Draft report by PwC on the payment mechanism and reflection of principles in the Contracts

Dated 19 May 2006

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Glossary

BAFO	Best and Final Offer
Capex	Capital Expenditure
CEC	City of Edinburgh Council
CSA	Commissioning Services Agreement
DfT	Department for Transport
DLR	Docklands Light Railway
DPOFA	Development Partnering and Operating Franchise Agreement
EARL	Edinburgh Airport Rail Link
HMRI	Her Majesty's Rail Inspectorate
IA	Infrastructure Agreement
InfraCo	Infrastructure and Equipment Company
ITN	Invitation to Negotiate
KPI	Key Performance Indicator
LD	Liquidated Damages
MUDFA	Multi Utilities Diversion Framework Agreement
OBC	Outline Business Case
OFT	Office of Fair Trading
OJEU	Official Journal of the European Union
Operator	the operator under the DPOFA (Transdev Edinburgh Tram Limited)
Opex	Operating Expenditure
PFI	Private Finance Initiative
PPP	Public Private Partnerships
Project	all aspects of delivering Edinburgh Tram
Project Board	the Tram Project Board or its successor
Project Team	the group of people responsible for delivering the Project
PUK	Partnerships UK
RPI	Retail Price Index
SDS	Systems Design Services
Service Providers	together the Operator, InfraCo and TramCo
STAG	Scottish Transport Appraisal Guidance
Stakeholder Group	includes, but not exclusively, **tie**, TEL, CEC and Transport Scotland
TEL	Transport Edinburgh Limited
the Executive	Scottish Executive
tie	**tie** Limited
TramCo	the entity selected to supply and maintain the trams
TSS	Technical Support Services
VAT	Value Added Tax
VFM	Value For Money

1 Executive Summary

1.1 Overview of work

Set out in this report are the results of PwC's brief review of the contractual documentation surrounding the Project. We have focused on the draft infrastructure and tram contracts and ITNs as they are about to be sent to bidders. We have also reviewed the signed DPOFA and SDS contracts and the draft CSA.

When our work was commissioned **tie** intended to release the tram documents to bidders at the end of April and the infrastructure documents to bidders at the end of July. Following changes in personnel and a high level assessment of the work to be completed, decisions to be made and support required from the Stakeholder Group the Tram Board decided to move the timetable back to a point where the Project Team could be certain to meet it. Much of the contractual documentation we have reviewed is therefore work in progress and we will need to review more complete documentation, probably in mid-late June, in order to complete the scope of our work.

1.2 Key findings

It is evident that the Project Team has completed an immense amount of work in developing the approach to the Project and the documentation to the current state. However **tie** should be aware that:

- Much of the document drafting is taken from other similar projects. This means that this Project risks inheriting structures and approaches rather than tailoring solutions to reflect **tie**'s needs and priorities. Has this risk been addressed?

- There is a shortage of evidence that key decisions, such as punctuality requirements to be placed on the Service Providers and quality-related KPIs, have been discussed in an appropriate forum, approved or benchmarked to demonstrate credibility. This could result in the implementation of incomplete solutions and/ or cause problems in getting buy-in from the Stakeholder Group to the approach adopted.

We have undertaken a brief review of the sections of the draft tram supply, draft tram maintenance, draft infrastructure, signed DOPFA and signed SDS contracts that related to performance and payment mechanisms and financial protections for **tie**. The review notes prepared as a result of this work are attached as Appendix D and form a major part of this report. The review notes have been prepared for each document separately and include a brief summary of the key findings before moving into the detail.

In preparing the review notes we have sought to identify individuals who might be responsible for addressing each point raised and also to prioritise the points. Given the intention to release the tram documents at the beginning of June the comments that should be given the highest priority are those relating to the tram ITN and the draft tram supply and tram maintenance contracts.

The main lesson from our review of the documentation and, in particular, how principles have been agreed and cascaded within the Project Team is the need to put in place a clear governance structure that ensures that the development of the tram procurement is discussed and approved at an appropriate level before being implemented. We are concerned that the workload of the TEL board is such that it is unable to provide sufficient time and speed of response to support this critical phase of the Project and therefore believe that a new project board or subgroup of the TEL board should be established to deal with Project specific issues only.

The new project board should consist of senior executives involved with the Project who can represent the views of **tie**, offer an objective view point and act as a sense check on proposals brought forward by the Project Team. Such a governance structure should also facilitate multi-disciplinary involvement in the development of principles in order to ensure that all relevant areas are properly addressed and the adoption of best practice. Consideration should also be given to the involvement of the Stakeholder Group on the new project board.

The new project board should also ensure that the practical statements about the control of risk, management arrangements and governance, set out in chapters 8 and 9 of the OBC, are properly implemented. The need to ensure effective co-ordination of work is particularly important as the key contracts are being developed, and will likely be negotiated in parallel, thereby increasing the risk of mistakes through poor coordination or individuals not recognising the wider implications of their decisions.

The implementation of such a governance process need will slow down delivery of the Project. It is vital to build a project of this complexity with such wide stakeholder interests on firm foundations with wide buy-in to decisions. Achieving this will save time in the bid evaluation and negotiation phases by avoiding the need to re-open issues.

Much work is still required to develop the performance and KPI structures, allocate responsibilities and determine and calibrate the financial incentives to support their delivery. Once developed, the agreed approach needs to be reflected in the tram, infrastructure and DPOFA contracts. It is important not to rush this process and we recommend that, such is the importance of the performance and payment mechanism, that the tram contracts and final bidding instructions are not released until this work is complete.

1.3 Other key recommendations

Outlined below are a number of other actions that we consider should be implemented in order to keep the project 'on track'. We have not had time to discuss these points with the Tram Board and it may be that activities are already in hand to address many of these points. The main recommendations are:

- Prepare principles papers covering key issues. The papers should set out clearly the approach proposed to be adopted and they should be used as part of the governance process to share views, obtain buy-in and record properly agreed positions.

- The delivery of reliable operations is critical to growing ridership on the tram. A punctuality performance measure has been proposed. It needs to be debated at new project board level, and may require the involvement of the Stakeholder Group, in order to ensure that relevant parties are bought in to the approach to be implemented. The current proposal has the advantage of being relatively simple but wider issues need to be considered. For example, is punctuality more important at different times of the day? Should this be reflected in the penalty regime? How are the Service Providers to be encouraged to deliver a quick recovery from major disruption? What is the appropriate calibration of the punctuality measures in light of the different involvement of each of the Service Providers?

  The performance and payment mechanism should also include other KPIs such as quality of service and revenue protection. Again the approach needs debating and approving at senior level and a mechanism that takes into account the contribution and financial interests of all of the Service Providers needs to be developed.

  The resourcing and support requirements of the Project Team need to be carefully considered in order to give the development of the performance and payment mechanism the commitment it requires. The development of this mechanism should be

a multi-disciplinary effort that reflects best practice and tie requirements specifically. The work should be completed within the parameters of a proper governance process.

- There is rightly a concern to construct the operating, tram and infrastructure contracts such that all responsibilities are properly identified and allocated. In order to address this issue an activities matrix should be drawn up in the same manner as the risk matrix. This should list out all activities and who is responsible for delivering them. It should be a live document which is updated through to the conclusion of the contracts. The activities matrix can then be compared to the contractual drafting to check for completeness.

- The efficient evaluation of bids and approval of decisions to reduce the number of bidders will be critical to the timely delivery of the Project. Experience indicates that planning the evaluation process is critical to informing the drafting of the bidding instructions. The planning should extend to who will be doing the evaluation, the need to engage the Stakeholder Group, being clear about what it is that you want to evaluate, the evaluation criteria to be adopted and ensuring that any stakeholder concerns are adequately addressed. This approach needs to be built into finalising the drafting of the tram and infrastructure ITNs.

- The requirement for bidders to address options is an unfortunate characteristic of complex projects. It should be recognised that the use of options adds to the workload for bidders, can impact the credibility of the project (both of which could effect appetite), complicates the evaluation of bids and can disguise inadequacies in the definition of the project. For these reasons the number of options that bidders are required to address should be strictly limited and a proper explanation should be provided in respect of each option.

2 Introduction

In accordance with the terms of reference set as Appendix A to this report, we set out in this report our responses and preliminary conclusions. As explained below our conclusions are subject to the completion of drafting that is in progress. Where documentation relating to a particular question in the scope of work is still being drafted we have tried either to comment on the draft or to provide practical observations as to how the drafting might be developed.

2.1 Background to the project

PwC was asked, towards the end of April 2006, to conduct a piece of review work in order to help the Tram Board to assess the readiness and completeness of the contractual drafting and ITN documentation in respect of the infrastructure and tram contracts for release to bidders. This request was made against the background that the Project Director was proposing to release the tram documentation at the end of April and the infrastructure documentation at the end of May.

Prior to PwC starting its field work the timetable was put on hold and the Project Director left the Project. Subsequently, whilst PwC was reviewing the documentation, the Project Team, led by the Tram Board took stock of:

- the readiness of the documentation; and
- the need to take into account the results of a readiness review to be led by PUK and conducted in the week commencing 22 May;

As a result a revised project timetable has been produced. This timetable provides for the tram documentation to be issued in early June 2006 and the infrastructure documentation to be issued at the end of July 2006.

The impact of the changes outlined means that the documentation currently available for review is incomplete. Moreover, we have had limited opportunity to discuss our findings with David Powell, the tram project manager, who is now taking responsibility for development of the infrastructure contract and the overall performance and payment mechanism. Nevertheless, the discussions which we were able to have indicated that there are not material differences between our assessment of the situation and David's view.

2.2 Work still to do

As set out in the rest of this report we have only been able to complete part of the scope of work set out in Appendix A. We consider that the Tram Project Board's desire to review the documentation in order to address the issues set out in the scope of work represents a practical and diligent approach to fulfilling their duties. We therefore intend to complete our review once the detail in the documentation, in particular the infrastructure contract and ITN, have been developed to a point where it is believed that all the major points relating to the performance and payment mechanisms have been addressed.

Owing to the tight timescale for this work and constraints over the availability of key personnel on the Project Team we have not had the opportunity to discuss our findings and confirm our interpretation of the contracts. We therefore intend to meet and discuss our findings with key members of the Project Team prior to finalising this report.

2.3 Structure of the document

The remainder of this document is structured as outlined below:

Section 3: description of the Edinburgh Tram contractual structure.

Section 4: results of reviewing draft contracts for consistent application of principles.

Section 5: review of payment mechanism principles.

Section 6: gaps in the payment mechanism.

Section 7: acceptability of the payment mechanism to the market.

Section 8: other governance related issues

3 Description of the Edinburgh Tram contractual structure

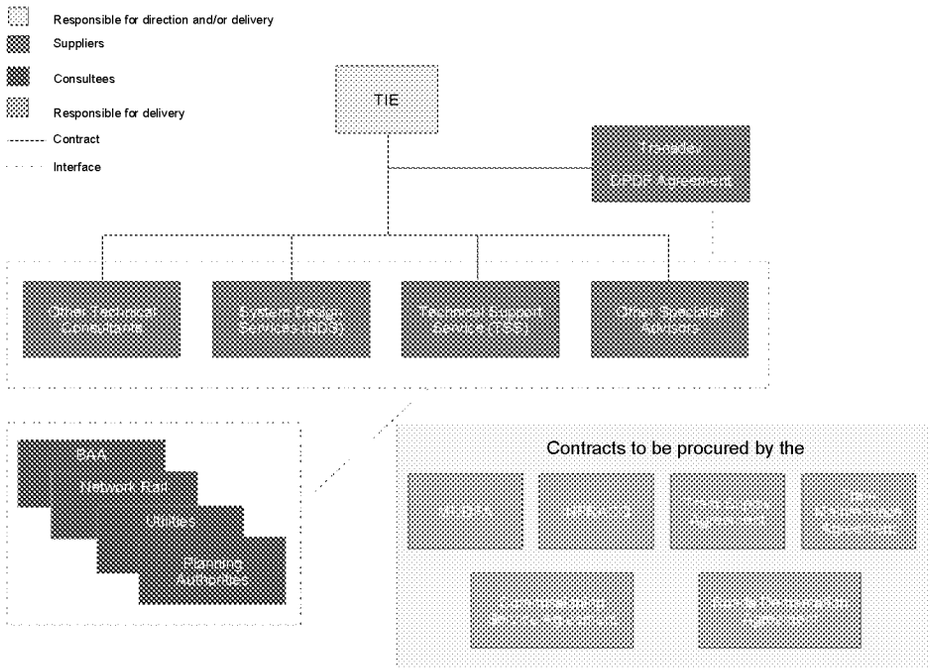
3.1.1 Introduction

In this section we:

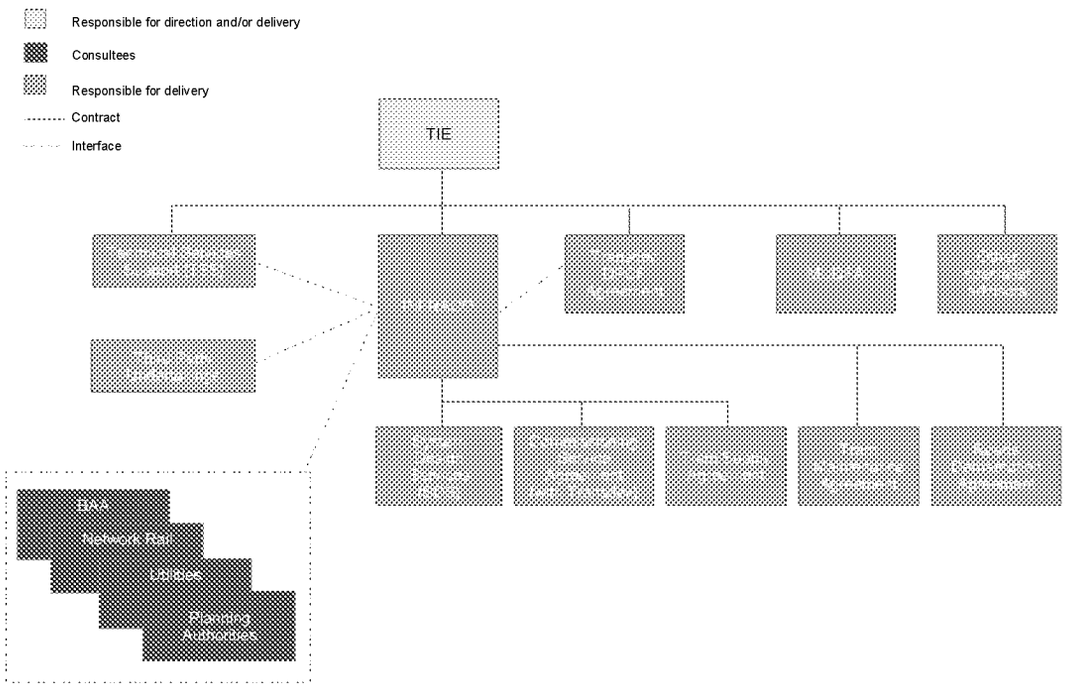
- describe the contractual structure that has been developed for Edinburgh Tram; and
- explain the rationale for the structure selected.

3.1.2 The contractual structure

The contractual structure selected for the Project is shown in the two diagrams below. The first diagram shows how the contracts are let prior to novation of the tram contracts, the TSS and the SDS contract to InfraCo. The rationale for the novation is principally so that integration risk can be taken and managed by InfraCo rather than **tie**. The novation of these contracts should occur soon after the IA is signed.



The second diagram sets out the structure that will be in place post-novation, during the construction and operating phases. A number of other contracts have been put in place to facilitate the Project and these are described at the end of this section.



