tie*** has approached the qualitative aspect of the SE's 'VfM Assessment Guidance – Practical Application Note'.

The key characteristics of ***tie's*** 'enhanced' conventional procurement strategy are therefore set out below with, in each case, a brief description of how the approach would alter (or not) under a PPP option:

Early operator involvement

As described in Section 2 above, a contract was signed with Transdev to undertake this role in May 2004, and they are co-located in ***tie's*** office, working on a consultancy basis. This gives ***tie*** access to the operator's knowledge and experience during the parliamentary approval, business case, planning, bus/tram integration, design, and commissioning phases to ensure that the system will be capable of being operated effectively. The operating contract[6] involves significant risk transfer on operating costs (many of which are fixed, subject to appropriate indexation) and more limited revenue risk share. *Transdev's role under their contract, and risks assumed, would remain the same under the PPP option, as operations would not form part of that contract.*

Separation of operations and systems delivery

When the project moves into the operations phase, Transdev will assume a portion of the risk of short term fare box revenue (70:30 ***tie***: ~~Transdev~~: Transdev around agreed target) and the bulk of the operating cost risks (largely fixed, subject to indexation – see above). Remaining revenue risk will fall to the public sector via CEC. There are a number of methods by which CEC can mitigate this risk as detailed under "Allocation of Financial Risk between CEC and SE" later. Premia required by the private sector to assume full revenue risk have been a major contributor to affordability problems on other schemes in the UK. *This experience informed the choice of early operator involvement, and, in turn, defines the PPP option which would exclude operations and revenue (risks already transferred to or shared with Transdev as operator).*

[6] Development, Partnering and Operating Franchise Agreement (DPOFA)

Establishment of Joint Revenue Committee

The Joint Revenue Committee (JRC) will develop a comprehensive and interdependent hierarchical public transport modelling suite, to support the development of the Tram network. The JRC will be responsible to ***tie*** along with the design contractor on a jointly and severally liable basis. The modelling suite to be delivered to ***tie*** by mid 2006 will, inter-alia, consider the impact of specific system design features and of service and frequency changes on revenue predictions, analyse the effect of changes in passenger numbers on revenue and report on the integration with other public transport modes. During 2006, the output from this next stage of transport modelling will facilitate the development of a business plan for integration of buses and trams. *The JRC will exist whether or not the infrastructure procurement is pursued with a private finance component.*

Early involvement of designer[7]

This allows ***tie*** to advance design work for sensitive sections of the lines and, following award of the design contract in September 2005, the designer will focus activities on the section of the network between Ocean Terminal and Haymarket via Princes Street (the core of any Phase 1). The early involvement of the designer will reduce the planning and estimating risks that bidders for the infrastructure contract are exposed to and so will contribute to eliminating the substantial risk premia they would charge. It will also facilitate the advanced works on utility diversions, another area where both programme and costs would present considerable risks and therefore premia[8] to be paid to the private sector but which ***tie*** and CEC can manage through bespoke utilities diversion framework contract (see below). The strategy calls for novation of the design contract to the infrastructure contract, when the latter is awarded, with all risks in relation to design work passing to the infrastructure contractor.

tie will monitor the solutions being prepared by the design contractor with the assistance of the Technical Support Services Provider (Scott Wilson Railways), Transdev and drawing on the significant experience of other schemes existing within the ***tie*** team. The purpose of this will be to avoid 'gold plating' of the system, and any tendency towards high risk, high cost options which do not provide the overall best VfM that ***tie*** is seeking. ***tie*** will track the cost of the system throughout the design period[9], so that cost overruns can be identified quickly and mitigating actions taken, while there is still scope to change the solution. Such an approach should also enable any cost under runs to be identified and allow spare resources to be allocated elsewhere. *Again, the early design work*

[7] Design and utilities (see below) were highlighted as important factors when handling procurements of this type, both in a National Audit Office Report "*Improving Public Transport in England through Light Rail*" and also within Lord Fraser's Report "*The lessons to be learned from Holyrood*".

[8] Costs charged for utilities diversions on the Leeds scheme, for example, were a major component of that scheme's affordability difficulties

[9] Through a formal change mechanism which will require all changes to be submitted and approved by the Project Board

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would also continue, with the same benefits, if the infrastructure contract were to include private finance.

Utilities undertaken as advanced works

A significant benefit arising from undertaking system design early is that ***tie*** can procure utility diversions in advance, thereby reducing programming and cost risk pricing by the infrastructure providers, creating the best opportunity to minimise disruption and maximise construction productivity. The downside is unhelpful media coverage, claiming that the roads affected by the tram corridor, will require to be excavated twice before a tram service commences running. ***tie*** therefore propose to retain and manage the significant risks associated with utilities and implement the major identified utilities diversions through a single framework contract[10] with a contractor approved by all the affected utilities.

tie and CEC will use their powers under the two Tram Acts and as the Roads Authority, to negotiate with the utility companies, allowing works to be carried out on the apparatus which is affected by the ETN. Many of the most complex issues, regarding utilities, are already being progressed through negotiations with the utility companies, with whom ***tie*** has agreed or is in the process of agreeing Heads of Terms for utilities diversion works. These negotiations have resulted in a number of innovative solutions for utility issues, highlighting the benefits of early engagement with the utilities suppliers. *Again, the approach on utilities would remain in place for the PPP procurement and, as with the range of other early work being carried out, removes an element of risk that the market has had difficulty pricing on previous PPP deals.*

[10] The Multi-Utilities Diversion Framework Agreement contract 'MUDFA' – see section on Contracts

Separate selection of infrastructure and vehicle providers

tie*'s** approach, of having separate competitions for infrastructure and vehicles, means that it will be able to select its preferred option for each of the vehicles and the infrastructure. As suggested in section 76 of the Guidance Notes, it is vital to take whatever action is possible to ensure that market failure or abuse is avoided at all costs. As there are a relatively small number of vehicle providers in the light rail market, asking them to partner with infrastructure providers would further restrict the range of choice available. ***tie also believes that separate procurement of these two key elements of the system, will increase competition for the infrastructure contract because the relatively small number of vehicle providers would otherwise limit the number of integrated consortia that could bid. ***tie's*** approach, therefore, potentially allows it to select both its favoured rolling stock choice and its favoured infrastructure provider, whilst building in opportunities throughout the procurement period to ensure compatibility between the two . As with the design contract, it is ***tie's*** intention to novate the vehicles contract to the infrastructure contract with all interface risks passing to the infrastructure contractor. *This approach would again also be pursued under the PPP option. The mechanics of the process are being explored as part of* ***tie's*** *current PIN consultation with the market.*

System maintenance and lifecycle

Under the 'enhanced' conventional approach, light 'daily' maintenance ('mop and brush') would be the responsibility of Transdev under the operator contract. The approach to 'heavy' maintenance of the system and vehicles remains under consideration (and is an issue for the current PIN exercise). The view of ***tie's*** procurement team is that the optimum period in terms of VfM for a maintenance contract is likely to be around 6 years. This is the sort of period currently under consideration as part of the infraco contract, and would provide for the integration of design with initial lifecycle costs. *This would be the main significant difference if the PPP approach were to be adopted: A PPP contract would typically need to build in maintenance/lifecycle obligations for the Infraco consortium over a period appropriate to the private finance (i.e. 25 or 30 years) through a system availability regime. Whether the private sector could accurately price such a risk is a possible issue. It is also true to say that the Public Sector might have difficulty in accurately pricing such costs and the shorter lifespan will also have an impact on delivery/quality of service incentives to be factored into the contract(s).*

Contracts

In terms of the number of contracts to be let under either approach, *there is no significant difference.* Contracts for operations (Transdev), initial system design, and the JRC have already been signed and would remain in place. The planned early utility diversion work is a separate contract that would also be put in place under both options. The vehicle contract would initially be separate (as with design), but would

then be novated to the Infraco and become part of that contract with a single consortium that included responsibility (and risk) for vehicles (and single point responsibility). The difference under PPP is that this contract would have private finance included (which would require the usual additional agreements linked to the funding).

The Infraco contract will be ~~a~~ bespoke ~~contract~~ and will be developed from the guidance given in the SOPC and various precedents from other light rail schemes in the UK. Given the early procurements of the designer, the operator and the utilities contractor, the terms of the Infraco contract will be 'back to back' with the relevant terms of the SDS Agreement, the DPOFA and the MUDFA.

The Infraco contract, which would be procured under the 'enhanced' conventional procurement route, will be drafted in almost identical terms to the Infraco contract which would be procured under a PPP procurement route. Thus, the contractual risk interface will not differ materially. The involvement of private finance under a PPP/PFI generally sharpens a contractors incentives because the private sector has more at stake but in the case of the ***tie*** enhanced/conventional structure, a combination of the SDS contractor, the strength of the Infraco contract and ***tie's*** expertise/management will deliver a commercially structured result but avoiding the higher cost of PPP/PFI Capital. The Infraco contract will contain the following provisions which would normally appear in a PFI/PPP contract: design obligations, construction obligations, vehicle supply obligations, change mechanism, change in law, force majeure, insurance, dispute resolution, payment mechanism with performance monitoring and deduction regime, flexible termination provisions, relief and compensation events, approvals, indemnities, quality assurance and safety. In addition, the Infraco contract will be structured to deal with the incremental construction and potential expansion of the Edinburgh Tram Network.

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Areas of contractual drafting where there will be a difference under the 'enhanced' conventional and the PPP procurement routes are as follows:

- **Payment mechanism**

  Under a PPP procurement route, the payment mechanism would be calculated as a unitary charge payable on service commencement over the concession period. Under the 'enhanced' conventional route, the payment mechanism could be drafted in various ways to manage the risks associated with cost overruns and programme delays: milestone payments or a single payment for construction payable on service commencement (with private sector construction financing) and with maintenance payments thereafter or payment for construction and maintenance released on service commencement and paid in analogous manner to unitary payments over the proposed contract period of 9 years (this would also require some element of private sector financing). If appropriate to the type of payment mechanism selected, retentions and the payment of sums to a maintenance/handback fund could also be included.

- **Compensation on termination**

  Compensation will be dealt with differently, under the 'enhanced' conventional procurement route, because of the difference in financing. No

compensation will be payable under the 'enhanced' conventional procurement route in respect of termination for contractor default.