In simple terms, the operating structure for Edinburgh Tram will be as follows:

- There will be an Operator (Transdev was selected and a contract awarded in 2004) who will be responsible for providing the tram services. This will include managing the timetable, driving the trams, collecting ticket revenue and basic maintenance and cleaning of the trams and tram facilities. The obligations of the operator are set out in the Development Partnering and Operating Franchise Agreement ('DPOFA'). The DPOFA is between **tie** and Transdev. The term of DPOFA is fifteen years with scope for a five year extension.

- There will be an infrastructure provider who will be responsible for the final design, construction and heavy maintenance of track, signalling, station facilities and the depot. The IA will be between **tie** and InfraCo. The IA will also make InfraCo responsible for the availability and maintenance of the trams and certain facilities on trams. The reference term of the IA for bids will be six years but option prices will be sought for 15 and 30 years. There will also be a **tie** option to roll the IA for three year periods.

- Separate contracts will be awarded for the build of the trams and the maintenance of the trams. The ITN sets out considerable information about the specification of the trams. Whilst these contracts will initially be between **tie** and the TramCo they will be novated from **tie** to InfraCo. The IA and TramCo contracts will be written such that the InfraCo's responsibilities for the provision of trams are back to back with TramCo's responsibilities to InfraCo. The reference term of the tram maintenance contract for bids will be six years but option prices will be sought for 15 and 30 years.

In addition to the contracts referred to above, **tie** has/is putting in place two other key contracts:

- A contract for the Provision of Systems Design Services. SDS has already been awarded to Parsons Brinckerhoff Limited who will be responsible for developing a basic specification for the tram infrastructure. The SDS contract is between **tie** and Parsons Brinckerhoff Limited. The SDS contract will novate to the InfraCo.

- The Multi Utilities Diversion Framework Agreement. MUDFA provides for the early delivery of preparatory works involving the identification and diversion of utilities, in preparation for the construction of the infrastructure. It therefore removes a major area of risk for the bidders for the infrastructure contract. This contract is being let and **tie** is currently engaging with bidders.

3.1.3 The rationale for the contract structure

The Procurement Strategy that **tie** is following for this project has been developed to address the common challenges faced on light rail procurements, the lessons learnt from recent tram projects and the specific issues associated with the Project. The main elements of the approach and progress to date are set out below.

Introduction of Operator at Early Stage
A key element of the procurement strategy is the decision to select the operator of the system in advance of completing the Parliamentary process which is a pre-requisite to the letting of contracts for the infrastructure and the trams. The principal reason for introducing early involvement of the operator was that it allows **tie** to use the operator's knowledge and experience during the Parliamentary process, business case development, planning, design, and commissioning phases, to ensure that the system will be capable of being operated effectively. Moreover it allows **tie** to obtain input from an experienced operator on issues such as fares, ticketing policy and customer service and it facilitates proper planning of an integrated service network including the Lothian Bus operations and other operators.

Separation of Operations and System Delivery

The separation of the day to day operation of the tram network from the initial construction of the tram system is a consequence of early operator involvement. The approach allows those parties responsible for providing vehicles and infrastructure to concentrate on their strengths. The benefits of this are expected to be reflected in more competitive contract pricing from those parties as they will not have to address procedures and risks that they do not necessarily understand.

Separate award of infrastructure and Ttram contracts

There are a relatively small number of vehicle providers in the light rail market, compared to the number of infrastructure contractors. Had **tie** adopted the conventional approach and asked the infrastructure providers and vehicle providers to team up and present a single proposal covering both, this would have restricted the choice of service providers available to **tie**. **tie**'s approach of having separate competitions for infrastructure and vehicle provision means that it will be able to select its preferred option for each from all possible combinations.

During the market sounding exercise conducted by **tie** in Autumn 2005, it became clear that the infrastructure providers would prefer to know in advance who the vehicle manufacturer would be in order that they could account for this in their infrastructure proposals. Consequently, **tie** intends to identify the 'preferred vehicle supplier' prior to the submission of BAFOs by the infrastructure bidders. This will give them the opportunity to take account of the characteristics of the chosen vehicle in their final infrastructure proposals and costings.

Re-aggregation of procurement structure under InfraCo

tie has chosen a procurement strategy that it believes is most likely to deliver best value for money for CEC and the Executive. A key element in achieving this is the dis-aggregation of the procurement of the infrastructure and tram contracts. However, **tie** also recognises the benefits delivered by a consortium structure which would normally be achieved through a single integrated procurement process. It therefore aims to retain as many of these benefits

as possible by re-aggregating the contracts within the Infraco contract. **tie**'s intention is to achieve this by novating the SDS and tram supply and maintenance contracts to InfraCo.

The structure transfers all of the systems integration and interface risk to InfraCo (with the exception of those contracts which remain held by **tie** eg MUDFA and DPOFA).

Early Involvement of designer

Another key strand of the procurement strategy was the early involvement of the design contractor. The SDS contract was awarded in September 2005 to Parsons Brinkerhoff. This contract allows **tie** to develop detailed design work for sensitive sections of the tram route, thereby reducing the planning and estimating risks to which bidders for the infrastructure contract are exposed. It also facilitates the opportunity to procure advanced works on utility diversions and identify at an earlier stage the land and traffic regulation requirements, both temporary and permanent.

Utilities Diversions Undertaken as Advanced Works

A significant benefit arising from having undertaken early design work is that **tie** is able to procure the necessary utility diversions prior to commencement of the system construction. This is expected to provide very significant construction programme benefits and therefore cost benefits, due to reduced risk exposure of the infrastructure provider, creating the best opportunity to minimise disruption and maximise construction productivity.

On award, the MUDFA contractor will undertake a series of pre-construction activities including working with the SDS provider to optimise the design of the utilities, minimise disruption to the city of Edinburgh and maximise construction productivity.

Procurement of Technical Support Services provider

The resources provided under the Technical Support Services (TSS) contract facilitate design and project management and allow for continuity post novation of the SDS contract to InfraCo. These resources will also be critical for testing, quality, safety and environmental management.

4 Results of reviewing draft contracts for consistent application of principles

4.1 Consistency with principles set out in the OBC

Set out in Appendix B is a table the shows the key principles that are outlined in the OBC together with comments on how they have been reflected in the drafting of the contracts and the ITNs.

In general the principles set out in the OBC are broad and therefore relatively easy to comply with. As most of the drafting of the principles into the contractual documentation has yet to be finalised the addressing of the principles is work in progress. At this stage we have not identified any principles set out in the OBC that are clearly not going to be honoured.

However, our fieldwork has revealed a number of issues that need to be addressed in order to ensure continued compliance with the agreed principles:

- Whilst there is generally an awareness of the Stakeholder Group that needs to engaged in the development, sign off and delivery of this Project, little consideration seems to have been given by the project managers to the importance of agreeing principles and then ensuring that they are complied with. For example, David Powell's lack of familiarity with the OBC indicated that little attention had been paid to the OBC in finalising the tram documentation and yet the OBC is probably the best source of approved, or at least widely circulated, principles.

- In order to engage effectively with stakeholders, ensure that their requirements are met and build their confidence in the process, it is important to establish clearly the mechanism by which principles will be shared, agreed and then cascaded into Project documentation.

- The OBC includes in chapters 8 and 9 a number of clear and practical statements about the control of risk, management arrangements and governance. The new project management team needs to put in place processes and procedures that will ensure compliance with these statements in the future. This is particularly important as the key contracts are being developed and will likely be negotiated in parallel thereby increasing the risk of mistakes through poor coordination or individuals not recognising the wider implications of their decisions.

4.2 Consistency with principles papers

4.2.1 Current state of principles papers

Set out in Appendix C are the principles papers that we have been able to obtain. The papers are:

- an early working draft document covering performance measures and payment mechanisms;

- a paper on liquidated damages and bonds; and

- a paper prepared by PwC on the costs of funding different procurement routes dated 18 April.

We referred to these papers specifically when scoping the work but anticipated that, given the complexity of the project, the size of the Project Team and the diversity of the Stakeholder Group that a wider portfolio of papers would have been prepared and be available to review. However, having discussed this with David Powell, Trudi Craggs and Sharon Fitzgerald, we

are understand that neither principles papers nor anything similar have been used to facilitate the coordinated agreement of approach and drafting of the contracts.

As a result of the limited attention that appears to have been given to the principles papers and because they are more in the nature of working drafts than final, approved positions we have not attempted to reconcile the papers to the current state of drafting of the principal contracts and the tram and infrastructure ITNs.

Subject to the development of principles papers, as recommended below, we would expect to be able to review more up to date, comprehensive and agreed principles papers and track them into the contractual documentation and ITNs as part of our follow up work.

4.2.2 Development of principles papers

We consider that principles papers, covering all the major issues, should be developed at the earliest opportunity and certainly before finalising the draft infrastructure contract and updating DPOFA. There are a number of reasons why we would encourage the adoption of this approach:

- The suite of contracts that the Project Team is developing is large and the relationship between the contracts is complex. An effective way to provide drafting guidance to the lawyers is to prepare short papers covering all the key principles to be reflected in the contracts.

- The principles papers can be used as a tool to synchronise the approach to drafting the same point in more than one document or merely reminding people as to a position that has already been taken.

- The Project Team is large and many members of the team will have a limited understanding of the contracts even where they are required to provide key inputs or support bid evaluation or negotiations. Principles papers could be very useful in bringing them up to speed and helping them to understand the issues they need to address.

- As with many Projects of this nature there is a wide range of stakeholders that need to be bought into the approach and satisfied as to the position **tie** is taking on a number of key issues. The principles papers can form the basis of practical briefing notes and could also form the basis of an approvals' process.

- Critical to stimulating strong competition amongst bidders is to get them to focus on the key issues and avoiding them mis-understanding the underlying contractual documentation and related risks. The principles papers could form the basis of key information to be shared in the ITN and subsequent bidding documentation.

- The principles papers could be bound together with the signed contract to create a useful guide for use by **tie** and the ongoing project management team.

Careful consideration should also be given to the establishment of a clear governance structure surrounding variations to principles and the negotiation of the outstanding projects. This is important in order to ensure the synchronisation of contracts, that no gaps are left and that commitments to stakeholders are honoured.

5 Review of payment mechanism principles

5.1 Overview

In this section we address two issues:

- The extent to which the payment mechanisms are reflected in the contracts, including an outline of the payment mechanism where relevant; and
- The principles that are being developed surrounding the payment mechanisms.

5.2 Contractual provisions

The current state of development of payment mechanisms is outlined in the table below. We have indicated a prioritisation for the follow up of these points but this will need to be discussed in light of individual workloads.

Contract	Area to which payment mechanism relates	Other comments *(items in italics indicate outstanding work or actions required)*	Priority
DPOFA **(Already signed)**	**Development phase** DPOFA sets out support requirements and deliverables for defined work Phases A, B and C1 which all relate to project development	Contract provides for the agreement of development costs quarterly in advance for the Operator's Core Team and monthly for the Operator's Non-Core team. Rates per day are specified in Schedule 6. *Need to check that the contractual arrangements are being followed in practice*	Note only M
	Phase C2 – testing and commissioning	Contract provides for the agreement of all project development services monthly in advance. There is provision for a retention of 10% of Fixed Costs and 10% of the profit element. Rates per day are specified in Schedule 6.	Note only
	Operating phase		
	The payment mechanisms under DPOFA are set out in Schedule 3 to Appendix 1 to the Operating Appendix. Unhelpfully this document is not mentioned in the contents section of DPOFA. Appendix 1 sets out four elements of payment:		
	Basic periodic payment	The basic payment mechanism is set out in clauses 1-6 of Schedule 3 to Appendix 1 of the Operating Appendix. It provides for the reimbursement of pre-agreed (or Target) periodic operating costs plus agreed fixed costs plus actual costs of special events plus any other costs permitted under DPOFA plus the agreed profit element, The amounts are to be profiled to reflect seasonality, one offs etc. *Note **tie** has to agree the profiling of these costs. This will be an important negotiation that will need to be properly planned for, in particular because of the Pain/ Gain share mechanism described below*	Note only H
	Payment related to performance	DPOFA sets our a comprehensive list of performance measures relating both to punctuality and quality of service. Provision to	Note only

Contract	Area to which payment mechanism relates	Other comments *(items in italics indicate outstanding work or actions required)*	Priority
		develop these into a detailed mechanism is set out in Clauses 24 and 25 of Schedule 2. Despite this there is a payment calculation formula included as Table 1 to Schedule 3 of the Operating Appendix. The table sets out seven weighted measures – Headway, first and last tram, Customer survey, Security, Cleanliness of tram interiors and stops, Information & signage and revenue protection & generation- and provides for deductions from the KPI profit element which amounts to 1.1 times Profit Element which is set out in the financial proposals in schedule 4 to the DPOFA. The maximum deduction is 40% of the amount in respect of performance less than 85% of the required standard. There is also provision for rectification plans and other measures should performance under these measures be consistently poor. *Given the detail set out in DPOFA and the interaction between the Service Providers in order to deliver punctuality and quality close regard needs to be had to what has already been agreed in developing the performance and payment mechanism across Edinburgh Tram*	H
	Pain-gain share mechanism	The pain/ gain mechanism is set out in clauses 18-22 of Schedule 3 to the Operating Appendix. It basically provides for a sharing or revenues or costs above the agreed (Target) levels: • Target Costs are agreed as above. Where actual costs exceed Target Costs the excess is shared 20% by **tie** and 80% by the Operator. Where actual costs are less than Target cost then the difference is shared 50:50. • Target Revenues are agreed with the Joint Revenue Committee which will normally set target revenue every three years for the next three years. Where actual revenue exceeds Target Revenue the difference is shared 70% to **tie** and 30% to the Operator. Shortfalls are shared in the same ratio. There does not appear to be a cap on the amounts that could be	Note only

Contract	Area to which payment mechanism relates	Other comments *(items in italics indicate outstanding work or actions required)*	Priority
		transferred under these arrangements. Gain/pain share is only calculated every six or seven periods. *These mechanisms mean that it will be very important for **tie** to understand properly the detailed behind the relevant financial projections in order to be able to agree appropriate target figures.*	 H
	Vision achievement incentive	The Vision Achievement incentive is measures over three years. It is only available if actual revenues exceed Target Revenues and is based on the calculation of a profit for the system i.e. it takes into account actual revenues and actual costs of operating the tram and calculates a 'super profit'. This super profit is shared 50:50. This appears to be an upside only incentive for exceptional performance by the Operator but it may be possible to trigger the award by negotiating artificially high Target Costs or arguing for easily achieved Target Revenues. *Again it is important that **tie** is properly supported./ resources for the relevant negotiations.*	Note only H
	Schedule 6 contains the financial proposals for the operating phase. These include detailed costing for operating Line 1 and Line 2 (further back up by Assumptions in Schedule 18	Clause 23 of Schedule 2 (Project Development Output Specification) provides for the updating of the Operator's financial model. *These costings therefore need updating for the revised route.* Clause 24 of Schedule 2 provides for the development of a KPI Regime, setting out in some detail on the nature of the proposed measures.	Note only Note only
	Clause 24.5 provides that target benchmark performance levels shall be agreed for each KPI. Performance will be measured and converted into under performance points which will result in deductions from the KPI Regime Profit Element "subject to an agreed scoring system to be developed in Project Phase B". KPI Regime Profit Element (= operator's profit [as set out in Schedule 4] multiplied by 1.1).	*The performance regime described has yet to be developed. Its development needs to be coordinated with current thinking regarding performance mechanisms in the tram and infrastructure contracts* *Given the drafting to the left, it is not clear whether the contractual provisions allow the scale of monies put at risk by the Operator to*	H H