- **Maintenance obligations**

  The obligations for maintenance would be the same under each procurement route. The difference is in the length of time over which those obligations would be provided. Under the 'enhanced' conventional procurement route as proposed, a new maintenance contractor would require to be procured after a period of 6 years' maintenance.

- **Availability and Performance-related deduction regime**

  An availability and performance-related deduction regime can fit with each procurement route. Under the 'enhanced' conventional procurement route, the main difference would be that the payments against which deductions could be made will be lower than they would be under a 25-30 year PPP arrangement, thus limiting the amount of deductions which could be made.

- **Refinancing**

  Under the 'enhanced' conventional route, there will be no requirement for refinancing provisions in the Infraco contract.

- **Step-In**

  Under the 'enhanced' conventional procurement route, there will be no provisions to deal with a funder stepping into the contract in the event of default by the Infraco.

The selection of the Infraco will be made on the basis of a rigorous pre-qualification assessment and tender evaluation. This selection process will be conducted in the same way regardless of the choice of procurement route. The successful Infraco will be required to provide a parent company ~~g~~Guarantee (if appropriate) and a ~~p~~Performance ~~b~~Bond. An obligation on the Infraco to provide an early warning of any financial ~~difficulties~~difficulties will also be included in the Infraco contract.

Summary

In summary, the majority of the features of the 'enhanced' conventional procurement option would also translate directly into the PPP alternative. The key difference is around long term maintenance and lifecycle, risks which are likely to revert to the public sector[11] at an earlier date under 'enhanced' conventional than under PPP.

[11] It would be the intention at that point to let a new maintenance contract to the private sector, albeit the degree of risk transfer possible at that stage is likely to be reduced if this contract is not with the original Infraco.

This similarity in contracts and structure is reflected in the pattern of risk transfer. This will be different in the period before and after signature of the main Infraco contract, but in both periods the two models are closely matched, as highlighted in the summary tables below:

Table 1: Summary Risk Matrix (pre-Infraco contract signature)

Risk	'Enhanced' Conventional			PPP		
	Public Sector	Private Sector	Shared	Public Sector	Private Sector	Shared
Design (SDS contract, pre-novation)			✓			✓
Approvals (SDS contract, pre-novation)		✓			✓	
Land Acquisition	✓			✓		
Utilities (initial diversions) (MUDFA)			✓			✓
Revenue (DP●FA)			✓			✓
●perations (DP●FA)		✓			✓	
Vehicles (vehicle contract, pre-novation)			✓			✓

Table 2: Summary Risk Matrix (post-Infraco contract signature)

Risk	'Enhanced' Conventional			PPP		
	Public Sector	Private Sector	Shared	Public Sector	Private Sector	Shared
Design (SDS novated to Infraco)		✓			✓	
Approvals (Infraco contract)		✓			✓	
Utilities (later diversions) (Infraco contract)		✓			✓	
Revenue (DP●FA)			✓			✓
●perations (DP●FA)		✓			✓	
Construction (Infraco contract)		✓			✓	
Vehicles (vehicles novated to Infraco)		✓			✓	
System Integration (Infraco contract)		✓			✓	
Maintenance (light) (DP●FA)		✓			✓	
Maintenance (heavy) + Lifecycle post 6 years (Infraco contract)	✓*				✓	

*Likely that risk would subsequently be transferred back to private sector under new maintenance contract.

4. The Initial Case for PPP

Early work, on the procurement strategy for the ETN, predated both the new HM Treasury Guidance on the assessment of VfM for PPP, and the more recent development of this guidance for the public sector in Scotland (the SE's 'VfM Assessment Guidance – Practical Application Note'). Nevertheless, the scale and complexity of the tram project always meant that both CEC and SE wished to maintain PPP as an option. This was reflected in the 'flexibility of financing' key criteria used by ***tie*** as part of its appraisal of options.

The initial assessment of whether there is a case for the consideration of PPP was summarised in the new HM Treasury guidance by a list of criteria to be tested. These criteria are also adopted in the new SE Guidance (Appendix 1). The criteria are set out below, together with an assessment of the ETN Project against each. The analysis supports the project's initial view that PPP merits consideration, albeit with certain issues that will require careful assessment in VfM terms.

PPP Consideration checklist:

- **A major capital investment programme, requiring effective management of risks associated with construction and delivery;** *The ETN is not a programme of investment, but it does represent a major capital investment, requiring effective management of the risks associated with construction and delivery.*
- **The private sector has the expertise to deliver and there is good reason to think it will offer value for money;** *The expertise to deliver the project is certainly within the private sector. Experience on recent DBFO PFI structures for trams does, however, raise certain doubts about the VfM of attempting to transfer certain risks (in particular full revenue risk and all utilities diversions). This suggests that VfM will need careful assessment.*
- **The structure of the service is appropriate, allowing the public sector to define its needs as service outputs;** *The proposed tram network involves the construction and long term maintenance of a major capital asset that would be capable of definition through a series of required service outputs.*
- **The nature of the assets and services identified as part of the PPP/PFI scheme are capable of being costed on a whole-of-life, long term basis;** *the ETN is capable of being costed on a whole-of-life, long term basis. The pricing of heavy maintenance and lifecycle over an extended 25-30 period does, however, present challenges.*
- **The value of the project is sufficiently large to ensure that procurement costs are not disproportionate;** *The current estimated value of the project (Phase 1 alone) is sufficiently large to ensure that procurement costs are not disproportionate.*
- **The technology and other aspects of the sector are stable, and not susceptible to fast paced change;** *The key aspects of light rail technology are stable and not subject to fast paced change.* ***tie*** *has also carried out an assessment of the possible impact of alternative technologies. See section 2.2 of draft IOBC.*

- **Planning horizons are long term, with assets intended to be used over long periods into the future;** *The planning horizons for the tram system are long term, with the system likely to be used for well over 30 years.*
- **There are robust incentives on the private sector to perform**; an *availability payment mechanism, put in place to cover a significant proportion of the private sector's construction and maintenance costs, would be capable of providing robust incentives on the private sector to perform.*

Certain of the issues highlighted, in the comments above, have already been reflected in the work (qualitative analysis) that has gone into developing ***tie's*** 'enhanced' conventional procurement, in line with the desire to retain flexibility in financing. The problems associated with full revenue risk transfer and utilities on other PFI tram schemes were direct influences on the strategy of early operator involvement, the separation of operations and system procurement, and the planned early work on design and utilities.

5. Detailed Qualitative Assessment

Having developed an 'enhanced' conventional model to reflect lessons learned from other schemes, and established a continuing prima facie case for the consideration of PPP, the new SE guidance (again building on the HM Treasury guidance) provides a helpful framework for the qualitative testing of any initial assumptions against the three key criteria of ***Viability, Desirability*** and ***Achievability***.

The proformas in the guidance are designed for generic application, and can be used at both a programme (Stage 1) and project (Stage 2) level. As advised by the FPU, ***tie*** has sought to use a tailored version to compare the two alternative procurement options (the 'enhanced' conventional procurement, and the 'enhanced' conventional procurement with private finance: PPP option) in accordance with Stage 2 of the guidance. The tables are set out below:

VIABILITY

[illegible]

Issue	Questions	Assessment of 'enhanced' conventional option compared with PPP variation
Project level objectives and outputs	Is *tie* satisfied that operable contracts could be constructed for the project?	Operable contracts based on a DBFM model capable of being constructed for project to form PPP option. Some uncertainty as to private sector pricing of long term maintenance and lifecycle, which would be mitigated under conventional option by shorter term approach Viability Assessment – PPP: High to Medium Viability Assessment – 'enhanced' conventional: High

	Could the contracts describe service requirements in clear, objective, output-based terms?	DBFM model contract capable of describing service requirements in clear, objective, output-based terms (likely to be based on system availability) subject to comments above. Degree of work on early design and particular planning sensitivities of Edinburgh, may merit more 'input' type specification which favours conventional option. Viability Assessment – PPP: High Viability Assessment – 'enhanced' conventional: High to Medium
	Could they support assessments of whether the service has been delivered to an agreed standard?	DBFM contract as above would support assessment of service delivery (based on system availability) subject to issues on long term maintenance/lifecycle already highlighted. Design sensitivities may favour more rigorous scrutiny of built asset in line with input specification. Viability Assessment – both options: High
	Is the fit between needs and outcome sufficient to proceed?	Yes for both options
Operational flexibility	Is *tie* satisfied that operational flexibility is likely to be maintained over the lifetime of the contract, at an acceptable cost?	Key parameters of tram system availability over a challenging long period will need to be finalised ahead of procurement for PPP option. In theory, contract will be capable of including a degree of flexibility, but extent of such flexibility will need to be specified in the contract to avoid unacceptable variation costs. Shorter term maintenance/lifecycle contracts under 'enhanced' conventional option would provide a greater degree of scope for operational flexibility Viability Assessment – PPP: High to Medium Viability Assessment – 'enhanced' conventional: High
Equity, efficiency and accountability	Are there public equity, efficiency or accountability reasons for providing the service directly rather than thorough a PPP contract?	No public equity, efficiency or accountability reasons to provide service directly (and no public sector capability to provide infrastructure on this scale without private sector involvement). Both 'enhanced' conventional and PPP option would be reliant on private sector expertise to the same significant extent
	Are there regulatory or legal restrictions that require services to be provided directly?	No for both options
OVERALL VIABILITY	Is *tie* satisfied that an operable contract with built in flexibility can be constructed, and that strategic and regulatory issues can be overcome?	No particular strategic/regulatory issues. Operable contract capable of construction for PPP option, but limits on flexibility in certain areas when compared with 'enhanced' conventional model Overall Viability Assessment – PPP: High to Medium Overall Viability Assessment - 'enhanced' conventional: High

[redacted]

Issues	Question	Assessment of 'enhanced' conventional option compared with PPP variation
Risk management	Does the project involve the purchase of a significant capital asset, where the risks of cost and time over-runs are likely to be significant?	Tram system infrastructure is significant and complex capital asset However, degree of detailed early design and utility work built into both the 'enhanced' conventional model (and present under the proposed PPP option) is aimed to reduce cost and time overruns significantly 'Enhanced' conventional also attempting to mirror pattern of risk transfer in PPP i.e. difference between 'enhanced' conventional and PPP options potentially more marginal. PPP likely to provide more 'complete' risk transfer (but at an additional cost)