Contract	Area to which payment mechanism relates	Other comments *(items in italics indicate outstanding work or actions required)*	Priority
		be as large/ as large a proportion of periodic costs as discussed in the performance principles paper	
Infrastructure contract (in early draft form)	**Construction phase**	Drafting is work in progress. Nothing developed on the performance and payment mechanisms other than bidders to propose the profile of milestone payments. There is provision for a performance bond but the drafting and scale have yet to be determined.	M
	Operating phase	Drafting is work in progress. Nothing yet on the performance and payment mechanisms other than bidders to propose the profile of milestone payments.	M
Tram Supply Contract (in developed draft form)	**Construction phase** Tram Supplier will be remunerated through milestone payments (Schedule 31)	ITN and draft contract provide for bidders to propose the timing and scale of milestone payments.	M
	Clause 34.8 sets out the provisions for late delivery of trams to the depot	An amount of 1% of the price of each late tram to be retained. This amount will be used to pay liquidated damages if the subsequent commissioning of the relevant tram is late.	Note only
	Clause 34.9 sets out the provisions for late commissioning of trams.	As this is a more important phase of work the penalties provided are more onerous. If the first tram is late being commissioned the Supplier shall pay liquidated damages at a rate of 1% of the price of the tram per seven days that the tram is late. Late commissioning of subsequent trams will attract liquidated damages at a rate of 0.5% of the price of the tram price per seven days late. Per clause 34.12 the maximum amount of liquidated damages payable for late commissioning is capped at 10% of the aggregate tram price. *Not clear how the level of liquidated damages has been determined – is it supported by an estimate of **tie**'s losses in the event of late commissioning?*	Note only M
	Specified set of Tram Delivery Requirements. If a tram fails to meet these requirements a Tram Rejection	Effect is that rejection could lead to late delivery and crystallise the penalties described above.	Note only

Contract	Area to which payment mechanism relates	Other comments *(items in italics indicate outstanding work or actions required)*	Priority
	Notice will be issued.		
	Specified set of Tram Commissioning Requirements (clause 25.7). If a tram fails to meet these requirements a Tram Rejection Notice will be issued.	Effect is that rejection could lead to late commissioning and crystallise the penalties described above.	Note only
	Clause 34.13 and Schedule 5 provide for liquidated damages for excess weight of a tram (Schedule 5). This provision is made because **tie** will be paying for power.	Liquidated damages are payable if a Tram exceeds the Maximum Tram Weight (which is set out in the tram specification requirements). If trams are 5% or more over the Maximum Tram Weight specified by **tie**. Liquidated damages to be paid, reflecting the estimated cost of the additional power as calculated per Schedule 5. *Need to consider (a) how to evaluate different weights received with bids; and (b) in light of this, the penalty that should apply to delivered weight above weight bid. If the LDs are driven off the Maximum Tram Weight but **tie** has evaluated weight bid, it will be importing risk unnecessarily.* *Need also to consider how to measure the liquidated damages – energy consumption, pricing the additional energy and approach to deriving an NPV.*	H
	Liability, retention and liquidated damages are provided for in Schedule 34.	Clause 34.6 states that the Tram Suppliers aggregated liability under this clause shall not exceed 20% of the tram price. The Client's liability under this clause shall not exceed the Aggregate Tram Price	Note only
	Clause 38 provides for a Reliability Bond to a value of 5% of the Aggregate Tram Price. Bond to be in place prior to delivery of the first tram.	If, on the expiry of 13 full reporting periods from commencement of passenger services, the Supplier has failed to establish the reliability of the trams the bond can be called. Reliability is defined as operating for two consecutive periods without being a Late Tram (broadly two minutes late at, or does not get to, a monitoring point) and it has travelled in excess of 10,000 kms *There are a number of gaps or ambiguities in the drafting. These are set out in the review notes at Appendix D.*	H

Contract	Area to which payment mechanism relates	Other comments *(items in italics indicate outstanding work or actions required)*	Priority
	Clause 30 sets out warrants in respect of Tram Defects, Paint and Finish Defects, Extended Tram Warranty Defects and Fleet Tram Defects		Note only
	Schedule 1, Part 3 provides for a parent company guarantee but it is blank.	Need to make clear: (a) the amount and form of guarantee required; and (b) the circumstances in which it can be called. *Need to consider whether this should be put in place before the documentation goes out*	M
Tram Maintenance Agreement	**Operating phase** Clause 26 sets out payment arrangements and cross refers to Schedule 3 which provides the formulae for determining the amounts which reflects the agreed service payment adjusted for the actual performance of the trams.	Schedule 3 defines an amount of the basic periodic service payment that is a risk. Per the principles note this is 30% of the maximum service payment. The at risk amount is multiplied by actual performance against a benchmark to determine the at risk amount to be received. The multiplier is determined by comparing actual performance to planned performance of the trams as set out in paragraph 2 to the Schedule. It takes into account both late running trams and defective trams. It also weights the performance measure to increase the penalty in relation to late running last trams. There is also provision in 2.3 to recover the costs of alternative transport for passengers not served by a Late Last Tram. *The documentation released to bidders should signal to bidders the amount of periodic payment at risk*	H
	There does not appear to be anything in the tram maintenance contract surrounding quality related issues such as the functioning of equipment and any failures that would require trams to be withdrawn from/ prohibited from entering service. There is reference in Schedule 5 to the tram requirements specification which is attached to the ITN but we have not seen this specification and have no reason to believe it includes any performance measures. .	The performance obligations and the related payment mechanism will be of critical interest to bidders. In turn **tie**'s final approach will need to reflect the development of an overall payment and performance mechanism that is properly coordinated across the tram, operating and infrastructure projects. Careful consideration should be given to the value of releasing the draft contracts to bidders prior to **tie** making decisions about the mechanism and reflecting this in the drafting of the tram contracts.	H

Contract	Area to which payment mechanism relates	Other comments *(items in italics indicate outstanding work or actions required)*	Priority
	Clause 1.5 of Schedule 3 provides for a daily meeting at 9.00am between InfraCo, TramCo and the Operator to agree the attribution of delays incurred the previous day.		Note only
	Clause 1.6 provides that if Tram Punctuality Performance is below 95% than TramCo must prepare a rectification plan	*Number of questions in the review notes at Appendix D surrounding how this amount is calculated – presumably it should only reflect Late Trains attributed to TramCo failings*	H
	Schedule 1, Part 2 provides for a parent company guarantee but it is blank.	Need to make clear: (a) the amount and form of guarantee required; and (b) the circumstances in which it can be called. *Need to consider **tie**'s position before ITN issued*	M
	Schedule 12, clause 4 provides for security in respect of the return condition of the trams (to include speacia parts and tools)	This clause provides that if the Client undertakes an inspection in accordance with clause 3 of the schedule and determines that more than £50,000 work is outstanding to bring the trams to the required return condition TramCo shall within ten days put in place a cash deposit or a performance bond. *How has the £50,000 been determined – the amount looks relatively small and if exceeded the Tram Maintainer must provide security ?*	Note only H
	Schedule 28 sets out arrangements surrounding liability. The Tram Maintainers liability to the Client is uncapped. The Client's liability is capped at the Maximum Performance Payment (=basic periodic payment for services)	*Need to determine the appropriate cap for **tie.***	H
	Clause 18 provides for termination of the contract in a variety of circumstances, in particular where the overall performance of the trams is too poor (= 90% or lower in any reporting period or 95% or lower in any three reporting periods or 13 consecutive reporting periods)	*Not clear how these figures have been calculated – this could be a hair trigger. Need to satisfy ourselves and bidders that these levels are reasonable – what is being achieved on other tram networks?* *Whilst the measurement of tram punctuality is set out in clause 2 to Schedule 3 it is not clear whether it is a combined measure (late Trams regardless of fault) or whether it relates to Late Trams attributed to the tram maintainer.*	H

Contract	Area to which payment mechanism relates	Other comments *(items in italics indicate outstanding work or actions required)*	Priority
SDS contract	Clause 11 provides for three methods of payment:		Note only
	1 Milestones	Clause 11.3 requires that during the Requirement Definition Phase payments against sub milestones are capped at 50% of the value of the total milestone payments for this phase. The remaining 50% is payable on the issue of the Milestone Completion Certificate by the Client. Similar arrangements exist for: • Systems Wide Preliminary Design (0%: 100%) • Preliminary Design Phase (80%: 20%) • Detailed Design Phase (80%: 20%)	Note only
	2 Fixed lump sum or sums	Per clause 11.7 agreed lump sum payments are capped at the contracted amount subject to any changes expressly agreed in writing *For all three payment mechanisms need to check that the contractual arrangements are being followed in practice*	Note only H
	3 Time based fee	A number of the activities set out in Schedule 3 to the SDS contract (see below) are remunerated on the basis of a time based fee.	Note only
	Clause 7.3 sets out the process for issuing the Milestone Completion Certificate	It appears to be entirely at the Client's discretion either to agree that the works are complete or to provide a notice setting out the further works to be undertaken. In both scenarios the Client must issue his decision within 3 days of being notified that work is complete and support this with a Certificate or notice of further work within ten days.	Note only
	Clause 12.7 provides for the retention of 3% of all amounts certified (to be achieved by the SDS Provider invoicing 97% of the sum certified) prior to the execution of the Novation Agreement. This amount is to be paid on novation or on notification that the SDS contract is not to be novated.	Per clause 12.7.4 the SDS can offer a Retention Bond in replace of the retention. The Retention Bond shall be for £500,000. *Need to check that the contractual arrangements are being followed in practice*	H
	Per clause 27.1 the SDS Provider indemnifies the client against losses, liabilities, damages etc arising from any negligence, wilful acts or omissions by SDS employees	Clause 27.6 provides that the total liability under this indemnity is capped at £10m.	Note only

Contract	Area to which payment mechanism relates	Other comments *(items in italics indicate outstanding work or actions required)*	Priority
	or parties, breach of any term of the SDS contract, breach of any law or non performance or delay in delivery of any obligations under the agreement.		
	Clauses 29.2 and 15 provide for **tie** to make changes to the scope of work to be undertaken under the SDS contract. Clause 29.5 requires the SDS Provider to provide an estimate of the costs of any changes to works under the SDS contract caused by bidders' proposed changes to the infrastructure contract	*Need to check that the contractual arrangements are being followed in practice*	H
	Scope of services are set out in Schedule 1	This schedule runs to about 20 pages	Note only
	The pricing details are set out in Schedule 3. They run to over 130 pages.	This breaks down the work by Line 1 and Line 2. Need to consider whether this needs updating/ renegotiating in light of the latest decision regarding the route	Note only
Commissioning Service Agreement (being drafted)	Contract is to ensure that the Operator provides services to InfraCo to facilitate the commissioning of the infrastructure and the trams such that the network is licensed and ready to operate on the due date.	Contract is in very early draft form so, for example the schedules relating to scope of services, schedule of key dates, key personnel and payment profile are blank. Drafting of payment clause 20 indicates that there is an ongoing discussion as to whether payments should be milestone based (per the SDS contract) or for agreed monthly amounts. There are support schedules outlining the scope of services but again these appear to be early drafts in order to collect views. This is drafting in respect of damages for delay (liquidated damages etc) but it there are no values and the text does not appear to have been tailored. *This contract, ideally in signed form, will need to be made available to infrastructure bidders to give comfort that they will get adequate support from the Operator during the commissioning phase of work.*	M
MUDFA	Not reviewed as this contract is being negotiated		
TSS	REVIEW O/S		

5.3 The principles

Included in Appendix B is a paper that sets out the basic approach to performance related payments that are planned to be applied to the infrastructure, tram and operating cxontracts. The paper is work in progress but views are sufficiently developed for it to be useful to outline the high level principles being adopted. These will necessarily be subject to review as a result of:

- further work on the detail which might reveal complications in implementing the principles currently established; and
- feedback from senior managers on the Project and stakeholders.

The principles currently being developed by David Powell, supported by Alisdair Richards and Jim Harries, are:

1 The delivery of appropriate levels of performance across a wide range of measures is critical to delivering the business case benefits.

2 The performance and payment mechanisms adopted should fit together across the infrastructure, tram and operating contracts such that the service providers are appropriately incentivised to deliver jointly a consistent level of service to customers with no gaps.

3 As evidenced on other transport systems the delivery of a frequent and punctual service (i.e. a service that can be relied upon) is key to building ridership. The most important performance requirement to be incentivised is therefore punctuality.

4 A measure of punctuality will be established and a mechanism put in place such that each failure in punctuality is identified and attributed to one of InfraCo, TramCo or the Operator at a daily delay attribution meeting. The relevant party will be penalised accordingly.

5 There is provision for Relief Events i.e. events that cause delay, are outside InfraCo, TramCo and the Operator's control and therefore do not trigger Late Train penalties.

6 The key measure of performance is a Late Tram or a Late Last Tram. These may be broadly defined as follows:

- Late Tram: a tram in passenger service arriving at Edinburgh Airport more than two minutes late or departing a Monitoring Point more than two minutes late or one minute early.
- Late Last Tram: a last tram of the day that either passes a monitoring point more than five minutes behind timetable or does not run at all. Late Last Trams are highlighted because of the disruptive impact for customers caused by a Last Tram not running or running too late to make connections.

7 In addition to punctuality there is a range of other measures (KPIs) to be put in place to both to protect **tie** in terms of getting the quality of operations it requires and to support customers' experience. These include:

- Delivery of planned maintenance by InfraCo and TramCo;
- Tramstop equipment availability (eg ticket vending machines, CCTV, Help Points, Passenger Information Displays, Public Address systems. lighting, seating, glazing, litter bins); and

- Customer journey experience (eg ease of buying tickets, clean and safe environment, provision of relevant information, management of crowding, management of disruption).

Critical to the development and contracting of these principles will be to make sure that the requirement to deliver is placed with the party who is best able to manage the delivery. This can be complicated, for example, where InfraCo provides passenger information displays and the Operator is responsible for the provision and updating of data. In this and similar situations it may be necessary to put in place two measures – one relating to the operation of display systems (InfraCo measure) and one relating to the usefulness/ timeliness of information displayed (Operator measure).

8 The amount of money to be put at risk under the performance regime is proposed to be 30% of the maximum amount of periodic payments for the provision of services eg the maintenance amounts payable to InfraCo and TramCo and the operating costs incurred by the Operator. This amount is a working assumption – its appropriateness needs to be tested against its adequacy compared to the number of performance measures to be put in place and the likely acceptability to bidders.

As noted above the performance and payment mechanisms are yet to be developed in the infrastructure contract and DOPFA. There are provisions surrounding punctuality in the tram Contracts but consideration does need to be given to whether there are any softer measures relating to customer experience that still need to be addressed. This will largely depend on who is responsible for dealing with issues such as the cleaning of trams, the maintenance of on train displays and CCTV, dealing with graffiti and vandalism. This detail needs to be developed as outlined in section 5.

Asset condition is addressed in both the tram maintenance and infrastructure contracts.

6 Gaps in the payment mechanism

6.1 Overview

Since the payment mechanism is work in progress, as explained in the previous section, it is not practical to comment on gaps in the mechanism at this stage.

We recommend that the Project Team uses a similar approach to that adopted for the management of risk and spend some time drawing up a comprehensive list of deliverables under the Project, allocate the deliverables to either the Operator, InfraCo and TramCo and then consider which of the deliverables can merely be contracted and the penalty for breach, and which need to be incentivised through the payment mechanism. Consideration will also need to be given to inter-dependencies identified ad how they are best addressed.