	Does the programme or project involve operational aspects where the risk of cost and time overrun are likely to be significant?	Tram operation will be subject of separate contract (DPOFA with Transdev) under both PPP and 'enhanced' conventional approach. The majority of operational costs have been fixed under this contract i.e. risks transferred. Not therefore a differentiator
Innovation	Does a preliminary assessment indicate that there is likely to scope for innovation? To what extent are the project's scope, specification and operation pre-set or open to negotiation with the private sector?	There will be *some* scope for innovation. However, sensitive nature of World Heritage site planning and available input from system operator (Transdev) means that design intended to be well-developed ahead of contract tender with design team available to infrastructure contract partner. Planning approvals are likely to be fairly restrictive of change to specification. 'Innovation' case for PPP consequently not strong when compared with 'enhanced' conventional
Service provision	Are there good strategic reasons to retain soft service provision in-house? Refer STUC Staffing Protocol	This criteria is not applicable in the case of either option
	Is soft service transfer essential for achieving the overall benefits of improved standards of service delivery? Refer STUC Staffing protocol	See above
Incentive and monitoring	Can the outcomes or outputs of the investment programme be described in contractual terms which would be unambiguous and measurable?	In general terms yes. DBFM model for PPP option capable of describing service requirements in output-based terms (likely to be based on system availability). Some issues surrounding long term lifecycle which are described under Viability heading above. Also scale of early design work/planning issues and in-house expertise available to ***tie*** may point to more prescription in terms of specification (favouring 'enhanced' conventional over PPP)
	Can the service be assessed against an agreed standard?	Yes for both options, subject to caveats on lifecycle mentioned above in context of PPP
	Would incentives on service levels be enhanced through a PPP payment mechanism?	Payment mechanism based on deductions for non-availability would potentially provide strong incentives. Difficulty of forecasting lifecycle issues over long term may increase risk pricing in PPP option as compared with series of shorter term contracts envisaged under 'enhanced' conventional. Also possibility of including a form of availability payment mechanism within 'enhanced' conventional option (see section 3 above) albeit without same level pf payments from which deductions could be made
Lifecycle costs / residual value?	Is it possible to integrate the design, build and operation of the project?	Design, build and maintenance can be integrated, subject to issues surrounding long term lifecycle already highlighted above. Operations could also be integrated, but based on lessons learned from other systems, and market sentiment, current intention is that operations will remain under a separate contract under either model i.e. not a differentiator
	Is a lengthy contract envisaged? Will a long-term contractual relationship be suitable (or advantageous) for the service?	Issues on pricing of lifecyle (see above) raise certain doubts over whether 25-30 year contract (as in PPP) preferable to construction followed by 6-7 year liability/obligation (more likely under 'enhanced' conventional)
	Are there significant ongoing operating costs and maintenance requirements? Are these likely to be sensitive to the type of construction?	Ongoing operation planned as a separate contract (see above) and more a function of number of vehicles/staffing. Ongoing maintenance and system lifecycle are potentially sensitive to type of construction adopted, which does favour ongoing responsibility of PPP
OVERALL DESIRABILITY	Overall, is ***tie*** satisfied that PPP would bring sufficient benefits that would outweigh the expected higher cost of capital?	Overall, the case for the PPP option is at best marginal, given the relative similarity of the two options (given planned and existing early contracts) in terms of risk transfer. This raises definite doubts that benefits would outweigh the expected higher cost of capital.

Issue	Question	Assessment of 'enhanced' conventional option compared with PPP variation
Transaction costs and client capacity	Is there sufficient client-side capability to manage the procurement process and appraise the ongoing performance against agreed outputs?	*tie* is a specialist procurement vehicle, and could also provide ongoing client-side capability to monitor performance. Alternatively, Transport Edinburgh Limited could provide such client-side capability for proposed integrated public transport system. Expertise has been assembled for 'enhanced' conventional procurement, so would be in place for PPP. May be additional legal and financial advisor costs associated with finance aspect of contract (and potentially longer procurement timetable)
	Can appropriately skilled procurement teams be assembled in good time?	*tie* has already assembled a dedicated and experienced project team which could manage either option (subject to comments above)
Competition	Is there evidence that the private sector is capable of delivering the required outcome?	Informal market testing has revealed strong interest from a number of potential consortia with strong delivery track records for the 'enhanced' conventional model. Option was designed specifically to maximise the number of potential bidders in an endeavour to generate genuine competition (in particular approach to vehicles). Unclear if addition of requirement for private finance under PPP option would weaken this competition. Formal market testing (PINs issued in October 2005 for Infrastructure works and vehicles) underway.
	Is there likely to be sufficient market interest for the project?	See above.
OVERALL ACHIEVABILITY	Overall, is *tie* satisfied that a PPP procurement programme is achievable, given client side capability and the attractiveness of the proposals to the market?	Preliminary overall assessment is that PPP procurement should be achievable given client side capability and attractiveness to market. Market reaction currently being tested more formally.

The qualitative ~~analysis~~analysis summarised in the tables above, in many cases highlights the similarity between the 'enhanced' conventional option and PPP already noted in Section 3 earlier. Under the PPP option, the range of planned and existing initial contracts (operations, design, utilities etc.) would also still be in place, and in risk transfer terms, the planned 'enhanced' conventional Infraco contract is intended to be close to a PPP version. The fact that the 'enhanced' conventional option was itself developed as a result of significant qualitative analysis of the issues that have lead to problems on previous PPP tram procurements, means that the option could be expected to rate well in a straight comparison.

In summary:

- both options rate similarly in terms of overall ***achievability*** (pending the current market consultation); but
- in terms of overall ~~***viabilitviability,y***~~ the 'enhanced' conventional option rates slightly higher than PPP (although both very viable); and
- similarity between the options in terms of risk ~~transfer~~transfer means that the ***desirability*** of PPP ahead of the 'enhanced' conventional is questionable given the higher cost of capital for PPP.

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Qualitatively, based on the three key criteria, the case for PPP appears relatively, slightly weaker than that for the 'enhanced' conventional option. In line with the SE guidance, ***tie*** has also therefore examined the specified range of possible wider factors that may influence any decision (as set out in Appendix 8 of the SE guidance).

Wider Factors

The examples given in Appendix 8 are limited. Reference is made to externalities and non-market impacts; but, given the close similarity between the 'enhanced' conventional option and the PPP variation in the case of the ETN, differential impacts are difficult to discern. None of the examples in paragraph 7 of Appendix 8 are of direct relevance given the similar level of private sector involvement in either route; and the lack of an existing 'public sector' capacity. STAG analysis, carried out on the scheme to inform earlier business cases, does not differentiate between procurement routes in terms of outcomes.

Timing

Timing of delivery is a possible distinction in the sense both of overall procurement timetable and of construction.

The involvement of banks/other funders in the proposed PPP option would increase the length of the *procurement* period by a factor of months. This would have a consequent impact on all later stages, with construction, commissioning and subsequent operational start, happening later. However, the proven capacity of PPP to incentivise on time delivery *once the contract has been signed*, would potentially provide greater certainty on timetable thereafter.

The planned 'enhanced' conventional contract is intended to incorporate a number of features to produce similar incentives for delivery (see Ssection 3 ~~above~~earlier) but it is unlikely that these can fully match those of PPP.

Affordability

The key outcomes around affordability are ~~is~~ presented in the May 2005 IOBC; a summary of these is provided below.

In the 'enhanced' conventional funding scenario, all ~~c~~Capital ~~e~~Expenditure is financed by the ~~p~~Public ~~s~~Sector, where the SE~~E~~xecutive grant of £375m is the only certain source of ~~public sector~~ funds to pay for ~~c~~Capital ~~e~~Expenditure.

The results reported in the May 2005 IOBC, demonstrate that both Line 1 on its own and Line 2 on itsheir own are affordable, within the constraints of a fixed SEExecutive gGrant of £375m, with £82.6m and £39.2m respectively headroom within the available funding of £375m, Both a full network of Llines 1 and 2 and a network excluding the Newbridge shuttle are unaffordable as single phase projects presenting a shortfall of £206m and £152m respectively compared to the fixed SEExecutive funding.

In each of the four project configurations presented, it is assumed that *tie's* CeCapital EeExpenditure estimates prove to be robust and therefore that the specified contingencies included in these estimates will prove sufficient.

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For the Hybrid PFI option, capital expenditure estimates are identical to those presented under the CConventional Ffunding scenario and the same amounts would be 'Upfront capital expenditure' being those elements not procured via the Infraco and which are paid for by draw down from the SEExecutive gGrant. For the balance of eCapital expenditure, the table reflects a proposed structure for a Hybrid PFI whereby 60% of the eCapital eExpenditure is met by payments to the Infraco (from the SEExecutive grant) during construction with the Infraco financing the remaining 40%.

CEC cash flows are identical to those under the Conventional Funding scenario; these cash flows occur during the period after commencement of tTram operations and the modelling assumption is that CEC will make a contribution to the required aAvailability pPayments equal to the sums it would pay for lifecycle costs under the Conventional Funding scenario.

The model assumes that SEExecutive support for availability payments in the form of Revenue Support Grant (RSG) would be available insofar as it relates to capital expenditure financed by the Infraco and insofar as the SExecutive gGrant has not otherwise been utilised to pay 'Upfront capital expenditure' or make payments to the Infraco during construction.

In the case of Line 1, SEExecutive payments for capital expenditure total £205.9m leaving £169.1m (£375m - £205.9m) of the total SEExecutive G grant available to provide RSG in respect of the capital expenditure financed by the Infraco. Since that [what?] is less (£86.5m) [than what?], RSG is available to meet the Infraco Availability Payment Requirement insofar as it is not met by CEC by annual payments in respect of lifecycle costs. [Don't completely understand this sentence – needs a bit of rephrasing]. Similarly, for Line 2, the availability payments are fully met by either RSG (in respect of capital costs) or by CEC (in respect of lifecycle costs). On the basis of these assumptions, either Line 1 on its own or Line 2 on its own, would be affordable under the PFI structure presented.