Areas to be considered should include:

- Commissioning of the infrastructure and the trams and training of drivers and operations-related staff such that all aspects of the network are ready to commence operations on the planned date.
- Obtaining all safety-related consents from HMRI, licenses and other relevant permissions such that operations are authorised to commence on the planned date. This should be extended to address where one of the parties has to take actions to support another party to fulfil his responsibilities.
- Safety related activities (eg maintaining the safety case, notices on trams and at stops, dealing with incidents, reporting of incidents, learning from incidents).
- Punctuality – this should probably be extended to considering sources of failure and how these might be agreed/ addressed through the daily attribution meeting.
- Delivery of the published timetable.
- Responsibilities and priorities in the event of a breakdown (of either a tram or the system), including learning from incidents, relevant standby resources.
- Revenue protection activities.
- Ticket retailing (eg publicising tickets, selling tickets, provision of advice on the best ticket to buy).
- Operation and maintenance of CCTV.
- Operation of Help Points, including response times.
- Delivery of activities to make customers feel safe when using the tram system.
- Provision and presentation of passenger information – real time systems? Information to be displayed? How monitored?
- Light and heavy maintenance of infrastructure and ancillary equipment (eg power sub-stations), tram stops (including shelters and ticket machines), the trams and the depot. Need also to reflect requirements for an asset/ maintenance register to facilitate effective monitoring and planning of work.
- Cleaning and presentation of all of the above assets (including when an asset should be withheld from or withdrawn from service).

- Provision and presentation of information posters, timetables and other standing information to help passengers – this may be extended to activities related to supporting an integrated transport system (eg signage, promoting multi modal tickets).
- Dealing with Lost Property.
- Passengers' Charter – both what it says and honouring commitments.
- Complaints handling procedures – prompt handling of complaints, analysis of complaints, reducing complaints.

7 Acceptability of the payment mechanism to the market

7.1 Generic lesson

Since the payment mechanism is work in progress, it is not practical to comment on the acceptability of the mechanism to the market. Nevertheless, there are some generic lessons that can be drawn from recent experience in the light and heavy rail sectors in the UK. These are as follows:

- **Controllability:** service providers will be extremely reluctant to take responsibility for delivering outputs over which they cannot exercise full control. To some extent this is a problem that will be faced by InfraCo in respect of the delivery of a punctual service, since InfraCo will, in the first instance, be responsible for tram failures. Whilst it should be able to recover compensation from tram-related failures from TramCo, it is still left with the uncertainty related to agreeing and recovering relevant compensation. Anything that facilitates the recovery by InfraCo of amounts related to tram failures will be welcomed by InfraCo but is likely to concern TramCo since such a mechanism could incentivise InfraCo to attribute failures to TramCo.

- **Amount of periodic payments at risk:** service providers generally accept that they should be paid based on the delivery of a defined output. However there will be an underlying cost of delivering that output and service providers will reasonably expect to recover a basic level of costs for delivering the service.

  It is being proposed that the amount put at risk for performance by the three service providers should amount to about 30% of their annual receipts under the relevant contract assuming that the service provider earns the full performance award. It is difficult to assess the reasonableness of this amount because:

  (a) it will depend on the service providers' perceptions of the deliverability of and risks associated with the targets; and

  (b) if bidders are concerned about the achievability of the targets, they might choose to price what they estimate to be the full costs of service provision and then uplift this estimate by the amount to be put at risk, thereby only risking their own profit. This approach is best addressed through a competitive bidding process (bidders may be too expensive if they adopt his conservative approach).

- **Track record**: the ability to price and accept a particular performance mechanism can be significantly influenced by the existence of a track record as this should make it much easier to assess the deliverability of, and the costs of delivering, the standards. For example, a bidder will likely find it relatively easy to accept the risk of delivering 95% punctuality if he knows that the system has consistently achieved 94% to 96% punctuality. Similarly he should be able to price the improvement of consistent 95% punctuality to 96% if he has sufficient data on the source of failings to develop a remedial plan in which he is confident.

  The Project faces a situation where there will be no track record as such. However the use of proven technology and benchmarking against other users should facilitate the Project team to get an understanding of how challenging are the standards that are being set.

- **Penalty should reflect the cost of rectification**: in determining the amount of a penalty it should be recognised that a service provider is unlikely to be undertaking work where the marginal cost of that work exceeds the marginal benefit in terms of reduced penalties or increased rewards. This suggests that the setting of the penalties

and rewards needs to have some regard to the actions that might be taken to improve performance.

There is also a possibility that if the amount to be put at risk is calculated bottom up i.e. it is defined to provide a real incentive to take action, the total amount to be risked may be much greater than 30% of annual receipts.

- **Number of deliverables**: experience surrounding performance related payment mechanisms suggest that the more deliverables are measured, the greater the challenge in meeting the deliverables. In effect, the number of deliverables can become a distraction and there is a risk that the service provider focuses on the easy wins rather than the deliverables that are of most importance to the buyer. Careful consideration therefore needs to be given to specifying the deliverables at an appropriate level (eg having a single measure of clean rather than separate measures for graffiti, litter, over grown foilage etc) thereby both limiting the number of deliverables and leaving the service provider with some discretion over how to deliver the required standards.

  Limiting the number of deliverables also helps to ensure that the potential penalty pot attaching to each deliverable is material. For example if it is determined that the maximum amount that can be put at risk is 100 and it is proposed to incentivise 100 deliverables, the average penalty will by 1. If only ten measures are proposed than the average penalty is 10 which is more likely to influence behaviour.

- **Measurement of the deliverables**: critical to the acceptability of a performance regime is defining standards that can be objectively and relatively easily measured otherwise (a) attention will focus on the measurement process rather than rectification actions; and (b) the service provider may struggle to know whether actions taken are bringing about an improvement.

- **Diminishing returns**: in setting standards it should be recognised that many deliverables are not capable of being delivered at the 100% level or that it would be extremely costly and not represent value for money to seek to achieve this. Moreover, the achievement of 100% may deflect effort from other deliverables which may assume more importance under this scenario. For example at DLR, where performance levels are extremely high, emphasis is not being put on further improving daily performance but on minimising the impact of major disruptions by looking at ways to get back to timetable more quickly after incidents.

In light of these points the Project Team should have regard to standards being achieved on other similar networks and benchmark the standards they are setting in order to

- set targets that are deliverable cost effectively and that represent value for money - bidders will build in costs to achieve the standards set and are unlikely to advise that a slightly lower standard can be achieved much more cheaply; and

- give bidders confidence in the deliverability of the standards set.

Regards also needs to be had to the dispute resolution process. Service providers will be wary of schemes where they have no ability to appeal assessments or understand better the reasons why they are judged to fail. Proposals to introduce electronic or automatic reporting of failures (relatively easy to put in place for measures of equipment availability) will go a long way to removing the likelihood of disputes.

8 Other governance related issues

Set out below are some other observations arising from our fieldwork. We recognise that because of the recent changes to the Project and the Project Team **tie** may already be putting in place actions to address these points. Our observations cover the following areas:

- Resourcing
- Number of options
- Governance following the letting of the contracts
- Management of the DPOFA and SDS contracts
- Use of Transdev and Parson Brinckerhoff
- Bid evaluation
- Bidder queries

8.1 Resourcing

With the recent changes to the Project Team there is a severe risk that David Powell could become overloaded. He appears to have the skills to progress the infrastructure contract effectively but for at least the next two months he needs to be freed from any project management or material tram-related responsibilities. Longer term consideration needs to be given as to how the work required to let the infrastructure and tram contracts is best resourced.

8.2 Number of options

It has been indicated that bidders on the TramCo contracts will have to bid against more than 90 variants albeit that David Powell has taken responsibility for reducing this number and explaining how this will be achieved. Whilst we understand the desire to keep to the timetable that has been notified to bidders, asking for 90 variants sends out the wrong message surrounding the state of readiness of the Project.

The evaluation of this number of bids is extremely difficult and it is quite possible that the winning bidder does not offer best value for money on the scenario that is ultimately contracted. Also there is a risk that bidders will be overwhelmed by the workload resulting in them not pricing their bid(s) optimally.

With the additional time now available before the release of the TramCo documentation it is important to cut down the number of variants, ideally to no more than 10.

Similarly it is important to limit the number of variants to be addressed by bidders for the infrastructure contract.

8.3 Governance following the letting of the contracts

An unfortunate feature of letting complex projects is that the team becomes totally focussed on creating, negotiating and concluding the contracts and often little consideration is given to the implementation phase. It is likely that, regardless of the contractual arrangements, it will be possible to realise much of the value of the Project through the effective management of the parties. Similarly, poor management of the contracts could jeopardise delivery of the business case.
Areas that are traditional sources of problems are:

- The contract letting team often disbands and moves on following the signing of the contracts but the winning bidders achieve a much greater level of continuity. As a result the new contract management team only has a partial understanding of the aims and objectives of the contract. This gives the winning bidder's team the upper hand on any issues requiring the interpretation or flexing of the contract.

- Inadequate information: in order to be an effective manager of a contract, particularly one involving a new business, the contract management team needs to get close to the business and obtain a good understanding of the key business drivers, the main issues arising and the opportunities for the service provider to address the issues. In order to achieve this understanding the contract management team needs access to data and to be able to have meetings with the contractors to discuss trends and causes of variations in the data.

- Re-letting: **tie** is proposing a relatively short operating period prior to re-letting the infrastructure and tram maintenance contracts. This raises two issues:

    1 How to encourage the TramCo and InfraCo to develop and improve their approach in the last couple of years of the contract, which could represent about one-third of the term; and

    2 Obtaining sufficient information, explanations and support from the incumbents to facilitate a competitive re-letting process. Without such information, it will be very difficult to stimulate competition in particular because potential bidders will be concerned about an incumbency advantage.

tie needs to address these issues up front in the tendering process and check that adequate provisions are built into the relevant contracts. For example data requirements and relevant meetings should be specified in the contracts, otherwise provision needs to be made in the contracts for the management team to request data and meetings.

tie should also give early consideration to the role and size of its management team as this will help it to ascertain its information requirements and will also help to achieve continuity and harden up negotiating positions when finalising contracts.

8.4 Management of DPOFA and SDS contracts

Given the effort being put into developing the suite of contracts at the moment **tie** needs to make sure that enough attention is being paid to managing, and obtaining on time, deliverables from the contracts that are already in place eg DPOFA and SDS.

8.5 Use of Transdev and Parsons Brinckerhoff

tie has put together an immensely experienced team. Members of the team have worked together previously which offers efficiencies. However there needs to be recognition of the different roles and parties individuals are representing on this project. For example, Transdev is taking a leading role in developing the principles paper surrounding performance and payment mechanisms – this could result in Transdev shaping a scheme that is not in the best interests of **tie**.

Consideration should be given to seeking input from **tie**'s advisers under the TSS. Such consideration should take into account the need to have technical advisers up to speed if potential conflicts are identified later in the project.

8.6 Bid evaluation

Effective evaluation of bids is critical to selecting the bid that offers the best value for money for the tax payer. The key to effective evaluation is to ask the right questions. Asking the right

questions requires clarity over what you are trying to assess, the type of evidence you are looking for, the relative importance of different types of evidence.

Since the questions will be included in the ITN addressing the points raised above effectively requires the completion of the bid evaluation plan before the ITN is issued. Whilst it might be argued that there is not enough time for this, experience indicates that delivery of a poorly constructed ITN on time will add more time to a bidding timetable, perhaps adding an extra round of bids, that a slightly later ITN which elicits bids that are easy to evaluate.

Having a well prepared and transparent bidding process will likely build the confidence of bidders and therefore improve the competitive process. More importantly, it should also help to engage the stakeholders in the process thereby improving their support for the conclusion.

The Project Team should look at the instructions in the tram ITN and take advantage of the extended timescale for issuing the infrastructure ITN to assess whether the plan for evaluating the questions posed is adequate or whether it can be improved to reflect better the key issues to be addressed in selecting a winning bidder.

8.7 Bidder queries

Whilst we have not sought to understand the state of readiness of the team to deal with bidder queries following the release of the tram documents, it cannot be over emphasised how important it is to have resources and quality control systems in place. A properly run clarification process will give bidders confidence. On the other hand, it is very difficult to recover from inadequate systems and resources on Day 1 and weaknesses will undermine confidence and potentially present problems for the evaluation of bids.

Appendix A

Review of the commercial principles, in particular payment mechanism, of the Edinburgh Tram project documentation

Draft scope of work for PwC:

Documentation surrounding the procurement of Edinburgh Tram currently falls into three main categories:

- High level terms and conditions as summarised principally in section 6 of the Outline Business Case ('OBC Principles'). The key stakeholders are familiar with these summaries and have had the opportunity to comment on them.
- More detailed principles as set out in a number of working papers and summary documents, the principal ones being the Performance Regime Concept and the Summary of Liquidated Damages, Retention levels and Liability Caps for the tram vehicles procurement and the paper prepared by PwC and submitted to Transport Scotland on 19 April('Principles Papers'). These papers are relatively recently developed and therefore limited comment has been provided on them by stakeholders.
- Draft contracts. These are work in progress and have had a limited audience. Work is therefore required to complete the drafting and confirm that it properly reflects the views of key stakeholders.

The principal aims of the work to be undertaken by PwC between 1 May and 19 May, prior to commencement of an external Readiness Review, are to:

1. Review the current drafts of the Infraco contract, the Tram Supply contract, the Tram Maintenance Contract, the SDS contract and the original DPOFA (together 'the Contracts') to address whether they are consistent with the OBC Principles and the Principles Papers and that they act in unison as a suite of documents;
2. To conduct a review of the payment mechanism principles in the Contracts to ensure that incentives and penalties flow to the correct party;
3. Identify any material gaps in the payment mechanism i.e. whether there are any material gaps which are not properly addressed or material activities that are not properly incentivised; and
4. Comment on the likely acceptability of the payment mechanism to the market.

Since the **tie** project team recognises that it needs advice from its financial adviser (PwC) in order to finalise the draft Contracts for submission to bidders, PwC's work should also be planned and executed in a manner which facilitates the provision of this support. The timing of this support has yet to e confirmed.

The principal deliverable will be a short written report that provides a guide to the payment mechanism and highlights (1) any material deviations in the drafting compared to the OBC Principles and the Principles Papers; and (2) any material commercial gaps in the drafting. The report will also consider the acceptability to the market of the proposed approach as reflected in The Contracts.

Appendix B

Principles set out in the OBC

Set out below is a table that shows:

- the key principles as set out in the OBC; and
- how they are being addressed on the development and execution of the Project.

It should be noted that the Project is at a stage where considerable work is being undertaken and major strategic and commercial decisions are being made. Therefore the comments surrounding the application of principles set out below represent, in many, cases intentions rather than binding conclusions. It will therefore be important to re-confirm the application of principles both before the bidding documentation is released and prior to signing the contracts.