In the case of a network of Lines 1 + 2 the full amount of the SEExecutive g grant is required to meet either 'Upfront capital expenditure' or payments to the Infraco during construction (in fact there is a shortfall of £35.5m) leaving none of the SEExecutive grant to provide RSG. In the case of a network of Lines 1 + 2 less the Newbridge shuttle, there is a relatively small amount remaining of £1.8m which for

modelling purposes has been converted into RSG on pro-rata basis. In both cases of a network of Lines 1 + 2 there is a very significant proportion of the required availability payments which are unfunded.

The calculation prepared has not taken account of any requirement there may be to discount the availability payments requiring support and then calculate the RSG as a level annuity.

tie anticipates SE will consider the issue of indexing of the grant in the autumn of 2006, at which time decisions with regard to the funding of the project will be informed by the output from the Integrated Transport Model being delivered under the JRC contract and initial tender prices received for the infrastructure and vehicle contracts.

Balance Sheet Impact

Balance ~~s~~Sheet analysis has an added impact in the context of this assessment, given the emerging view that the PPP option under consideration is likely to be on the CEC ~~b~~Balance ~~s~~Sheet**.** The initial view provided by ***tie's*** financial advisors, PwC, is attached as Appendix C. In summary, the PwC findings do suggest that the ETN project would require to be treated as **on** Balance Sheet with the associated Assets and Liabilities being accounted for, firstly by ***tie*** and then TEL when the ETN commences service. Clearly, as wholly owned CEC entities, both ***tie*** and TEL's Annual Accounts would require to be consolidated into CEC's Group Accounts, and, ultimately,the on Balance Sheet nature of the ETN project would be seen to impact on CEC's financial position.

PwC have also provided key characteristics which would require to be reflected in the contractual structure, were the ETN project to be considered for **off** Balance Sheet treatment and these are also listed within Appendix C. It is ***tie's*** strongly held view, however, that such characteristics would prove to be very difficult to attain in all practical terms. ~~[Useful to have a short summary here – not all will read Appendix]~~

Market Capacity

In terms of the make up of the consortia for the main Infraco contract, there is likely to be no material difference in the likely private sector players under both procurement approaches. This is not, therefore, a differentiator.

There will potentially be some overlap with the EARL project, although this is running to a later timetable. As ~~p~~Project ~~m~~Manager for both, ***tie*** is very aware of this market issue and well placed to manage. The recent issue of PIN notices for the ETN will assist in providing the latest market intelligence and feedback.

Uniqueness of Project

The ETN is a unique project in the Scottish context, and this is reflected in the level of qualitative analysis undertaken to inform the development of the 'enhanced' conventional procurement route. The fact that this conventional option is 'bespoke' may merit greater weighting within the qualitative analysis.

Taxation

There is potential for increased taxation receipts in PPP, though marginal at a single project level. For project, addressed in quantitative assessment (see page ~~[325]~~).

Risk

The overall position, in terms of risk allocation, is summarised in the high level tables at the conclusion of Ssection 3, which highlight the ~~essential similarity~~common ground between the 'enhanced' conventional and PPP options. As stated within Section 87 of the SE Guidance, appropriate risk allocation is fundamental to achieving VfM for the ETN. Risks should be allocated to the parties best placed to manage and/or bear them and can be used as the basis for an incentive to the private sector to help ensure that CEC's objectives for the project are met. This outsourcing of risk and its management would leave CEC/***tie*** to concentrate on their core functions of procurement and overall project management.

The procuring Authorities own expertise and capacity to manage risk, is of relevance to any difference in risk allocation between the alternative procurements. ***tie's*** approach to developing the ETN has been heavily focused on the identification and management of risk. ***tie*** has developed a sophisticated approach to risk management. Central to this are the appointment of a Risk Manager, and the establishment of a comprehensive risk management process, including both a highly detailed risk matrix for the overall project, and detailed risk matrices for individual contracts within the procurement strategy. Examples of these matrices are contained in the IOBC.

Summary on Wider Factors

Overall, the assessment of wider factors would tend to reinforce the conclusions on viability, desirability and achievability in pointing towards the 'enhanced' conventional approach as potentially better VfM than a PPP option. The most significant advantage of PPP is in terms of proven timely delivery following contract signature. The overall *procurement* timetable is however likely to be longer under PPP. The affordability and ~~b~~Balance Ssheet analysis are also significant potential difficulties with PPP.

Conclusion on Qualitative Assessment

The 'enhanced' conventional procurement strategy that ***tie*** has developed is itself a product of extensive qualitative analysis focussed on some of the difficulties with previous procurements in the sector, and in particular recent PPP projects (see Sections 2 and 3 above). However, the 'enhanced' conventional procurement option is ultimately also designed to achieve a very similar transfer of certain key risks to a single private sector consortium. Consequently, it is perhaps to be expected that the qualitative analysis contained in this section confirms the essential similarity, and overall does not suggest that PPP may bring sufficient benefits that would outweigh the expected higher cost of capital. This is the case based on an assessment against the key criteria of viability, desirability and achievability, and is reinforced by the examination of a range of 'wider factors'.

6. Quantitative Assessment

Assessment of project against key Stage 2 quantitative factors

Introduction

At this stage, it is the Infraco element of the project which is being tested for PPP/PFI feasibility using the Line 1 + Line 2 network configuration. As required by Section 3 of the VfM Assessment Guidance for Projects at Stage 2 – Project Level Investment Review, a quantitative VfM assessment has been carried out using the HMT Value for Money model in conjunction with PwC and PUK. The HMT model produces a quantitative NPV output for both the 'enhanced' conventional procurement Option and the PPP Option.

Use of the HMT Spreadsheet Model

The HMT model has been used for the VfM assessment in this paper. ~~The inputs and assumptions used have been identified in the preceeding section[no they haven't – later section?].~~ The development of the model has followed the HM Treasury Quantitative Assessment User Guide (August 2004).

The VfM Assessment Guidance recognises that the HMT model is a deliberately simplified VfM assessment tool which can, if necessary, be complemented or replaced at Stage 2 of procurement by a bespoke stand alone Conventional Procurement Assessment Model (CPAM) and Shadow Bid Affordability Model. (Section Three, p23).

It is important that the quantitative assessment be considered in conjunction with the qualitative assessment. The HMT VfM model is a relatively simplistic modelling tool for a project as complex as this, and as such the overall conclusion of the quantitative assessment must be considered in the context of the qualitative assessment already described.

In view of the outcome from the qualitative analysis in support of the ***tie*** Procurement Option, and the preliminary results from the HMT model, it has been deemed unnecessary at this stage to construct a CPAM and Shadow Bid Affordability Model.

NPV Comparison

The NPV comparison from the HMT model is summarised below. The Treasury model indicates that the ***tie*** Procurement Option NPV costs are marginally lower than those for the PFI model, based on the assumptions outlined in this section, and shows an indicative VfM value of 0.12%. Based on the result of this high level assessment the enhanced tie model represents marginally better VfM.

	£m
tie Procurement Option Costs	-850
PFI Costs	-851
Indicative VfM	0.12%

Sensitivity tests have been completed on this base assessment, the results of which are provided in the relevant section below.

It should be noted that, as recommended in the Guidance ~~n~~Notes, the output from this model should not be used to assess affordability. Affordability is discussed in a previous section.

Model Inputs

Costs Assumptions

The VfM Assessment Guidance, Appendix 6 – Use of the HMT Spreadsheet Model, notes that input values and whole life costs under the two procurement methods should be based on a combination of project-specific costings and on sector specific experience.

tie held a workshop on the 8th September 2005 to discuss the guidance, provided by the S~~cottish E~~Executive's ~~Financial Partnerships U~~nit in relation to the quantitative assessment, and agree the input assumptions for the HMT VfM model. The workshop was facilitated by PwC and attended by ***tie***, PUK, CEC Corporate Finance representatives and legal agents DLA. The workshop confirmed that the base costs and market prices assumed at IOBC should be used in the HM Treasury VfM model. A summary of the key costs categories is provided below:

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Real at 2003 Q2	tie	PFI
Capital costs	350,828	350,828
Lifecycle costs	3,079	3,079
OpEx (non-employment)	12,596	12,996
Public Sector Transaction costs	14,033	11,226
Private sector transaction costs	●	5,262

As indicated in the market capacity section ~~above~~earlier, costs will be reviewed and updated throughout the tender process to Full Business Case.

Capital Expenditure Assumptions

Capital expenditure estimates were developed, by ***tie,*** using a combination of benchmarking, previous experience and engineering judgement. The work in developing cost estimates was split into two distinct phases. The first phase involved a qualitative assessment of costs which defined a series of scheme parameters and assumptions that would form the basis of the estimation process in later work and defined the elements that would comprise the options.

The second phase of the cost estimation process was the development of quantitative cost estimates. The approach to preparing capital cost estimates was to use a combination of benchmarking, previous experience and engineering judgement. The rates used for the various capital cost elements were developed and refined to reflect

experience in a wide variety of LRT and highways projects throughout the UK and Europe. The rationale behind the estimation process for capital costs has been to ensure that the accuracy of the estimates is appropriate to the level of detail available at each design stage. Thus, the initial estimate relied on broad brush per metre rates, for which conservative assumptions and larger contingencies were used to reflect the level of confidence in the estimates at that stage. As the scheme has developed towards a single preferred route, and individual elements have been identified and quantified, it has been possible to estimate the costs for individual items, which has allowed contingencies to be reduced and estimates to be tightened. Inevitably, the development of the scheme proposals has resulted in inconsistent bases for each iteration of the capex estimate, so each iteration has been reconciled to previous estimates in order to carry out a like-for-like comparison.

The following table details the split of capital costs.

	Tram Line 1&2 including Newbridge
Civils	62,673
Utilities	60,047
Electrical	42,437
Network Rail	9,555
Stops	12,838
Depot	30,320
Track	76,337
Land	48,950
Vehicles	55,258
Project Costs	20,438
Preliminaries	43,231
Design	15,991
Coordination/Consent	4,728
Total (2003 Prices)	**482,802**

The following table summarises the assumptions used in deriving the estimates for the different components of the capital expenditure.

Category	Sub-category	Assumption
Civil	Structures	Individually assessed to determine cost and size requirements.
	Bulk Earthworks	Includes rates for excavation and disposal of material, an allowance for contaminated land, and placing/compacting of capping.
	Landscaping	Costs of £150k per kilometre (assuming 10m wide corridor) plus £15k per stop.
	Drainage/Ducting	Included within track costs for track drainage, and highway costs for new highway works.
Utilities		Combined services drawings issued to utilities companies cost estimates received from all PU companies.
Electrical	Substations	Construction of buildings and installation of plant and equipment for substations
		SCADA included throughout.
Preliminaries		20% preliminaries, 7% design, 3.35% coordination.
Stops		All stops assumed to have 2 side platforms (except Airport and Ingliston park and ride with 1 platform), 2 ticket machines, 2 CCTV cameras, 2 emergency help points and a PA system.
Depot		Costs allow for the provision of the main depot. Location of the depot requires significant earthworks and retaining structures so costs have been increased.
Track	Ballasted	Ballasted track used where practical.
	Slab track	Assumed on structures, to minimise construction depth.
	Paved(embedded) slab track	Used where road vehicles are permitted to share road spaces with trams, at level crossings and in areas of dedicated running.
Land		Colliers CRE commissioned for separate specialist report.
Vehicles		Trams assumed values at £1.55m each.
Contingency		HM Treasury guidelines were applied at STAG 2
Project Costs		To cover promoters costs, insurances and pre-operational costs.

The VfM model guidance notes indicate that PFI capital costs would generally be expected to be higher than those of a traditionally procured project~~;~~. ~~h~~However, as the risk transfer for the Infraco element of the project does not differ greatly between procurement options, the workshop concluded that the same capital expenditure should be assumed for the ***tie*** Procurement Option as for PFI, reflecting the cost of the

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management of risks under the ***tie*** Procurement Option. Assuming the same costs under each ~~option option, adds additional prudence~~ to the VfM calculation.

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Lifecycle Costs

tie's approach to preparing lifecycle cost estimates was similar to the process for developing capital costs, namely using a combination of benchmarking, previous experience and engineering judgement. In addition, detailed discussions between Line 1 and Line 2 Consultants took place to ensure consistency of approach.
The rates used for the various components are those derived for the capital cost elements, and thus reflect the team's experience in a wide variety of LRT and highways projects throughout the UK and Europe. The lifecycle costs encompass all costs associated with operating and maintaining the tramway that are ~~out without~~ with the standard operating costs. These include the replacement of civil, electrical and stop installations, tram vehicle refurbishment and other non-routine maintenance activities. Lifecycle costs include "heavy maintenance" whereas operating costs contain "routine maintenance".

The build-up of lifecycle costs was based around a standard list of lifecycle cost headings agreed between ***tie*** and the Consultants for Lines 1 and 2. Lifecycle costs were determined by specifying maintenance intervals for "minor" or "major" refurbishment of each item, and by applying a cost as a percentage of the original value.

The 8th September workshop concluded again that, for, lifecycle cost inputs for the HMT model should be assumed to be the same for traditional procurement as for PFI. Whilst it is possible that these costs will be greater for the PPP option the workshop concluded that this approach would provide further prudent model input in relation to the tie procurement option. In addition, it is intended that the Infraco will retain maintenance and lifecycle responsibility for an initial period of up to 7 years. In line with the modelling carried out for the IOBC, the total amounts shown below were spread equally over the operating phase in order to avoid peaks.

Operating Costs

The five main operating cost drivers are:

- Infrastructure Length;
- Number of stops;
- Annual service kilometres and total kilometres;
- Annual operating hours; and
- Fleet size.

Operating cost has been a major component of the business case. However, this element is often difficult to assess as it varies a lot from network to network. Moreover, it has been recognised that engineering consultants have limited access to the accounts of public transport operators. Nonetheless, the costs under DPOFA compare well to original estimates provided by the Line consultants. Each of the main parameters will be reviewed further by Transdev and the process will be

ongoing throughout the development and design phase and will shape the final system configuration and tram operations that are eventually tendered.

It is important to note that the DPOFA contains gain and pain share arrangements whereby performance which is better or worse than agreed targets will result in a sharing of the impact of the variance between CEC and the Operator. For modelling purposes, it has been assumed that the revenue and operating cost estimates represent the targets. This will be clarified and better defined through future dialogue with Transdev under the DPOFA. Under DPOFA, Transdev will be paid preset operating costs and a fixed profit element monthly, on the basis of the target operating costs and a fixed profit element. The annual target operating costs will be agreed in advance with Transdev.

The pain/gain element of the mechanism is intended to achieve mutuality of interest in the financial performance of the network. The intention of this mechanism is to offer Transdev and ***tie*** the opportunity to share in savings on operating costs generated from operating the system more efficiently and in the generation of any additional revenues above targets. The mechanism also offers Transdev an element of protection against downside revenue risk and cost escalation.

The comparison of target and actual costs and revenues, and the ensuing payment to or from Transdev will be performed by ***tie*** semi-annually. It is proposed that the targets are reviewed during the course of the contract on a three yearly cycle and, if necessary, reset by agreement between ***tie*** and Transdev.

Non-employment operating costs have been provided by ***tie*** and are assumed to be £400k more for the PFI option.

Transaction costs

Based on the base case model developed for the IOBC, transaction costs incurred by the public sector under a PSC are assumed to be 4% of the capital costs, i.e. 4% x £350,828 = £14,033. Transaction costs incurred by the public sector under a PFI structure are assumed to be 80% thereof based on past experience and industry information, i.e. 80% x £14,033 = £11,226. Private sector costs under a PFI scenario are calculated automatically by the HMT Model

Timings

A construction period of 4 years has been assumed with 30 years of operations.

Optimism bias / Risk

Optimism Bias levels and risk assumptions were also covered in detail within the Workshop environment on September 9th. As discussed in the IOBC document, optimism bias was calculated by ***tie*** in accordance with HM Treasury Guidelines taking account of the progress which had been made up to that point, in the development of the project.

Capital costs

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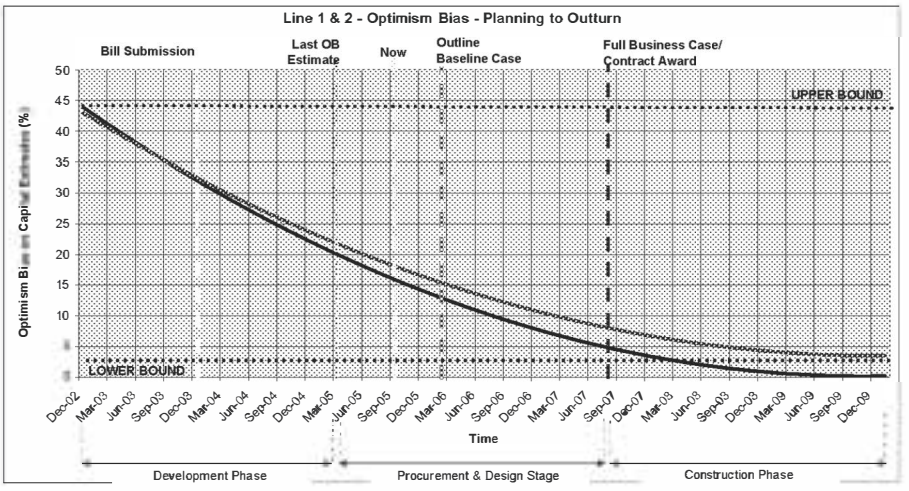
Capex optimism bias has been calculated by ***tie*** for the ***tie*** procurement option and for a PFI funded option and the resulting difference reflects the private sector tendency to price risk with no flow back of savings to tie. Reduced project momentum and recent delays reduced the potential for further risk mitigation since IOBC. The capex optimism bias therefore remains unchanged at this stage.

tie's calculation, (please see graph ~~below~~), actually indicated that PFI Post FBC Optimism Bias would be higher than that of the ***tie*** Procurement Option, however, as the HMT model does not allow for a distinction between Optimism Bias for each procurement option, the same level has been assumed for each option which has effectively built in additional prudence.

A summary chart of the 'actual' (to March 2005) and 'predicted' (to end of Works) progress of Optimism Bias reduction is shown below indicating a comparison between the proposed procurement strategy for 'Grant Funded' option (black) and 'PFI Funded' option (red).



Event	Date	OB - Grant	OB - PFI	Comments
Appointment of Technical Advisors	Dec-02	44	44	Upper Bound Starting Values (HM Treasury)
Bill Submission	Dec-03	30	30	
Interim OB Refresh Update	Feb-05	24	24	
Commencement of Construction	Jul-07	3	8	
Completion of Construction	Dec-09	1	4	
Opening of Project	Jan-10	0	3	

Lifecycle and operating costs

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There is limited evidence from other UK light rail schemes on lifecycle and operating cost optimism bias. The 10% Pre FBC lifecycle OB is derived, therefore, from the value applied to EARL as part of the STAG appraisal for that project. This level has also been applied to all other categories (with the exception of Capex). Post FBC OB has been assumed at 12%, reflecting that whilst prices would be fixed over the first 7 years in the tie procurement option, uncertainty could potentially increase thereafter as contracts would be re-tendered.

Summary

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The table below indicates the optimism bias used for the purposes of this assessment.

	Tie procurement		PPP	
	Pre-FBC	Post-FBC	Pre-FBC	Post-FBC
Initial capex	24%	3%	24%	-
Lifecycle costs	10%	12%	10%	-
Opex	10%	12%	10%	-
Transaction costs	10%	12%	10%	-

Sensitivity tests

Using the Indifference Points within the HMT Spreadsheet model, a number of sensitivities were run to ascertain the percentage increases and decreases necessary in the cost variables to give the point of indifference between the two procurement options, i.e. to close any VfM gap. The results of these sensitivities are detailed in the table below.

Indifference Point	% increase in tie procurement option costs necessary to give point of indifference
Initial CapEx	0%
OpEx (Non Employment)	0%
Transaction costs	6%

Third party income

No third party income has been assumed.