Ref No	Principle in the OBC	OBC Ref	Application *(text in italics reflects actions to be taken)*
1	Two contracts: an operating contract (DPOFA) and an infrastructure contract with the infrastructure contract acting as a 'holding' contract	6.3	This is the approach being implemented
2	Early selection of the operator of the system	6.3.1	DPOFA signed with Transdev in 2004. Clear that Transdev is very much part of the development process
3	Separation of operations and system delivery	6.3.2	This is the approach being implemented
4	Early involvement of systems designer	6.3.5	Contract with Parsons Brinckerhoff signed Sept 2005
5	Utilities diversion undertaken as advanced works	6.3.6	Still the plan – **tie** is currently in dialogue with bides for the MUDFA
6	Separate selection of infrastructure and vehicle contracts	6.3.7	Separate documentation, contracts and timetables being implemented
7	Preference amongst infrastructure providers to know who vehicle provider will be before finalising bids	6.3.7	Factored into current timetable and being reflected in discussion surrounding update of timetable
8	**tie** to project manage acquisitions of all land and land rights	6.3.8	Currently being implemented
9	Outline of approach to remunerating TransDev under DOPFA	6.6.3	This reflects the mechanism that is contracted in Appendix 1 to DPOFA
10	Vehicle maintenance: reference case is for 6 years' operations but variants to be sought for 15 and 30 years	6.11.1	Reflected in current draft of ITT. *Need to be sure that we don't remove this requirement in cutting down the number of options*
11	Tram supply and maintenance agreements to be novated to InfraCo	6.11.1	Reflected in the current drafts of the documents
12	Bids for the infrastructure contract to be evaluated on the basis of whole life cost	6.12.1	*Need to ensure that this is clearly reflected in the final ITN and agree how this evaluation will be conducted*
13	Infrastructure operations for 6 years initially with 3 year roll over plus variants for 15 and 30 year maintenance	6.12.1, 7.4.4	Roll over mechanism provided for in drafting. *Need to decide whether to set criteria to be eligible for roll over.* Note that draft contract provides for extensions up to 30 years.
14	Financing/ risk transfer structure for	6.12.5	Thinking represented in OBC may be

Ref No	Principle in the OBC	OBC Ref	Application *(text in italics reflects actions to be taken)*
	infrastructure contract reflects shorter maintenance period and suite of bonds and LDs to deliver characteristics of risk transfer		ahead of where drafting is. These protections are high up the Project Team's agenda.
15	The case for the 'enhanced' conventional procurement strategy includes the assertions that **tie** has assembled the means to carry out its own 'due diligence' on all aspects of the project ahead of the Infraco contract, in effect, simulating the rigorous analysis of contractual and management arrangements that would normally be undertaken by the senior lenders under a PPP approach.	7.3.6	*Need to ensure that having indicated that we will undertake our own due diligence that:* *(a) **tie** does so; and* *(b) the standard of the work is appropriate*
16	The proposed approach includes many of the risk management features that a Special Purpose Company undertaking a PFI project would put in place e.g. liquidated damages for late completion, bonding requirements for construction and operating contracts.	7.4.2	*LDs and bond requirements are being discussed, although the amounts and the drafting of triggers has yet to be completed.*
17	Payment to the Infraco during the construction period will be governed by a comprehensive 'fine grained' milestone schedule. The schedule will include clear and rigorous criteria for the achievement of milestones during testing, commissioning and acceptance of each element of the system. Should Infraco be late with the delivery of the tram system it would be liable to **tie** for substantial Liquidated Damages.. This Liquidated Damages amount would relate to the potential loss experienced by **tie**, arising from a mobilisation of operations prior to the system being available. The Liquidated Damages provision would be within an overall substantial Performance Bond which would be callable in the event of non-performance or abandonment by Infraco of its obligations under the Infraco contract. The Performance Bond would be released at service commence date (i.e. post commissioning completion).	7.4.6.1	*There is nothing in the Infrastructure Contract defining the milestones. **tie** is asking bidders scope to determine the milestones.* *However, such is the importance of the milestones in incentivising and managing InfraCo, **tie** needs to determine a robust, preferred position on milestones i.e. it should take the lead in defining the milestones and not take a passive role. It is vital that the achievement of milestones is clear cut – endless debates over technicalities will harm the relationship early in its life – and that they truly represent significant progress on the project.* *LDs and performance bonds of the nature described are planned but the detail has yet to be drafted.*
18	Provision of parent company guarantee in support of InfraCo	7.4.6.2	*Included in the draft TN and draft infrastructure contracts but no form of words is provided.*
19	Payments under the maintenance contract will be subject to satisfactory performance of the maintenance obligations, the test for which will be a mixture of output based e.g. the availability of the infrastructure on an ongoing basis, or input based e.g. against an agreed schedule of	7.4.6.3	*The performance and payment mechanisms are still being developed. There are two key issues to address:* • *the output of the network – this will largely be measured through delay attribution; and* • *maintenance – potentially more*

Ref No	Principle in the OBC	OBC Ref	Application *(text in italics reflects actions to be taken)*
	maintenance works.		*of a challenge because over six years poor maintenance may not manifest itself in poor performance but the lack of maintenance could be storing up problems for the future.*
20	Provision of a Defects Rectification Bond	7.4.6.6	*Intention to provide for but drafting not complete*
21	Introduction of an Owner Controlled Insurance Programme	8.3.8.4	Draft ITNs for tram and infrastructure include a schedule setting out the insurance cover that the contractor ir required to obtain.
22	Under DPOFA terrorism is a force majeure event. However the Operator is responsible for protecting the system. **tie** will define the extent of duties required to protect the system.	8.3.9.3	*Need to check what is currently provided in DPOFA and how it should be updated.*
23	Allocation of risk during the development period (see table in OBC)	8.5.1	SDS responsibilities agreed to the SDS contract
24	Allocation of risk during the construction period (see table in the OBC)	8.5.2	Seems to reflect current approach *This will need to be reconfirmed as the draft contracts are finalised for issue to bidders.*
25	Allocation of risk during the operating period (see table in the OBC)	8.5.3	Seems to reflect current approach *This will need to be reconfirmed as the draft contracts are finalised for issue to bidders.*
27	Clearly stated approach to managing project risK • Risk Management • Scope management ie changes in the terms of reference • Monitoring and control • Planning • Day to day administration • Organisation and team	9.3.2	***tie** needs to satisfy itself that all of the actions described are being implemented.*
28	Proposals to have a management of change protocol so that all relevant parties are aware of changes and there is an opportunity to check that nothing is dropped as a result of the changes. This approach is reinforced by reference to a Management of Change protocol	9.3.3	Proposal appears sensible and fits with the approach to governance proposed in this report. ***tie** needs to ensure that the detail behind this approach is developed and is properly embedded in the Project Team's approach to the development and negotiation of the contracts.*

Appendix C

Paper	Page No
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Summary of Liquidated Damages, Retention levels and liability caps under the draft Tram Maintenance Agreement and draft Tram Supply Agreement	16
Edinburgh Tram Network Costs of Funding for Alternative Procurement Routes for InfraCo	22

The paper below is provided as a record of what we have been able to find in terms of a principles paper on the performance and payment mechanism. The paper, together with the comments from DLA, demonstrates that there is considerable work still to be done and the attention to detail that will be required in order to complete the performance and payment mechanisms.

This paper was prepared by members of the Project Team as an internal document in order to develop thinking and provide drafting guidance for DLA – it also includes comments provided by DLA (text below in italics). There is a later draft of this paper held by David Powell reflecting his thoughts but we have not been able to find an electronic copy of the paper owing to David being on holiday.

Performance Regime Concept Paper

1 Introduction

This document sets out a proposal for the suite of performance regimes for the Edinburgh tram project. It is the intention of **tie** to procure the operation of the system through 3 separate contracts:

- Operations, through the DPOFA with Transdev as the Operator
- Infrastructure Maintenance, with the selected InfraCo undertaking this activity
- Tram Maintenance, with the selected TramCo undertaking this activity, as a subcontractor to InfraCo

In the longer term, probably after 6 years, **tie** may re-configure these contracts. This may result in new contracts being let for these activities. Consequently setting up the performance incentive mechanisms for each contract as linked, but stand alone schemes should facilitate any eventual re-configuration.

The purpose of the regimes is to incentivise performance of the system in order to protect and develop the business case for the system and consequently the main focus is on those aspects of the system that attract patronage and secure revenue. The dominant factor in all three schemes is the punctuality of the trams. This is supported by measuring other factors such as cleanliness, provision of information, security and the availability of systems.

For both TramCo and InfraCo, a bonding mechanism has been incorporated into the draft contracts to enable payment for underperformance by either maintenance Contractor, leading to termination and provision of funds to cover remedial works. The mechanism for triggering this bonding should be linked into the mechanisms described herein. *The bonding mechanism in the Tram Maintenance Agreement operates in relation to the maintenance of the spare parts pool and the condition of the Trams compared to the specified Redelivery Condition. It operates in these specific cases only. The bonding mechanism does not operate in relation to the punctuality performance regime, nor would it, in our opinion, be appropriate to do so, as this is already incentivised by deductions. THE BONDING MECHANISM FOR THE INFRACO CONTRACT COULD BE CALLED UPON TO REMEDIATE DEFECTS NOT COVER OFF DEDUCTIONS.*

This paper sets out the evaluation of punctuality *(we presume there will be other performance quality regimes to incentivise the Operator in relation to soft quality issues e.g. cleanliness, provision of timetable information, accurate PIS/PAS information, etc. - **tie** to confirm THERE IS DRAFTING IN THE DPOFA - THE KPIs*

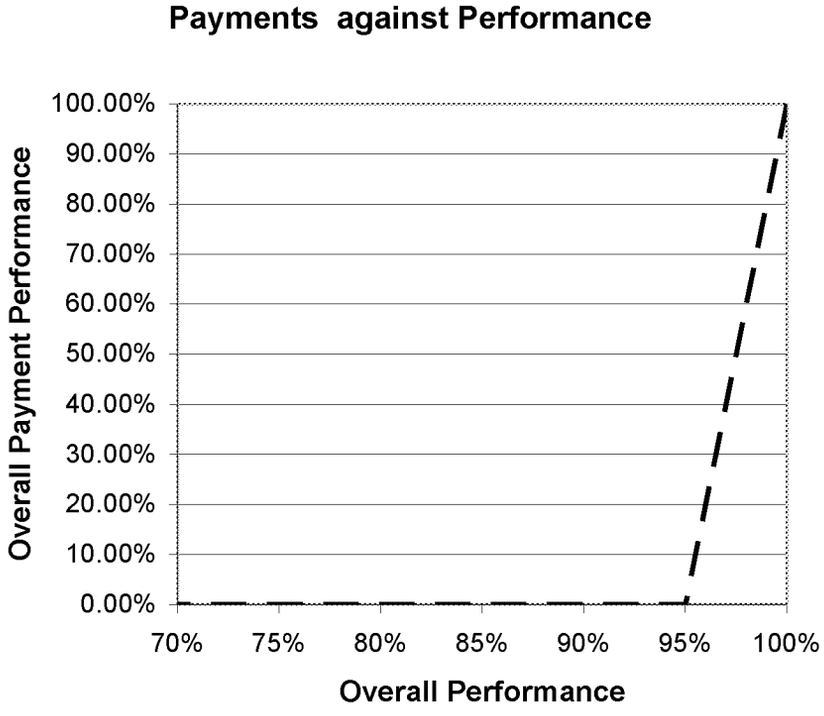
ARE HEADWAY, FIRST AND LAST TRAM, CUSTOMER SURVEY, SECURITY, CLEANLINESS, INFORMATION/SIGNAGE AND REVENUE GENERATION.). The mechanism applied to each of the three performance regimes is driven by the same operational data, which will be captured automatically by the Supervisory & Communications System

All performance calculations are undertaken to reflect the actual performance over a Period.

For each regime, the Maximum Performance Payment is as follows:

- As set out in the DPOFA for the Operator - *DEDUCTIONS ARE MADE AGAINST THE OPERATOR'S PROFIT ELEMENT MULTIPLIED BY A FACTOR OF 1.1.*
- [£] for InfraCo, and
- [£] for TramCo

The amounts actually paid under these schemes will lie between the Maximum & Minimum Performance Payments. *The amount of the minimum Performance Payment needs to be calibrated in order to assess whether TramCo will be properly incentivised under this regime. For example if the minimum performance payment is 85% of the contract price this will have a significantly different effect to it being 30%. AGREE WITH THIS COMMENT - SAME GOES FOR INFRACO* Between these two values, there will be a linear relationship for each of the three regimes, as shown diagrammatically below*: GIVEN THE WAY IN WHICH THE OPERATOR IS PAID IS DIFFERENT I DO NOT THINK THAT THE GRAPH WORKS*



The payment made by **tie** to each supplier under the scheme is

*((Maximum Performance Payment - Minimum Performance Payment) * (Overall Payment Performance for the Period)) + Minimum Performance Payment*

2 Defined Terms

Each scheme is outlined in the attached documents which use the following defined terms:

Defined Term	Definition
Contractor	Either: • The Operator, • TramCo, or • InfraCo Collectively referred to as The Contractors
InfraCo Late Tram	Is a Late Tram that is late due to *any breach or non-performance by InfraCo of any of its obligations in the InfraCo agreement which : SUGGEST THAT THIS WILL NEED TO BE REVIEWED TO ENSURE THAT THE DRAFTING IN THE INFRACO CONTRACT PLACES APPROPRIATE STANDARDS ON THE INFRACO. EG THAT THE INFRACO DOES NOT CARRY OUT MAINTENANCE AT TIMES WHICH WILL IMPACT ON THE PROVISION OF THE SERVICE* directly or indirectly causes the tram to be late
Last Timetabled Tram	The timetable slot for a Last Tram
Last Tram	A timetabled tram that is the last to operate on any route in each direction prior to the system shutting down for the night.
Late Tram	Either 1. a tram that is in passenger carrying service, and 2. is arriving at (Edinburgh Airport only) or departing from a Monitoring Point, and 3. when its actual arrival/departure time at/from the Monitoring Point is compared to the Timetable, it is either more than 2 minutes late or more than 1 minute early, or it is a Timetabled time at a Monitoring Point for which there is no tram running in service.
Tram Material Defect	A defect to a tram that has been advised to TramCo and is included in the Schedule of Material Defects in Schedule 1 hereto
Monitoring Point	A location when the arrival and/or departure of trams is recorded for the purpose of calculating tram

	punctuality. The following locations are to be employed: *Arrival & Departure Monitored* • Edinburgh Airport *Departure Only Monitored* • Edinburgh Park Station **[check name]** • Haymarket • Foot of the Walk • Leith (Newhaven or Ocean Terminal) • Crewe Toll • Granton Square
Operating Day	A 24 hour period running from [6 a.m.] on each day when Trams are timetabled to run.
Overall Payment Performance	The result of evaluating the Overall Performance in order to alter the financial impact of the performance regime
Operator Late Tram	1. Is a Late Tram *that is late due to any breach or non-performance by Operator of any of its obligations in the DPOF agreement which directly or indirectly causes the tram to be late*
Overall Performance	The result of the calculations as set out in each of the 3 performance regimes that are then used to calculate the performance payments
Period	The period of time over which each reporting period operates, 28 days.
Punctual Tram	A tram that is not a Late Tram
Special Event	[As DPOFA?]
Timetable	The timetable that has been agreed between the Operator and **tie** in accordance with DPOFA
Timetabled Monitored Trams	The maximum possible number of Punctual Trams that could be achieved during the period concerned.
TramCo Late Tram	Is a Late Tram that is late *due to any breach or non-performance by TramCo of any of its obligations in the TramCo agreement which* directly or indirectly causes the tram to be late
Trip	A journey made by a tram from an originating point to a destination point. Typically, the cab from which the tram is driven changes at the start and end of each trip. However if the whole of Line One is built and it is operated as a circle, the change of ends will not be required for certain services, in which case points along the route where layover time is built into the timetable will be used to segregate trips.

Tram punctuality is monitored against the Timetable. When a tram is either running too early, too late or not at all, then deductions will be made to the Overall Performance, which will lead to reductions to the Overall Payment Performance for

the Contractors. Overall Performance deductions will ultimately fall to the organisation at the root cause for the problem; Operator, InfraCo or TramCo. Once the organisation that is responsible for the Late Trams has been agreed, each organisation then has a specific mechanism relating its overall performance to Overall Payment Performance.