Flexibility

According to guidance, this adjustment refers to major scope change post contract signature e.g. addition of tram lines, or re-scope of materials. ***tie*** has assumed that if a major scope change was to occur, it would be reasonable to assume that this would occur in year 5. This has been given a probability factor of 10% and a level of scope change of 10% of the initial capital expenditure. A Premium Flexibility Factor of 10% has been applied to the PFI option.

Indirect VfM factors

No indirect VfM factors have been assumed in the model.

Tax

In line with Treasury Guidance and the Green Book, ***tie*** has calculated that the adjustment to be made to reflect the additional tax that accrues to the Government under the PFI option is 10%. The Calculation of Taxation Adjustment Factor follows the VfM guidance notes. To the starting factor of 2% is added 3% as the nominal cost for facilities management services is likely to be less than the capital value of the project. As this part of the project relates 100% to new build, the chart flows through to "At least 50% by value of the lifecycle maintenance the supplier will provide is on new build and improvements, rather than repairs". It has been assumed that COP10 approval would not be achieved, and therefore the project is deemed to be "on capital account for tax purposes". As it would be prudent to assume that the tax relief would be likely on 41% to 50% of the initial project expenditure under the Plant and Machinery allowances rules (Part 2 Capital Allowances Act 2001) this adds a further 5% to the taxation adjustment. The sector is not classed as risky which brings the total taxation adjustment to 10%.

PFI Funding

The funding terms assumed are as follows:

Gearing (%)	90%
Sterling swap rate (%)	5.35%
Credit spread (bps)	12
Bank margin (bps)	100

Escalators

Capital expenditure is inflated in the model at a rate of 4.5%
Non-employment operating costs at a rate of 2.5%
Employment related operating costs at a rate of 3.5% and finally,
Unitary charge at 50% of the rate for non-employment operating costs, i.e. 1.25%

Overall Quantitative Ceonclusion

The HMTTreasury model indicates that the ***tie*** Procurement Option NPV costs are marginally lower than those for the PFI model, based on the assumptions outlined in this section, showing an indicative VfM value of 0.12%. Based on the result of this high level quantitative assessment the enhanced tie model represents marginally better VfM.

In view of the outcomes from the qualitative analysis, and the preliminary results from the HMT model, it has been deemed unnecessary at this stage to construct a CPAM and Shadow Bid Affordability Model. If the PPP approach were to be considered any further, a CPAM and Shadow Bid Affordability Model would need to be developed.

7. Preliminary conclusions on VfM case for use of PPP

Guidance requires a combination of the qualitative and quantitative assessments in any final assessment, but with a judgement as to their relative 'proper' weighting. Given the breadth and depth of qualitative analysis that has driven the formulation of ***tie's*** 'enhanced' conventional procurement option, and the unique characteristics of the ETN, the assessment is that qualitative factors merit a significantly greater weighting and emphasis than quantitative.

Prima facie, there is a case for considering a form of PPP for the ETN, and retaining the option of private finance has been a feature of the development of the 'enhanced' conventional procurement route. However, a preliminary assessment of the qualitative tests included under Stage 2 of the VfM assessment together with examination of a number of wider factors, suggests that ***tie's*** 'enhanced' conventional procurement route appears capable of delivering similar levels of contractual risk transfer and potentially better VfM than an 'on balance sheet' PPP option with its associated higher cost of capital.

The quantitative analysis has been high level, making use of the HM-T~~reasury~~ model, and this is reflected in the suggested weighting. However, the emerging evidence here also reinforces a conclusion that suggests that PPP may not bring sufficient benefits to outweigh the expected higher cost of capital as compared with the 'enhanced' conventional approach.

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Appendix A

Finance and Central Services Department
Financial Partnerships Unit

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Edinburgh EH6 6QQ

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sandy.rosie@scotland.gsi.gov.uk
http://www.scotland.gov.uk/ppp

Stewart McGarrity
Finance Director
tie limited
Verity House
19 Haymarket Yards
EDINBURGH
EH12 5BH

Your ref:
Our ref:

22 July 2005

Dear Stewart,

EDINBURGH TRAMS PROJECT – PPP FEASIBILITY

Further to our meeting last week, we agreed to write to you to clarify the appropriate features we would expect to find in the forthcoming PPP feasibility study for the Edinburgh Trams project.

1. Background

- The feasibility study should describe the variety of procurement and phasing scenarios and scopes currently under consideration. A sample scope should be agreed ("the base case"). This section should confirm the requirement for a STAG appraisal of the final version of the scope being procured.
- Both the qualitative and quantitative value for money (VfM) assessments of PPP should apply to the final scope of the project. The similarities between the contract structures of conventional and PPP procurement should be discussed.
- Sensitivity analysis on this base case should be presented, to highlight the impact changes in scope would have on both the qualitative and quantitative review outcomes.
- The study should be related to application of the new VfM guidance, taking account of the contract structures of both conventional and PPP procurement, in the context of the approach by ***tie***.
- The overall VfM assessment is a combination of both qualitative and quantitative assessments.

2. Qualitative Assessments

- These should consider the validity, desirability and achievability of the means of procurement in both conventional and PPP contexts. The proformas in the VfM Guidance should be utilised
- The assessments should take account of how ***tie*** would set up the delivery of either procurement structure, and take account of the differences between them in planning, site issues, time and cost over-runs, interface risks, whole-life costs, pre-development works, utilities, and design risks.
- Differences in contractual arrangements between the procurement methods should be highlighted.

- Market price bases, information and associated evidence should be used, together with an explanation of where cost bases will vary between procurement routeroutes together with an approximate percentage of variation.
- The assessments should discuss market issues, such as market sounding, project attractiveness, and anticipated competition levels during bidding. We understand a PIN is being contemplated; a process following up PIN responses could address these areas.
- High level contractual risk matrices should be produced, with associated internal risk management registers for both procurement methods.

3. Quantitative Assessments
- Clarity is required on which specific elements of the project are being tested for PPP feasibility
- The HM Treasury model should be used in conjunction with advisers. PUK can advise on technical issues.
- Input costs should be demonstrated, with differences between procurement methods highlighted. Relevant risk costs and optimism bias levels should also be specified.
- These inputs should all be supported by an explanation of their derivation.
- Optimism Bias levels and differences in Optimism Bias between procurement routes can be opined upon by Tie, its advisors and KPMG
- An NPV comparison of the procurement methods should be produced.

4. Other issues to address
i) Balance sheet position
– The anticipated position and justification for this should be discussed for both conventional and PPP procurement.
- Consideration should be given to what steps would be required in order to achieve off- balance sheet status fo

ii) City of Edinburgh Council's position as counter-party to project
- CEC funding contributions and associated assumptions should be discussed. This should cover the question of
- Tie should assume that RSG can be paid in accord with previous correspondence.

iii) Farebox Revenues qualitative
- Proposals should be discussed on how the SE might share in a potential farebox revenue upside, given their po

iv) Indexation of SE grant
- The effect of indexation of the SE grant on VfM should be evaluated, considering the relationship between t

The relationship between all of the above four issues and the overall VfM assessment should be outlined.
I hope that this is helpful to you. Should you have any questions, please contact Ben King in the first instance

Yours sincerely

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Appendix B

Graeme,

Further to our meeting last week, we provide further comments on ***tie's*** first draft of the PPP VfM assessment for the trams project.

The key point is that the assessment paper must be grounded in the context of the current SE VfM guidance. What is below should be read in conjunction with the original letter.

Procurement options:

- Better descriptions (perhaps definitions) of the procurement options should be provided. How does the ***tie*** approach differ from normal "conventional" procurement? How does the PPP approach differ from PPP procurements on other trams projects? These differences should be described in terms of risk sharing, pricing, contractual arrangements, integration of contracts, single point control etc (max 2 pages).

(as we see it, ***tie*** should be comparing their procurement route (which is an enhanced conventional procurement with an option with PPP finance in it. For the PPP option to be preferred, the benefits of it would need to outweigh the higher cost of capital of it as against the ***tie*** option.)

- Set out in more logical manner why ***tie*** is considering PPP as a procurement option (prima facie characteristics in the vfm guidance), before getting into the detailed qualitative and quantitative aspects of the defined procurement routes

Background:

- the qualitative and quantitative assessments should both be weighted and scored (the relativity of these being defined by the project team - its not something SE will comment on).

- the scope of what you are assessing in terms of 1 line or two lines etc should be set out, and importantly how robust conclusions are to a changed scope (say a line 1 and line 2 hybrid)

Qualitative assessment:

- more clarity and brevity is needed on the differences in contractual structure between procurement methods. This should cover the differences in the complexity and number of contracts required (or it maybe there is a similar number?), the relative levels of risk exposure to the procuring body (including the transfer of lifecycle risk). We note some of this may be in the definitions above

- qualitative factors table (ex guidance) should be produced for both procurement methods

- high level contractual risk matrices should be provided. It should be possible to extract these from the IOBC. We want these to show as a snap shot any differences between procurement with PPP and that without it?

- this section should conclude with a discussion of the relative merits of each procurement method from a qualitative perspective.

Quantitative assessment:

- the quantitative section should be introduced by a description of how the cost bases and risk quantifications differ (if any under both routes).

- more detail is required on the use of the HMT model. This should cover how it is being used, and describe the inputs and assumptions.

- the need for a bespoke model should be addressed (to address limitations in HMT model high-level approach - for instance so wider factors such as affordability of options should be considered). This additional modelling may not be not necessary, if the qualitative assessment shows a clear steer against PPP, but this point should be discussed. (the VfM guidance notes that large complex projects like this should have bespoke models adopted)

Wider VfM Factors (ex guidance) where not already covered, plus

- more discussion is needed on the differences in timetable impact with each procurement method - there is little on this so far

- does a potential single PPP contract enhance deliverability vs series of contracts

- does novation impact differently on the PPP / non PPP route

- lack of lifecycle risk transfer

- impact on market attractiveness / procurement costs

- how do other ***tie*** / CEC / SE initiatives impact investment route, VfM, economies of scale, deliverability (e.g. EARL)

City of Edinburgh Council's contribution:

- More discussion is needed on whether there is potential to deliver a larger scope earlier using PPP, in the context of SE's £375m committed offer available. Would PPP allow a larger scope to be built (whether earlier or later); assuming funding can be switched to RSG type arrangement (but, balance sheet issues need to be noted)

- does CEC limitations to be a counter party impact on procurement route

- Does a larger amount of capital funding change the VfM assessment.

We ~~are not wanting~~do not want you to abort work you have already done, but you do need to digest the SE VfM guidance and ensure the themes within it are addressed in your assessment.

We trust that this helps take matters forward.

Appendix C

~~[B/S opinion to be inserted~~]

A PwC Report follows, which comments on the likely Balance Sheet treatment for a potential PPP/PFI procurement process

Accounting advice on the proposed Edinburgh Tram project – initial views

Draft for Discussion only

14 October 2005

Strictly private and confidential

Important Notice

This report has been prepared by PricewaterhouseCoopers LLP ("PwC") for **tie** limited ("**tie**") in connection with The Edinburgh Tram Network under the terms of **tie's** agreement with PwC dated 18 February 2005 (the "Agreement") and its contents are strictly confidential.

This report contains information obtained or derived from a variety of sources. PwC has not sought to establish the reliability of those sources or verified the information so provided. Accordingly, no representation or warranty of any kind (whether express or implied) is given by PwC to any person, except as expressly set out in the Agreement, as to the accuracy or completeness of the report.

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14 October 2005

Dear Sirs

Accounting advice on proposed Edinburgh Tram project – initial views – discussion draft

The purpose of this letter is to set out our initial views on the likely accounting treatment for the proposed Edinburgh Tram Network project

Our advice is given on the basis of Application Note F to FRS 5 - Reporting the substance of transactions: Private Finance Initiative and Similar Contracts (the 'Application Note'), as supplemented by PFI Technical Note Number 1 (Revised) - Accounting for PFI Transactions (the 'Technical Note').

In determining the accounting treatment of the project, we have considered the FRS 5 assessment from the perspective of the public sector as a whole. Then having determined the accounting treatment for the scheme, we have considered the impact on the individual public sector entities involved in the project.

The project is currently at the Outline Business Case stage and consequently at this stage of the procurement process, as noted in Section 2 of the Technical Note, it is only possible to give high level views based on the expected structure of the proposed scheme. As outlined in the Technical Note this initial view should cover the qualitative indicators noted in paragraph 4.11 of the Technical Note and an initial assessment of those risks retained by the purchaser. The initial views expressed in this letter are based on the description of the proposed Hybrid PFI scheme set out in the Interim Outline Business Case. May 2005 ("May 05 IOBC") and clarification provided by both the tie and PwC Project Team

We have prepared this letter solely for tie, a wholly owned subsidiary of the City of Edinburgh Council pursuant with our contract dated 18/2/05. If a third party were to obtain a copy without our prior written consent we would not accept any responsibility for any reliance they might place on it. We accept, however, that you may need to provide a copy of this letter to your auditors.

No reliance should be placed on this draft letter since it does not constitute our definitive opinions and conclusions at this stage. These will be contained solely in our final written letter. Any oral comments made in discussions with you as concerns our reports and letters are not intended to

have any greater significance than explanations of matters contained in our final letter. We shall not be held responsible for oral advice unless we confirm such advice formally in writing.

The structure of this letter is as follows:

- background to the scheme
- separation of the contract
- should SSAP 21 or FRS 5 be applied?
- application of SSAP 21
- summary of risk analysis
- accounting implications
- structuring the contract - 'off' balance sheet treatment

Background to the scheme

The Edinburgh Tram Network Project comprises the provision of two new lines. Line 1 is 15.6km and provides a circular connection around the North Edinburgh development area, Leith Walk, Princess Street and around the Roseburn to Granton Loop. Line 2 covers 17.8km and extends from Roseburn through the Edinburgh Park Business Park and out to the Airport, with a shuttle extension from the Airport to Newbridge. The capital costs for Line 1 have been estimated at [£243] million and [£278.5] million for Line 2 (excluding contingencies).

The promoter's (tie) approach to delivering the project is to disaggregate the procurement of the contracts required to achieve a tram service. The outcome of the procurement strategy will be two separate contracts covering;

- an operating contract providing for the delivery of the tram services and the management of the farebox income over the operating period of the project; and
- an Infraco contract covering the provision of the infrastructure and tram vehicles including maintenance and lifecycle replacement

tie will be responsible for promoting the project through to operational commencement including receiving grant funding direct from the Scottish Executive and conducting negotiations with the contractors. On operational commencement we understand Transport Edinburgh Limited ('TEL') will take over responsibility for the project and on expiry of the contract the assets will revert to TEL. Both tie and TEL are 100% owned subsidiaries of the City of Edinburgh Council.

In respect of the capital works required for the project, it is currently envisaged that separate contracts will be let for the procurement of the infrastructure assets and the tram vehicles to separate private sector entities. Consequently during the 'construction' period a 'Tram Supply' contract and an 'Infraco' contract will be in place.

On completion of the 'construction' period the 'Tram Supply' contract will be novated into the 'Infraco' contractor which will take on the responsibility of maintaining all of the Tram service assets over the operating period of the contract. Funding of the maintenance and lifecycle replacement assets will come via the revenues generated through the farebox in the operating contract.

It is currently envisaged that the project if procured via the PFI route will run for an operating period of thirty years. Of the total capital expenditure of [£491.5 million] (excluding contingencies) it is anticipated that [£205.91] million will be funded by upfront milestone payments via grant funding from the Scottish Executive with the balance repaid via an availability payment over the operating life of the contract.

Separation of the contract

The first stage of the accounting analysis is to determine if the PFI contract is separable, ie the commercial effect is that individual elements of the PFI payments operate independently from each other. "Operate independently" means that the elements behave differently and can therefore be separately identified. Any such separable elements that relate solely to services should be excluded when determining which party has an asset of the property.

Paragraph F10 of the Application Note, which is elaborated upon in the Technical Note, provides that a contract may be separable in a variety of circumstances, including but not limited to the following three situations:

Situation 1 - the contract identifies an element of a payment stream that varies according to the availability of the property itself and another element that varies according to usage or performance of certain services.

Situation 2 - different parts of the contract run for different periods or can be terminated separately. For example, an individual service element can be terminated without affecting the continuation of the rest of the contract.

Situation 3 - different parts of the contract can be renegotiated separately. For example, a service element is market tested and some or all of the cost increases or reductions are passed onto the purchaser in such a way that the part of the payment by the purchaser that relates specifically to that service can be identified.

Distinct properties

When considering the extent to which a contract can be separated into individual elements, the Technical Note focuses on separability of services from the property, rather than separability between properties. Nevertheless, it does state that 'in some contracts there may be two or more **distinct properties** which need to be assessed separately'.

The contract comprises the provision of two tram lines and multiple properties with a total estimated capital value of [£491.5 million]. The properties are summarised below.

(4)

- Depot
- Vehicles
- Power supplies
- Signalling
- Tramstop installations
- Trackwork
- Overhead line equipment
- Tramstops
- Structures

It is envisaged that the payment to 'Infraco' will be made via a combination of Milestone Payments in the construction phase and in the operational phase via an availability payment

At this stage of the procurement process it has not been determined as to whether the milestone payments relate to specific assets. Therefore for the purpose of this accounting assessment we propose to conduct the accounting analysis for the scheme as a whole.

Situation 1
It is expected that the operating contract will be separable from the 'Infraco' contract and is therefore separable under situation 1. Consequently, services and farebox revenue relating to the operational aspects of the tram service will be excluded from the accounting analysis.

The Milestone Payments payable during the construction period relate solely to payments for the property and are also separable under Situation 1.

Situation 2
It is expected that no parts of the contract run for different periods or can be terminated separately. Therefore, the contract is not separable under Situation 2.

Situation 3
It is anticipated that no 'Infraco' services are subject to benchmarking/ market testing. Therefore the contract is not separable under Situation 3.

Should SSAP 21 or FRS 5 be applied?

Once any separable elements have been excluded, paragraph F7 of the Application Note states that PFI contracts can be classed into

(A) those where the only remaining elements are payments for the property. This will be akin to a lease and SSAP 21 'accounting for leases and hire purchase contracts (interpreted in the light of the FRS 5) should be applied

(B) other contracts (ie where the remaining elements include some services). These contracts will

fall directly within the FRS 5 rather than SSAP 21

The Milestone Payments form a significant portion of the total capital expenditure of the project. No definitive accounting guidance exists in relation to the impact of an upfront contribution on the accounting treatment assessment for a PPP transaction. We however understand that a general "rule of thumb" is currently being applied by Audit Commission auditors and other audit bodies in relation to the maximum level of upfront contribution relative to the total capital expenditure of the scheme. When applying the 'rule of thumb' criteria, the Audit Commission consider that if the maximum level is exceeded then the scheme is considered to be fully separable. The maximum level that has been applied on PPP schemes to date is set at approximately 25% of the total capital cost of the scheme. On the basis that it is envisaged that the Milestone Payments will comprise 42% of the total capital expenditure, this scheme is fully separable and the project as it is currently structured should to be assessed under SSAP 21.

Application of SSAP 21

In applying SSAP 21, the key question is whether the lease is a finance lease, i.e. one that 'transfers substantially all the risks and rewards of ownership of an asset to the lessee'. SSAP 21 paragraph 15 provides a test to measure the element of risk transfer in a lease. The 90% test states that risk transfer has occurred where 'if at the inception of a lease the present value of the minimum lease payments, including any initial payment, amounts to substantially all (normally 90% or more) of the fair value of the leased asset.

However the Application Note states that in many cases such a numerical test will not be required if it is clear which party has substantially all the risks and rewards. Only when there is a sharing of risk will the 90 per cent test be required. Even where a 90 per cent test is used the overriding principle is to establish whether the lessee has substantially all the risks and rewards of ownership. The Application Note states that where SSAP 21 is used as a basis for determining the accounting treatment, SSAP 21 should be interpreted in the light of FRS 5. Therefore an FRS 5 approach will be adopted in addition to the SSAP 21 90 percent test.

90 per cent test

As currently proposed the payments for the property consist of upfront payments prior to the completion of the implementation phase with the remaining amounts payable over the operating life of the contract. On expiry of the operating period it is expected that the assets will revert back to the Purchaser for nil value.