3 Apportionment of Responsibility

Other than where a Relief Event applies, all Late Trams are identified as InfraCo Late Trams, TramCo Late Trams or Operator Late Trams according to the definitions of these terms. This allocation process will be undertaken at the morning meeting on every Weekday at 09:00 hrs or as otherwise mutually agreed. All 3 organisations and **tie** will be represented at this meeting. Where agreement cannot be reached, **tie** will intervene and decide. Where **tie**'s decision is not accepted, the matter can be raised to the dispute resolution mechanism. *There is no overarching dispute resolution process under which the contractor's can appeal against **tie**'s decision. However, each relevant agreement has its own dispute resolution process (which are all identical) and the agreements specifically allow for "joinder". DLA Edinburgh to confirm if use of the joinder mechanism provides an efficient and appropriate mechanism for resolving day-to-day apportionment of responsibility disputes. THE JOINDER MECHANISM ALLOWS FOR JOINDER IF A DISPUTE HAS BEEN REFERRED TO ADJUDICATION. WE WOULD NEED TO INCLUDE NEW DRAFTING TO ESCALATE A DISPUTE BETWEEN THE THREE PARTIES TO CHIEF EXECUTIVE LEVEL IF THIS WAS REQUIRED.*

4 Calculation of Punctuality Performance for the Contractors

The Punctuality Performance for each of the Contractors will be calculated in a similar manner, as follows:

1 - (the total number of Contractor Late Trams)/(total number of Timetabled Monitored Trams),

expressed as a percentage.

5 Relief Events

With the proposed redefinition of the various Late Trams (which are attributable to a breach of the relevant Contractors' obligations) there is no need for the concept of Relief Event, so long as the obligations in the relevant agreements are correctly framed i.e. they do not impose responsibility on the Contractor for third party events, but do subsequently impose a responsibility on the Contractor for recovering the service within a specified/reasonable period. Without this latter principle, there would be no incentive for the Contractors to recover service punctuality as the original cause of the Late Tram was beyond their control. This would, for example, catch the Tram Maintainer's breakdown recovery responsibilities within the performance regime. This also simplifies the performance regime by eliminating the need for overriding Relief Events / Excusing Causes which with the benefit of hindsight might be exploited in ways that were not necessarily contemplated at the time when the contracts were entered into (i.e. loopholes). AGREE - COMPARABLE INFRACO OBLIGATIONS WILL NEED TO BE DRAFTED Wouldn't this be unworkable?

6 First and Last Tram

As the first Tram is likely to be relatively lightly used, it is not proposed to apply any particular performance measure to its performance over and above that applied to all other timetabled Trams. *[IN DPOFA, FIRST AND LAST TRAMS WERE TREATED I ON A COMPARABLE BASIS.]* However, if any of the Last Trams fail to operate, the inconvenience to passengers can be extreme. Consequently the following mechanism is used:

The Last Trams are those that are set out in the Operations and Performance Specification [check reference before publishing]. For the Network, there will be either 4 or 2 Last Timetabled Trams each depending on whether any of the route between ROJ and GRS is built.

In order to qualify as a Last Tram, it must:

1. Be a Punctual Tram, *(this may be a question of semantics - but a Punctual Tram can be up to a minute early, and presumably this would be unacceptable for the Last Tram?)*operating in the path of the last tram,
2. Permit passengers to board and alight at all tramstops on the route for that tram
3. Arrive at the destination point of the route within 5 mins of the timetabled arrival time. *Isn't this unnecessary if the Tram must already be a Punctual Tram?*

The performance for this factor is calculated as

(total number of qualifying Last Trams) / (total number of Last Timetabled Trams),

expressed as a percentage.

The aggregate Last Tram performance (2 or 4 values, each weighted evenly) will represent 5% of the Punctuality Performance for each day.

7 Termination

In the event that a contractor's performance level falls below a threshold value, contract termination may be triggered. [use the provisions within the DPOFA to develop a mechanism for Tramco & Infraco) – *DP note: sounds sensible, where do we find this? This is already included in the Tram Maintenance Agreement, but the threshold requires calibration by* ***tie****. DPOFA CONTAINS TWO PERFORMANCE RELATED TERMINATION EVENTS. ISSUE OF A SECOND MAJOR KPI BREACH NOTICE AND UNDERPERFORMANCE BELOW A DEFINED THRESHOLD.*

IN RESPECT OF THE INFRACO CONTRACT, WE NEED A KPI REGIME WITH POINTS/DEDUCTIONS ASSOCIATED WITH POOR PERFORMANCE. THIS WILL NEED TO BE DRAFTED.

Provisions Specific to TramCo

8.8 Number of Trams that may be Required for Service

TramCo is required to provide trams each day to the Operator at the depot. The number of trams required is generally equal to the number of trams required to meet the timetable plus one tram as a hot standby, ready to enter service to help to minimise disruption or to replace a defective tram. Trams will also be required by the Operator for training tram drivers or for other purposes.

The number of trams that TramCo is required to provide is the tram service requirement plus one. The additional one tram is a "hot spare", as set out below:

Day	Period description	Period, times	Number of trams
Mon-Fri	Early	[03:30] – [06:00]	[? + 1 = ?]
Mon-Fri	Peak	[06:00] – [10:00]	[? + 1 = ?]
Mon-Fri	Interpeak	[10:00] – [16:00]	[? + 1 = ?]
Mon-Fri	Peak	[16:00] – [19:00]	[? + 1 = ?]
Mon-Fri	Late	[19:00] – [02:00 on the following day]	[? + 1 = ?]
Saturday		[06:00] – [19:00]	[? + 1 = ?]
Saturday		[19:00] – [03:00 on Sunday]	[? + 1 = ?]
Sunday		[03:30] – [02:00 on Monday]	[? + 1 = ?]

DP Note: To be populated with sample info or only following establishment of the Business Case? I THINK WE NEED TO AGREE WHAT THE STANDARD TENDER IS AND BASE ALL INFORMATION OFF A SET OF AGREED PARAMETERS. IS THIS POSSIBLE ?

The operator can, with one week's notice, require additional trams for his own use, subject to the following limits:

1. During the Interpeak period, [1 or 2] trams
2. During Peak periods, [0] trams
3. At all other times, [2] trams.

If the situation arises where TramCo does not provide the number of trams needed for both the passenger service and those required by the Operator for training and other purposes, then the Operator shall recommend to **tie** which requirement is cancelled. Therefore the Operator may, with **tie**'s agreement choose to cancel trams that are in passenger service in order to undertake tram driver training. In these circumstances, responsibility for the resultant Late Trams would lie with TramCo.
1. An incentive mechanism is required for the provision of Hot Spares, as these are not directly incentivisied through punctuality, until a tram breaks down and the hot spare is required.
2. A mechanism is required to incentivise provision of the Additional Trams, for the same reason as above.
Tram Maintenance Agreement currently addresses both of these points.

8.9 Overall Performance for TramCo

The Overall Performance for TramCo will be calculated as:

= *[70%] * (TramCo Punctuality Performance) +*
*[20%] * (Material Defect Performance) +*
*[10%] * (Planned Maintenance Performance).*

The determination of these Performances is set out below.

8.10 TramCo Punctuality Performance

The performance in respect of tram punctuality is calculated as set out above.

8.11 Material Defect Performance

The expression Material Defect is a misnomer, as Trams cannot be accepted into service with a Material Defect. Accordingly that part of the regime that applies a smaller deduction for Trams which are accepted into service with defects should relate to minor defects and logically should be called Minor Defect Performance. The trams that TramCo presents to the Operator for his use should be fully functional, and fit for service. However, there is a set of defined Tram Minor Defects that a tram may have and still be allowed to enter passenger service. Where TramCo presents trams to the Operator with Minor Defects, payment deduction will apply as set out below.

Tram Minor Defects are to be set out in *Part 1 of Schedule 16. to the Tram Maintenance Agreement. Tram Material Defects which automatically make a Tram Unavailable are to be listed in Part 2 of Schedule 16. The list in Schedule 1 to this paper appears to be mostly made up of Material Defects, where you would not expect a Tram to be operated. Is this correct? Are the lists of defects to be agreed now or in a later information release? The definition of Material Defect will include a sweeper to catch any safety or non-DDA-compliant defects.* When a Tram *Minor* Defect has been identified, either by the Operator or TramCo, the Operator will mitigate TramCo losses as a result of the Tram Minor Defects by making trams with Tram Minor Defects available to TramCo for rectification at the earliest practicable time, bearing in mind the need to run operational services in accordance with the timetable.

Performance in respect of Tram *Minor* Defects is calculated as

= 1 – (Total number of occasions when a tram with a Tram Minor Defect passes a Monitoring Point) / (Timetabled Monitored Trams),

expressed as a percentage.

The "Total number of occasions when a tram with a Tram *Minor* Defect passes a Monitoring Point" in the above calculation will be established manually during the morning meeting. As the number of trams with Tram *Minor* Defects that are left in service is expected to be small, this is not expected to be a significant task.

8.12 Planned Maintenance Performance

This factor measures the amount of routine maintenance that is carried out by TramCo against their maintenance plan.

At least 3 Periods prior to the start of each Year, TramCo will submit their Annual Maintenance Plan to **tie**. This plan will support and be entirely compliant with the prevailing tram maintenance plan. The Annual Maintenance Plan will include the planned quantity and periodicity of each routine examination. Where planned maintenance activities are outstanding from the previous year, the Annual Maintenance Plan will set out how any such shortfall in maintenance will be rectified.

The following example for a fleet of 20 trams illustrates how the performance mechanism would work. This model will only be capable of calibration once the bidder's maintenance plans are known.

Exam type	Weighting factor	Quantity Planned for year	Number planned in current Period	Number achieved in Period	Points planned	Points achieved
A	2	520	43	40	86	80
B	4	260	22	23	88	92
C	12	87	7	6	84	72
D	26	40	3	2	78	52
E	52	20	2	1	104	52
F	104	10	1	1	104	104
				Totals	**544**	**452**
				Performance	**83%**	

The performance figure calculated by this method is expected to vary quite significantly from period to period. In order to smooth it out, the Planned Maintenance Performance for a Period is calculated as

*=40% * (Planned Maintenance Performance from the above spreadsheet) + 35% * (Planned Maintenance Performance for the previous Period) + 25% * (Planned Maintenance Performance for the Period before that)*

Where a particular Planned Maintenance Exam Type has not been undertaken during the originally planned Period, but has been achieved in a subsequent period, the Planned Maintenance Performance for the previous Period will be adjusted to no longer deduct the points associated with that Exam.

The above performance is capped at 100%, and for the very first period, when there will be no value for the previous Period's Maintenance Performance, the previous Period's Maintenance Performance is deemed to be 100% for the purposes of this calculation.

Provision Specific to InfraCo

8.13 Overall Performance for InfraCo

The Overall Performance for InfraCo will be calculated as:

= *[60%] * (InfraCo Punctuality Performance) +*
*[20%] * (Tramstop Equipment Availability Performance) +*
*[20%] * (Planned Maintenance Performance).*

THE ABOVE DOES NOT ALLOW FOR A PERCENTAGE ALLOCATED TO PERFORMANCE MONITORING AGAINST A KPI REGIME

The determination of these Performances is set out below.

8.14 Punctuality Performance

The performance in respect of tram punctuality is calculated as set out *above AS FAR AS INFRACO IS CONCERNED, ITS PAYMENT MECHANISM WILL HAVE TO INCLUDE POOR PERFORMANCE ARISING OUT OF INFRACO LATE TRAMS AND TRAM CO LATE TRAMS.*

8.15 Tramstop Equipment Availability

Items of equipment at tramstops that are provided for the benefit of the passengers are measured in terms of their availability. Equipment is deemed to be available if it is present, fully functional and damage free. Equipment is deemed to be unavailable if either the inbuilt diagnostics for the equipment recognise that it is defective, or if it is reported as defective by other means. The inbuilt diagnostic data automatically flows through the system architecture and results in an auditable determination of the system's availability. Where other defects are recorded, they are advised to InfraCo and InfraCo calculate any additional loss of availability that is identified through this separate reporting system. *WHO WILL CARRY OUT THESE VISUAL CHECKS?*

It is envisaged that where systems have in built diagnostics provided, the lack of availability of the equipment will be automatically alerted to InfraCo's technical staff without any action needed to be taken by the Operator.

Some items have no inbuilt diagnostics. Where this is the case, any period of loss of availability is deemed to start at the time that it is notified to InfraCo, and deemed to finish when InfraCo declares that it has been rectified.

All availabilities are calculated for the system as a whole. For example, the loss of two TVMS for a whole Period out of a total number of 100 TVMs will result in an overall system availability of 98%.*THIS WILL NEED TO BE CALIBRATED.*

Availability is calculated for each item in each system, with the items set out in the following table. There is no partial availability of any item. If there is any defect, then the whole item is deemed to be unavailable. For example, a seat with graffiti on it is not available*. I DID NOT THINK THAT THIS VANDALISM WOULD BE AN INFRACO RISK. IF SOMETHING IS USABLE BUT IS NOT REPAIRED/REPLACED WITHIN A SET TIME, SHOULD THIS NOT BE COVERED AS A PERFORMANCE RELATED DEDUCTION ?*

Where availability is determined by manual methods, the [Operator or **tie**] will produce daily records of any lack of availability of the equipment concerned. These records will be advised to InfraCo, who will calculate its own performance based on these records. These records will be formally recorded and subject to audit.

Once the individual availability has been calculated for each row in the following table, an overall availability is calculated by weighting the rows according to the weightings in the table.

System	Item assessed	Main method of determining availability	weighting
TVM	Each TVM	Electronic	100
CCTV	Each camera	Electronic	10
Passenger Emergency call/Help Points	Each help point	Electronic	10
Passenger Information Displays	Each PID	Electronic	20
Public Address	Each speaker	Electronic	5
Lighting	Each lamp	Manual from Control Room, using CCTV	20
Seating	Each seat	Manual	10
Shelter glazing panel,	Each glazing panel	Manual	5
Litter Bin	Each bin	Manual	5
Passenger Information Display notice cases	Each notice case	Manual	10

DP note – we might want to consider other items such as: AGREE THAT THESE ISSUES NEED TO BE FURTHER CONSIDERED

- *Depot equipment (could become TramCo responsibility once we have a better fix on the scope) - making these TramCo responsibility may be difficult given current timings.*
- *Tramstop infrastructure*
- *Pedestrian access routes*
- *Highway works within InfraCo's maintenance responsibility*
- *Depot Infrastructure* - NON-AVAILABILITY OF THE DEPOT MAY LEAD TO LATE TRAMS. A GOOD EXAMPLE IS IF THE CONTROL ROOM WAS NOT AVAILABLE. HOWEVER, THERE COULD BE CIRCUMSTANCES WHERE THERE IS PARTIAL UNAVAILABILITY WHICH DOES NOT IMPACT ON THE TIMETABLE BUT IMPACTS ELSEWHERE
- *Any facilities to enable passenger interchange*
- *Radio*
- *Substations & LV power supplies*
- *AVLS*
- *Fibre optic backbone*
- *Telephones*
- *Tram signals*
- *Highway signals interface*
- *Trackwork*
- *Rail/highway interface*
- *Trees/vegetation*

Most of these would need a manual method of determining "availability" – we would probably have to develop maintenance standards against each of these, some of which may need to be further broken down. Some may not be relevant, as any lack of availability in the individual subsystem will manifest itself in Late Trams (e.g. OLE) This works if we redefine Late Tram as suggested above. AGREE WITH THIS.

8.16 Planned Maintenance Performance

This factor measures the amount of routine maintenance that is carried out by InfraCo against their maintenance plan.

At least 3 Periods prior to the start of each Year, InfraCo will submit their Annual Maintenance Plan to **tie**. This plan will support and be entirely compliant with the prevailing infrastructure maintenance plan. The Annual Maintenance Plan will include the planned quantity and periodicity of each routine examination. Where planned maintenance activities are outstanding from the previous year, the Annual Maintenance Plan will set out how any such shortfall in maintenance will be rectified.

A similar mechanism to that developed fro TramCo could be developed.

MORE DETAIL IS REQUIRED. AN INFRASTRUCTURE MAINTENANCE OUTPUT SPECIFICATION IS REQUIRED

WE HAVE TOLD THE EXECUTIVE/CEC THAT THERE WILL BE A PERFORMANCE RELATED DEDUCTION REGIME. THIS HAS NOT BEEN DEVELOPED. HOW DO WE DEAL WITH ISSUES SUCH AS:

- *RIDE QUALITY*

- *NOISE*

- *LANDSCAPING IS NOT MAINTAINED*

- *PAVING AT A TRAMSTOP IS LOOSE*

- *EQUIPMENT PROBLEMS OUTWITH A TRAMSTOP*

- *VISIBLE CORROSION OF OLE/ DAMAGE TO POLES*

- *CLEANING THE DEPOT*

- *REPLACING LIGHT BULBS*

- *HEATING PROBLEMS AT THE DEPOT*

- *PEELING PAINT*

Schedule 1 – Tram Material Defects

These are as listed below, based on Jim's original list. I have separated out those items which I think are either RSPG/DDA compliance issues. We need to consider whether any Tram should be allowed to continue in passenger service if such a defect is known to exist:

- Any exterior door not working or isolated
- Any internal or external passenger door open or stop request button not working
- Any Saloon or cab heating or air-conditioning equipment not working or isolated
- More than 20% of interior lighting in any passenger-carrying module not working
- Any crew door open switch not working
- Any sanding equipment not working
- Windscreen wipers not working at either or both ends
- Windscreen washers not working at either or both ends
- Cab radio not working at either or both ends
- Driving seat at either or both ends incapable of adjustment throughout the normal range (includes movable floor panels or footrests if fitted)
- Sun visor not working in either cab
- Any brakes isolated, inoperative or dragging
- Any or traction equipment isolated or inoperative such that the tram is not delivering full performance
- Any exterior door taking more than three seconds to open
- Any exterior door taking more than three seconds to close
- Door interlock indicator lamp in cab not working
- Cab to Saloon door sticking at either end
- Cab to Saloon door not latching closed at either end
- Any passenger alarm point inoperable
- Event recorder not working at either or both ends
- Cab to Saloon mirror missing
- Any passenger seat missing
- Any cab to Saloon window blind, missing or inoperative
- More than 50mm step height between Tram and platform at a location where the platform and track are within tolerance
- More than 75mm horizontal gap between any door threshold at a location where the platform and track are within tolerance
- Any window that is designed to be openable to provide ventilation and either cannot be shut or cannot be opened
- Internal CCTV system is not fully functional
- Forward viewing or backward viewing tram CCTV system not fully functional.

RSPG

- Any headlamp, tail lamp, brake lamp, or external direction indicator lamp not working
- Horn not working at either or both ends
- Bell not working at either or both ends
- External rear vision equipment (mirrors or CCTV) not working or not adjustable
- Any exterior door emergency release inoperative

- Speedometer not working at either or both ends

DDA

- Any door enabled or door closing audible alarm not working
- Any internal or external passenger door open or stop request button not working at a priority or wheelchair seat
- Cab to saloon public address equipment not working from either or both cabs
- Automatic stop annunciation equipment not working from either or both cabs
- Any internal visual next stop indicator not working
- Any external destination indicator not working
- Any passenger alarm point at wheelchair locations inoperable

Summary of Liquidated Damages, Retention levels and liability caps under the draft Tram Maintenance Agreement and draft Tram Supply Agreement

Tram Supply Agreement

8.17 Liability Caps

Tram Supplier

Currently capped at 20% of the Aggregate Tram Price. We have been informed that within the European Tram market a liability cap above 20% of the tram price is unlikely to be accepted. [**Clause 34.6]**

Client

Currently capped at the Aggregate Tram Price. [**Clause 34.7**]

8.18 Liquidated Damages/Retention for late commissioning/delivery

If any Tram is delivered to the Depot later than the date set out in the delivery programme, then there will be a retention made. This is to be expressed as a percentage of the Tram Price for the late delivered Tram. **The figure has yet to be specified**. [**Clause 34.8**]

If any Tram that has had a retention made pursuant to clause 34.8 is issued with its Certificate of Tram Commissioning on or before the programmed commissioning date then the retention will be released to the Tram Supplier. [**Clause 34.10**]

If any Tram (whether or not a retention has been made for late delivery) is commissioned late then Liquidated Damages will be payable (see paragraph 0 for the level of Liquidated Damages). If a retention has been made then the Liquidated Damages will initially be paid out of the retention, until the retention is exhausted, in which case the balance will then be payable as an additional sum by the Tram Supplier. If the Liquidated Damages are less than the retention then the balance will be released to the Tram Supplier. [**Clause 34.11]**

The level of Liquidated Damages for late commissioning still needs to be determined. The contract currently makes provision for three separate levels of liquidated damages, depending upon whether the delay in commissioning is in respect of the first Tram, and then in respect of Trams within two further tranches. This is only a suggestion to reflect the fact that the damage suffered by not having the first Tram commissioned may be greater, and that the damage suffered due to unavailability of the remaining Trams may also vary. **Currently both the different tranches of Tram and the levels of Liquidated Damages for failure to commission trams within those tranches on time require determination.** It should be noted that for liquidated damages to be enforceable they need to be a genuine pre-estimate of loss. Therefore this may be difficult to accurately estimate until the programme dependencies on Tram commissioning are known. This may relate to the Relief or Compensation required by other contracting parties (in particular Infraco and the Operator) if the Trams are not available on time.[**Clause 34.9**]

The amounts of LDs specified above are for each 7 days of delay, with apportionment for each part period during which there is delay. **The total level of Liquidated Damages for each tranche is also capped**. **The level of the caps is still to be specified.**

8.19 Liquidated Damages for overweight Trams

Liquidated Damages are payable in respect of the Trams exceeding the weight specified by the Tram Supplier in its bid. [**Clause 34.13**]

Any Tram which is more than 5% overweight can be rejected outright (although this does not preclude Trams which are more than 5% overweight being accepted and greater Liquidated Damages being payable) [**Clause 34.13**]

The first Tram to be commissioned is to be weighed using independently calibrated and operated weighing equipment. The amount it exceeds the specified weight (if at all) can be calculated. This figure is then fed into a computer model to calculate the additional energy usage attributable to the excess weight over a thirty year lifetime of the Trams. The liquidated damages are then to be calculated to reflect the net present value of the additional cost of electricity. The following figures/requirements need to be determined/estimated to enable the Liquidated Damages to be calculated:

- the energy usage model for the trams - has this been progressed with SDS?
- a methodology for estimating energy costs over thirty years - financial advisers may be able to propose a suitable methodology.
- the basis of calculating the Net Present Value of these costs, so that Liquidated Damages can be immediately payable.

[**Part 2, Schedule 5**]

If modifications are made to the Trams there is also the ability to re-weigh a modified Tram and charge additional Liquidated Damages (on the same basis) for any additional costs **[Paragraph 5, Part 2, Schedule 5**)

8.20 Reliability Bond

The Tram Supplier is to procure a Reliability Bond to 5% of the Aggregate Tram Price prior to the delivery date for the first Tram. [**Clause 38.1]**

If the Trams do not achieve a reliability requirement of at least 6000 km between tram defects, within the first 12 months of passenger operation then the Reliability Bond can be called upon and retained by the Client. [**Clause 38.2**] **Are the proposed bond level and the reliability requirement reasonable?**

8.21 Termination Thresholds

Tram Supplier

If (but for the existence of the caps) either the cap on Liquidated Damages is exceeded [**clause 46.1.9**], or the liability cap is exceeded [**clause 46.1.8**] then the Client is entitled to terminate the agreement.

Client

The Tram Supplier can terminate if the Client fails to pay a due amount of 5% of the Aggregate Tram Price within 60 days of being notified that it has failed to pay.

Tram Maintenance Agreement

8.22 Liability Caps

Tram Maintainer

No liability cap is included. We understand that this is the default starting position on most contracts under this overall procurement.

Client

To be capped at the annual price of services (before any deductions have been made). [**Clause 28.8**]

8.23 Payment Mechanism

Schedule 3 sets out the payment mechanism in line with the Jim Harries' papers with comments reported to us from David Powells meeting with Ian Kendall regarding the same. **We are not aware that these have been calibrated and may need amendment to reflect mechanisms under other agreements. Information is still required regarding the performance monitoring mechanism to be used for both this mechanism and others within the overall project.**

8.24 Retention for failure to maintain

If the Tram Maintainer fails to maintain either the Trams or the Spare Parts pool so that they meet the Return Condition then, if the total rectification cost exceeds £50,000 [**Note: this figure has not been calibrated**] the Tram Supplier shall be required to provide security for rectifying the condition, either in the form of a cash deposit, or a performance bond. [**Part 1, Schedule 12**]

This security can then be used for the purposes of rectifying any non-compliance with the Return Condition upon termination or expiry of the agreement. [**Part 1, Schedule 12]**

The Return Condition is set out in **Part 2 of Schedule 12** - this sets out the position that the Trams (and Spare Parts and Special Tools) should be in on expiry of the agreement.

8.25 Termination Thresholds

Tram Maintainer

The Tram Maintainer can be terminated in circumstances where its overall performance over a period of either 3 or 12 months is below a certain figure. The figure used is the Overall Payment Performance figure calculated in the payment mechanism. [**Clause 18.1.11**] **The levels of these termination thresholds needs calibrating against the finalised performance mechanism - setting these too high could be seen as a hair trigger, setting them too low may allow the Tram Maintainer to perform badly without risk of termination.**

Client

Failure to pay the equivalent of three months of payments (before deductions) within 60 days of notification of non-payment will allow the Tram Maintainer to terminate. [**Clause 19.1.1**]

- **Edinburgh Tram Network**
- **Tram Vehicle Procurement**
- **Summary of Liquidated Damages, Retention levels and liability caps under the draft Tram Maintenance Agreement and draft Tram Supply Agreement**

Tram Supply Agreement

8.26 Liability Caps

Tram Supplier

Currently capped at 20% of the Aggregate Tram Price. We have been informed that within the European Tram market a liability cap above 20% of the tram price is unlikely to be accepted. [**Clause 34.6]**

Client

Currently capped at the Aggregate Tram Price. [**Clause 34.7**]

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If any Tram is delivered to the Depot later than the date set out in the delivery programme, then there will be a retention made. This is to be expressed as a percentage of the Tram Price for the late delivered Tram. **The figure has yet to be specified**. [**Clause 34.8**]

If any Tram that has had a retention made pursuant to clause 34.8 is issued with its Certificate of Tram Commissioning on or before the programmed commissioning date then the retention will be released to the Tram Supplier. [**Clause 34.10**]

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The level of Liquidated Damages for late commissioning still needs to be determined. The contract currently makes provision for three separate levels of liquidated damages, depending upon whether the delay in commissioning is in respect of the first Tram, and then in respect of Trams within two further tranches. This is only a suggestion to reflect the fact that the damage suffered by not having the first Tram commissioned may be greater, and that the damage suffered due to unavailability of the remaining Trams may also vary. **Currently both the different tranches of Tram and the levels of Liquidated Damages for failure to commission trams within those tranches on time require determination.** It should be noted that for liquidated damages to be enforceable they need to be a genuine pre-estimate of loss. Therefore this may be difficult to accurately estimate until the programme dependencies on Tram commissioning are known. This may relate to the Relief or Compensation required by other contracting parties (in particular Infraco and the Operator) if the Trams are not available on time.[**Clause 34.9**]

The amounts of LDs specified above are for each 7 days of delay, with apportionment for each part period during which there is delay. **The total level of Liquidated Damages for each tranche is also capped**. **The level of the caps is still to be specified.**

8.28 Liquidated Damages for overweight Trams

Liquidated Damages are payable in respect of the Trams exceeding the weight specified by the Tram Supplier in its bid. [**Clause 34.13**]

Any Tram which is more than 5% overweight can be rejected outright (although this does not preclude Trams which are more than 5% overweight being accepted and greater Liquidated Damages being payable) [**Clause 34.13**]

The first Tram to be commissioned is to be weighed using independently calibrated and operated weighing equipment. The amount it exceeds the specified weight (if at all) can be

calculated. This figure is then fed into a computer model to calculate the additional energy usage attributable to the excess weight over a thirty year lifetime of the Trams. The liquidated damages are then to be calculated to reflect the net present value of the additional cost of electricity. The following figures/requirements need to be determined/estimated to enable the Liquidated Damages to be calculated:

- the energy usage model for the trams - has this been progressed with SDS?
- a methodology for estimating energy costs over thirty years - financial advisers may be able to propose a suitable methodology.
- the basis of calculating the Net Present Value of these costs, so that Liquidated Damages can be immediately payable.

  [**Part 2, Schedule 5**]

- If modifications are made to the Trams there is also the ability to re-weigh a modified Tram and charge additional Liquidated Damages (on the same basis) for any additional costs **[Paragraph 5, Part 2, Schedule 5**)

8.29 Reliability Bond

The Tram Supplier is to procure a Reliability Bond to 5% of the Aggregate Tram Price prior to the delivery date for the first Tram. [**Clause 38.1]**

If the Trams do not achieve a reliability requirement of at least 6000 km between tram defects, within the first 12 months of passenger operation then the Reliability Bond can be called upon and retained by the Client. [**Clause 38.2**] **Are the proposed bond level and the reliability requirement reasonable?**

8.30 Termination Thresholds

Tram Supplier

If (but for the existence of the caps) either the cap on Liquidated Damages is exceeded [**clause 46.1.9**], or the liability cap is exceeded [**clause 46.1.8**] then the Client is entitled to terminate the agreement.

Client

The Tram Supplier can terminate if the Client fails to pay a due amount of 5% of the Aggregate Tram Price within 60 days of being notified that it has failed to pay.

Tram Maintenance Agreement

8.31 Liability Caps

Tram Maintainer

No liability cap is included. We understand that this is the default starting position on most contracts under this overall procurement.

Client

To be capped at the annual price of services (before any deductions have been made). [**Clause 28.8**]

8.32 Payment Mechanism

Schedule 3 sets out the payment mechanism in line with the Jim Harries' papers with comments reported to us from David Powells meeting with Ian Kendall regarding the same. **We are not aware that these have been calibrated and may need amendment to reflect mechanisms under other agreements. Information is still required regarding the performance monitoring mechanism to be used for both this mechanism and others within the overall project.**

8.33 Retention for failure to maintain

If the Tram Maintainer fails to maintain either the Trams or the Spare Parts pool so that they meet the Return Condition then, if the total rectification cost exceeds £50,000 [**Note: this figure has not been calibrated**] the Tram Supplier shall be required to provide security for rectifying the condition, either in the form of a cash deposit, or a performance bond. [**Part 1, Schedule 12**]

This security can then be used for the purposes of rectifying any non-compliance with the Return Condition upon termination or expiry of the agreement. [**Part 1, Schedule 12]**

The Return Condition is set out in **Part 2 of Schedule 12** - this sets out the position that the Trams (and Spare Parts and Special Tools) should be in on expiry of the agreement.

8.34 Termination Thresholds

Tram Maintainer

The Tram Maintainer can be terminated in circumstances where its overall performance over a period of either 3 or 12 months is below a certain figure. The figure used is the Overall Payment Performance figure calculated in the payment mechanism. [**Clause 18.1.11**] **The levels of these termination thresholds needs calibrating against the finalised performance mechanism - setting these too high could be seen as a hair trigger, setting them too low may allow the Tram Maintainer to perform badly without risk of termination.**

Client

Failure to pay the equivalent of three months of payments (before deductions) within 60 days of notification of non-payment will allow the Tram Maintainer to terminate. [**Clause 19.1.1**]

DRAFT

Edinburgh Tram Network
Costs of Funding for Alternative Procurement Routes for Infraco

18 April 2006

1. Introduction

This paper sets out a comparison of the cost of:

- the proposed 'Enhanced Conventional' approach developed by **tie** for the procurement of the Infrastructure Contractor ("Infraco") for the Edinburgh Tram Network ("ETN") project; and

- Variant funding approaches which **tie** has been asked to examine by the Scottish Executive and its advisers.

tie's proposed approach has been set out in previous papers provided to the Scottish Executive, and most recently in the Outline Business Case. A copy of the relevant paper of 28 February is attached to and referred to throughout this paper.

tie's proposed approach is based around a contract period of construction and commissioning plus six years, with liquidated damages and bonding to provide incentives for the private sector to deliver.