Therefore given that the property will be fully paid for over the life of the contract period and that the assets will be handed back for nil value on expiry; this indicates that the present value of the minimum lease payments would represent 100% of the fair value of the assets. On this basis the assets should be accounted for as 'on' balance sheet from the perspective of the Purchaser.

Analysis of relevant risks

In forming our view on the accounting treatment of the transaction it is important to consider both the results of the 90% test and the allocation of risks within the project.

We set out in the table below our understanding of the risks that are expected to be borne by each party to the contract

Risk	Borne by the Purchaser	Borne by the Operator
Demand risk	✓	
Third party revenues	N/A	N/A
Design risk		✓
Penalties for non-availability/poor performance		✓
Potential changes in relevant costs		✓
Residual value	✓	

For the purposes of our initial view assessment we have produced a commentary below on each risk and its likely impact

Quantifiable risks – Purchaser

Demand risk
Evidence that demand risk has been transferred to the 'Infraco' exists where payments by the purchaser to the Operator are volume related

The Availability Payment payable in respect of the 'Infraco' contract is not expected to vary with passenger volumes. Therefore, demand risk is borne by the Purchaser

Critical to the accounting treatment decision if the project were to be assessed under FRS 5,will be the extent of the significance of demand risk. This is measured as the potential variations in patronage numbers over the period of the contract

Residual value
It is expected that the trams and infrastructure assets will revert to the Purchaser for nil consideration at the end of the contract. Residual value risk will therefore remain with the Purchaser in respect of the trams and infrastructure assets that have a remaining useful economic life.

Third party revenue
It is expected that the Purchaser will bear the risk of third part revenues from advertising and related income.

Quantifiable risks – Infraco

Design

Failure of design against initial requirements
It is expected that the 'Infraco' will bear the risk that the trams and related assets will not meet the design brief in terms of functional capability.

Variations in maintenance and works costs
We understand that the 'Infraco' are responsible for all maintenance and lifecycle expenditure and therefore bear the risk that maintenance and lifecycle costs will vary from budget.

Design risk could potentially be significant.

Penalties for non-availability
We understand that the Infraco will be incentivised to maintain the availability of the tram system and will be subject to penalties for non-availability.

Potential changes in relevant costs
It is envisaged the Availability Payment will be indexed by RPI.

Therefore, in our view the bidder will bear the risk of pricing changes in respect of their relevant costs (labour and materials).

Third party revenue
Given that the operating contract is separable from the 'Infraco' project, the farebox revenue risk is not relevant for this analysis.

Concluding remark
The risk analysis of the key relevant property risks in the project demonstrates that there is a sharing of risk between the Purchaser and the Operator.

(8)

Accounting implications

When considering the FRS 5 Application Note F accounting implications of the scheme, we have assessed this as whether the assets should be accounted for on or off balance sheet from the perspective of the Public Sector as a whole. On the basis the assets should be accounted for as 'on' balance sheet, consideration therefore needs to be given as to which entity's balance sheet the assets should be recorded on.

We understand that upon operational commencement all legal title of the contractual and operational aspects of the scheme will transfer to TEL. In addition on expiry of the contract the assets will revert to TEL for nil value. Consequently we consider that the assets should ultimately be recorded on the balance sheet of TEL.

However during the development and construction phase of the project it will be the responsibility of tie to account for the cash flows on its balance sheet. Accordingly the following transactions will be reflected on the balance sheet of tie up to the point of operational commencement:

- The grant funding received by the Scottish Executive should be recorded as a deferred creditor under UK GAAP and the principles of SSAP 4;
- On the basis construction risk is borne by the contractor the Milestone Payments made to the contractor should be recorded as a prepayment;
- Upon construction and once operational tie will reflect the entire fair value of the assets in fixed assets;
- At this stage the Milestone Payments should be transferred from prepayments to fixed assets;
- The remaining value of the assets to be paid over the life of the contract should be added to fixed assets to give the total fair value. A corresponding liability will need to be recognised.

Upon operational commencement we consider that as TEL takes on the responsibility for the project (and on the basis they take on any liability or obligations for the Scottish Executive in connection with the grant funding) the assets and liabilities will transfer from tie to TEL.

From the perspective of the Scottish Executive the assets of the scheme will not be recorded on the Executive's balance sheet. The Executive will however need to account for the distribution of the upfront grant funding and this may need to be accounted for as a prepayment on the balance sheet of the Scottish Executive. This will however need to be considered in accordance with the Executive's accounting policies.

As Scottish Authorities are required to prepare group accounts, tie and TEL as wholly owned subsidiaries of the City of Edinburgh Council, will need to be consolidated into the Council's group accounts. We understand that there is currently no requirement for the Scottish Executive to prepare group accounts incorporating the financial statements of Local Authorities however this position may change as the 'Whole of Government Accounts' are established.

Structuring the contract – 'off' balance sheet treatment

Under the current proposed structure, the assets of the project should be accounted for as 'on' balance sheet from the perspective of the Purchaser. To achieve a full 'off' balance sheet treatment for the assets it would be necessary for the following characteristics to be reflected in the contractual structure

Separability
The project as currently structured is fully separable. This is due to the funding of a significant proportion of the capital expenditure with the Milestone Payments payable during the construction period. To ensure that the project is not separable the Milestone Payments would need to be less in value than 25% of the total capital expenditure

Risk transfer
Given the current status of the project it is not possible at this stage to identify definitively which party bears the majority of the property related risks. However based upon our experience of recent Tram scheme projects (and primarily the Nottingham Tram scheme), to ensure that the majority of risks are borne by the Infraco, a significant proportion of the farebox revenue risk would need to be transferred to the Infraco. As the operating agreement is separable, farebox revenue risk is not included as part of the accounting analysis

The operating agreement would therefore need to be included as part of the 'Infraco' contract covering the whole provision of tram related services. The revenue sharing thresholds would also need to be set at such a level that a significant level of farebox risk was transferred to the Operator We note that the operating agreement has already been let.

Partial 'off' balance sheet treatment
If the Milestone Payments were attributable in such away that they related specifically to assets with the longest useful economic lives, there might be potential to achieve off balance sheet treatment for those remaining assets funded via the Availability Payment

In order to achieve this, two separate accounting assessments would be required for those assets funded specifically via Milestone Payments and those funded via the Availability Payment The following characteristics would also need to be in place

- Those assets covered by the Availability Payment would need to have a negligible useful economic life on expiry of the contract (and hence residual value risk would be de minimus);
- Demand risk in relation to those assets funded via the Availability Payment would have to be relatively insignificant in value

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Based on the above the assets funded via the Milestone Payments would be accounted for as 'on' balance sheet from the perspective of the Purchaser. There might however be potential, if demand risk were relatively insignificant to account for the remaining assets as 'off' balance sheet.

If you wish to discuss any aspect of this letter or require further help or advice, please do not hesitate to contact Mike Pugsley or Paul Thomson (0191 2328493)

Yours faithfully

PricewaterhouseCoopers LLP

(11)

Appendix D

Additional Issues

In discussion with the SE FPU, a number of further issues have been suggested for inclusion as part of this paper. These are addressed below:

Allocation of Financial Risk between CEC and the Executive

Under conventional funding and prior to the commencement of operations of Phase 1 of the ETN, CEC has no financial resources available to contribute towards the capital costs of the ETN~~Tram project~~ and Phase 1 must, at this stage, be contemplated as being provided entirely from the fixed SE~~Executive~~ funding of £375m. These "CEC limitations" are not seen by ***tie*** or their advisors as having any impact on the chosen procurement route. As can also be demonstrated within the quantitative analysis undertaken by PwC, a larger amount of Capital funding will not change the VfM assessment, at this stage.

In terms of the ability of PPP to deliver a larger scale project within a shorter timeframe, the issue depends crucially on assumptions as to the basis on which the current assumed capital funding would be switched to a Revenue Support Grant basis (setting aside the ~~b~~Balance ~~s~~Sheet considerations). On the assumptions used in the IOBC (see page 21 above) as advised by the SE, the project becomes *less* affordable. An alternative approach to the calculation of RSG (decoupled from the equivalent of £375m in grant) may produce a different result.

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Both ***tie*** and CEC submit that the SE's risks in relation to funding all of Phase 1 from the £375m~~M~~ are mitigated by the procurement strategy developed by ***tie*** which takes full account of the lessons learned from the procurement of other public transport projects and, in particular, by the phased approach to implementing the project. In addition, ***tie*** has set up a process under which SE will approve progress of the project at various stages during the progress of design, the phasing definition and receipt of tenders.

Under conventional funding, CEC will retain the risks associated with fare box revenues (to the extent they are not shared with the operator), other income and lifecycle costs. A simple analysis does not reflect the risk of cash deficits occurring in individual years, especially in the initial years of operation and the risks being borne by CEC are considerable. These risks are, however, also mitigated by the phasing approach under which the elements of the ETN most likely to be economically sustainable will be constructed first. In addition, early involvement of an experienced operator (Transdev) and Lothian Buses, in the context of the TEL service integration plans, will provide CEC with a considerable additional level of assurance.

Under a PPP arrangement, CEC would no longer be responsible for paying ~~l~~Lifecycle costs directly but would expect to contribute, in an equivalent manner, to the availability payments made to the PFI contractor. Such payments would~~to~~ be funded mainly from Revenues.

CEC contribution to Capital Expenditure

It has always been anticipated that CEC will make a contribution to the capital costs of the first phase of Lines 1 and 2. As with the SE Grant, the final quantum and nature of the CEC contribution will be confirmed and agreed in the latter part of 2006, following receipt of initial tender prices for the infrastructure and vehicle contracts and presented as part of the Final Business Case. The total CEC contribution will come from a number of sources including:

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- Cash contributions to development - In a manner similar to the £1m development funding CEC has provided to the project for the year to 31 March 06.

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- The value of land contributed to the project by CEC and under S75 agreements with developers and reasonably certain development contributions.

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- Income from tram related development contributions and other property related activities which have reasonable visibility.

- Future CEC cash flows from the operation of Lines 1 and 2. In substance, this is likely to be limited borrowing or other financing arrangements against the forecast future operating surpluses from the tram system and contributions from development and other commercial activities related to the tram project.