On 11th April 2006 **tie** was asked to examine the costs and benefits of two variants to this approach as follows:

- Variant 1 - A 15% retention from construction costs to be paid as a lump sum at the completion of testing and commissioning (i.e. at the point the tram becomes operational) with a further 15% to be financed by the Infraco, and repaid over 15 years linked to the availability / reliability of the system (essentially a short period PFI).

- Variant 2 – As per **tie**'s proposed approach but with an amount (15%) retained and paid as a lump sum at the completion of testing and commissioning (ie at the point the tram becomes operational) or by augmenting the milestones at testing and commissioning by an additional 15% of the total contract costs.

Variant 1 has many of the attributes of a PFI, the significant differences being the shorter concession period and the relatively small amount being funded privately (as a proportion of the project costs).

As such, this option is very similar to the '7 year PFI' option which was considered and rejected in the paper of 28th February.

However, to aid understanding of the costs and benefits of the variants we have quantified the costs of each of them.

2. Cost of tie Enhanced Conventional Approach

tie's approach is to include many of the risk management features that a Special Purpose Company undertaking a PFI project would put in place e.g. liquidated damages for late completion and bonding requirements for construction and operating contracts.

As such, most of the costs that are associated with the approach would also be included in a PFI subcontractors' costs, so there is no difference between the two approaches in this area.

However, there is one aspect of the cost which would be significantly different. The **tie** approach requires a bond to be in place for the six year operating period (called the Defects Rectification Bond in the OBC), and that this bond can be called for insufficient maintenance either during the six year period or at handback.

The cost of this bond is difficult to accurately estimate, because it is an unusual requirement of a contractor.

The basic financial cost of a bond to a contractor will be relatively small, in some cases as low as 0.5% per annum. However, contractors have limited bonding capacity, which they like to recycle quickly to use on new projects, so we would expect there to be some internal charging representing the opportunity cost of the bond capacity utilised.

In an extreme scenario, this could be as much as the opportunity cost of equity less the cost of corporate debt |(since the capital is not actually being committed to the project by way of additional borrowing as it would be for a retention or turnkey payment .

If equity were to follow the infrastructure norm of 12-15%, with the cost of debt being in the order of 5%, then we could have an internal charge for the bond of 7-10% per annum.

With the proposed bond of £10m per annum, this would result in an overall cost of the bond of around £1m per annum, for the six years, creating an incremental nominal financing cost for this option of around £6m.

3. Cost of Variant 1

The proposed alternative differs from the Enhanced Conventional approach in that:

- It ties up cash during construction, rather than allowing the public sector a call on cash if problems arise;
- It requires cash to be committed during operations;
- The period for maintenance liability is substantially longer (15 years as opposed to 6).

The above attributes will mean that there is a substantial cost increase over that required for the **tie** Enhanced Conventional approach.

Estimating the cost of this option is difficult because of its unusual nature.
It is not common to have a service based contract which is relatively short, at less than twenty years. In addition, a very small proportion of the total cost of the project would be financed over this period.

It is also unclear exactly how much risk transfer there would be in the contract. Given the length of the contract we have assumed that it would be a similar risk allocation to a PFI. We have assumed that the market will look at this as a PFI.

A key financial assumption is how much of the capital required will be regarded as requiring an equity (risk) return. On the most recent light rail deals, equity has been about 15% of the total capital cost. This is higher than on the average PFI, where the equity is usually about 10%.

We believe that there is a possibility that the market will require higher equity contributions, because the shorter length of the concession. However, the two scenarios we have run are with 10% equity and one with 15% equity. For the avoidance of doubt, these percentages are applied to the whole Infraco cost, not just the financed amount. This is consistent with the market approach seen on other deals.

The model assumes that the costs which must be financed by Infraco during the construction period (30%) are entirely financed by borrowings at a rate of 6.5%. These borrowings are then repaid from the turnkey payment and the injection of equity at the commencement of the operational period with the remainder including rolled up interest being repaid over 13 years beyond the commencement of operations i.e. the debt capital is fully repaid 2 years before the equity.

We have assumed a 15% return on capital requiring an equity return, which is consistent with what we have used for calculating the costs of bonding in **tie**'s enhanced conventional approach.

The results are shown below:

Proportion of total Infraco costs to be funded by capital requiring an equity return £'000s	15%	10%
Construction Costs paid by Interim Milestones (70%)	221,130	221,130
Final Milestone i.e. Turnkey or Retention (15%)	47,385	47,385
Cumulative 'Unitary Charge' Payments over 15 years	153,953	138,812
Total cost	422,468	407,327
Basic cost before financing	315,900	315,900
Nominal financing cost (Debt plus Equity)	**106,568**	**91,427**

The incremental financing cost are therefore £101.6m and £85.4m compared to the £6m estimated for tie's Enhanced Conventional approach at 2 above. The reason for the large financing cost is because of the length of the concession. Even with very small levels of equity (and correspondingly larger amounts of cheaper debt), the cost of financing remains over £60m.

4. Cost of Variant 2

As stated, Variant 1 is significantly more expensive due to incurring financing costs over a 15 year period.

Therefore, we have also run a model with a 15% retention which is repaid in single payment on completion of construction and commissioning.

This results in an incremental financing cost of £7m, in addition to the costs being incurred under tie's Enhanced Conventional approach at 2 above.

5. Impact of Options on Key Objectives

The key objectives of **tie** are to ensure that the Infraco has sufficient incentive to:

i. Deliver the project on time, and operating to a high standard

ii. Ensure that the assets are of sufficient quality to continue to provide service for the long term, with only scheduled maintenance.

The differences in incentives between **tie**'s proposed approach and the variants set out above are primarily financial.

5.1 On Time Delivery

The incentive to deliver on time is that the contractor has to pay liquidated damages if the project is delivered late. This encourages the contractor to manage risks effectively.

Under **tie**'s approach liquidated damages would be paid from the Infraco to **tie**, to compensate for operating costs and lost farebox revenue.

For the variants proposed, there will be additional payments of liquidated damages to the funding providers. These will represent the loss of availability payments, along with the interest costs payable on the funding of the turnkey payment.

Having a turnkey payment does not in itself encourage timely delivery – it is the liquidated damages associated with it that will make the contractor work harder (this is because the level of turnkey payment envisaged will require external funding to be raised).

tie's opinion is that there is a substantial and sufficient incentive with the level of liquidated damages in the proposed approach. Higher levels of damages will not necessarily improve performance further. However, they are likely to cost more. It should be borne in mind that the cost of increased liquidated damages is most likely to feed into a higher construction cost, which has not been included in our calculations of comparative costs.

Higher levels of liquidated damages are also likely to make the project more difficult to place in the market.

5.2 Quality Construction

The key driver for the quality of the construction of the assets is the amount which is at stake if the maintenance of the asset falls below standards, or the assets are not in an appropriate condition on handback.

The table below shows the amount at stake for the quality of the asset at the end of the sixth year of operations. We have assumed that Variant 2 will include the same bonding as **tie**'s proposed solution.

Enhanced Conventional	£10m
Variant 1	£54m
Variant 2	£10m

The amounts above show that Variant 1 has considerably more cash at stake than the alternatives. This is mainly the amount of funding in the Infraco is £61m which is at stake at the end of the construction period, which compares with the £10m of bonding in the other scenarios. In Variant 1, capital is repaid very slowly due to the high funding rates.

Does this increased amount increase the transfer of risk, and is it value for money?

tie believe that the Infraco will view £10m as sufficiently important to ensure that work is done a high standard. It is also by no means certain that the quantity of risk capital required for Variant 1 will be available in the market. This is discussed further in **tie**'s paper of 28th February, which forms an Appendix to this paper.

6. Market Acceptability of Proposals

tie have crafted their proposals for the Enhanced Conventional approach to maximise the commitment of funders without requiring significant financing costs or requiring all of the complexity and expense of getting project finance lenders involved. As such, this proposal is likely to push the market, and will require **tie** to convince bidders to accept it.

However, **tie** believes that the two variants described here are likely to make the overall deal less attractive to the market. This is because they will add a layer of complication to the development of their bids, due to the requirement for external financing.

In particular, Variant 1 is likely to require substantial equity, which will be difficult to source. In addition, both variants require bridging finance for the large final milestone payable on completion of commissioning, which is unusual, and difficult for lenders to deal with.

This is not to say that external financing is fundamentally wrong for infrastructure projects. The concern is that it brings added complication to light rail projects, and if implemented for only part of the financing and for a relatively short period, then bidders will not have access to 'off the shelf' products.

The costs calculated for each of the above options assume no difference in procurement costs, or funding rates that are above market. We believe it is likely that there will be substantial additional procurement costs associated with external financing, and the possibility of higher than market rates for financing, due to the bespoke nature of the variants proposed.

Appendix 1

Edinburgh Tram Network
Proposed Procurement Route for Infraco

28 February 2006

iii. Introduction

This paper sets out the proposed approach developed by **tie** for the procurement of the Infrastructure Contractor ("Infraco") for the Edinburgh Tram Network ("ETN") project.

The core of the paper sets out the preferred approach that **tie** has developed. This has been based purely on the objectives of maximising value for money, while effecting a sensible transfer of risk to the private sector, that the Infraco will be capable of managing. The proposed approach includes many of the risk management features that a Special Purpose Company undertaking a PFI project would put in place e.g. liquidated damages for late completion, bonding requirements for construction and operating contracts.

For the avoidance of doubt, **tie** has not considered either the make-up or timing of the public sector funding commitment or the balance sheet position of the project to be an objective in the formulation of this procurement strategy.

tie believes that the approach that it has developed delivers many of the benefits of a PFI without significant funding cost. **tie** recognises that more risk transfer could be achieved under a PFI approach, but does not believe that the additional risk transfer justifies the extra costs involved. In particular, **tie** believes that some of the benefits which arise from its carefully developed procurement strategy would not be recognised by a PFI contractor, and therefore would be lost to the contract.

The structure of the paper is as follows:

- We set out the proposed approach to procurement, including demonstrating its advantages over conventional procurement, and setting out how it incorporates appropriate 'PFI-style' incentives ;
- We set out a brief description of why a full PFI option was rejected on value for money grounds;
- We analyse an option which combines the risk transfer of a PFI with a shorter term contract.

2. Enhanced Conventional Procurement

As discussed above, **tie** has endeavoured to develop a procurement strategy which transfers risk to the private sector whilst minimising the funding, management costs and risk premia associated with the procurement strategy, with the overall objective of obtaining the best value for money position. This has been encapsulated in what **tie** refers to as an 'enhanced conventional procurement'.

During the construction period the risk transfer under the 'enhanced conventional' approach is very similar to how a PPP company would transfer risk to its construction subcontractor.

The key differentiator, in risk transfer terms, between the two options is in the area of post commissioning maintenance. Under a PPP option, this would be transferred to the private sector for the duration of the concession agreement (usually 25-30 years) whereas under the 'enhanced conventional' approach it is envisaged that this period will be much shorter - 6 years.

The reasoning behind this is that private sector operators are likely to charge a significant price premium to accept the long term risk, given the lack of accurate information as to the extent and cost of long term maintenance, whereas it is far easier to predict these for a shorter period. Moreover, **tie** and its technical advisers consider that any inherent defects in the design or construction of a tram system will have a high probability of manifestation in the first 3-5 years of operations.

Therefore **tie** believes that a combination of bonding and performance related payments can provide the necessary incentives to the private sector to deliver the tram system on time and ensure its continuing availability throughout the 6 year maintenance contract period thus providing a high degree of assurance that the condition of the system at handover will be of a sufficient standard to attract a successor Infraco maintenance contractor and to safeguard continued performance of the system for an acceptable further period of the asset life. This would be achieved as follows:

Timely delivery - Payment to the Infraco during the construction period will be governed by a comprehensive milestone schedule. Should Infraco be late with the delivery of the tram system it would be liable to **tie** for substantial Liquidated Damages. This Liquidated Damages amount would relate to the potential loss experienced by **tie**, arising from a mobilisation of operations prior to the system being available. The Liquidated Damages provision would be within an overall Performance Bond of [10%] of the contract sum [c.£315m] which would be callable in the event of non-performance or abandonment by Infraco of its obligations under the Infraco contract. The Performance Bond would be released at service commence date (i.e. post commissioning completion).

In addition and as per PPP contracts, **tie** would require a Parent Company Guarantee ("PCG") from Infraco in respect of its obligations.

Continuing availability - it is intended that there will be a six year infrastructure (and vehicle) maintenance contract following on from the main infrastructure construction contract. Payments under this maintenance contract will be subject to satisfactory performance of the maintenance obligations, the test for which could be either output based e.g. the availability of the infrastructure on an ongoing basis, or input based e.g. against an agreed schedule of maintenance works. The exact requirements in this regard are still under development.

There will also be a Defects Rectification bond to cover any post commencement date "snagging" items and any deficiencies highlighted by the "in-service testing period" which takes place over the [6 months] following service commencement and at any time during the maintenance period of 6 years. This bond will be in the order of [£10m] and will only be released upon completion of the 6 year maintenance period including all snagging items and the satisfactory conclusion of the in-service testing.

Release of the construction period performance bond will be conditional upon the implementation of the Defects Rectification bond. Alternatively, the construction bond could be structured so as to step down at service commencement and become the maintenance bond.

Any failure to immediately take action to correct defects would result in the Defects Rectification bond being utilised to make good the defects. A final handover condition survey (of both the infrastructure and the vehicles) will also be carried out prior to the expiry of the maintenance contract to ensure the medium term viability of the system and again any defects identified will require to be made good to avoid utilisation of the maintenance bond to fund the works required.

The above package of incentives could be structured differently to achieve the same level of risk transfer,e.g. stepping down of the Defects Rectification bond from a higher amount, replacement of the Defects Rectification bond with a cash retention or stepping down of the construction performance bond to cover a specific major defects liability period and so forth. The finer detail of the incentive package will be further developed and agreed prior to completion of the Infraco/Tramco tender documents, however, **tie** firmly believe that the structure outlined above, or a variant thereof, will deliver the required risk transfer provisions to maintain a high level of incentivisation throughout the contract period. **tie** also believes that the cost of the incentives package will compare favourably to the cost of finance incurred in PPP projects. **tie** and its advisors are currently testing the market's capacity for bonding lines and the pricing that might attach to the package being sought.

3. Alternative Approach: Short Term PFI

tie has considered an alternative approach to risk transfer which would entail private funding being raised through an approach similar to a PFI. The key

differentiator of this approach from a conventional PFI would be that it would be for a relatively short period, construction plus six years.

Before considering the potential benefits arising from this approach, it is worth considering the reasons why a full PFI was not considered to provide sufficient value for money to make it worth pursuing.

Assessment of Full PFI Option

On the advice and with the assistance of the SE (Transport Division and FPU) **tie** and its advisors completed an extensive **ETN - *Procurement Route VfM Assessment*** in November 2005. That paper (the 'Nov'05 VfM Assessment') compared the enhanced conventional procurement route developed by **tie** with a PFI approach. The conclusions were as follows:

*'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 HMT 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'

tie has investigated this value for money analysis further and can confirm that the conclusions of this work still stand. An analysis of this in included in Annex 1.

While a full PFI was not deemed to produce sufficient value for money, there is a possibility that a shorter term arrangement with a PFI provider could reduce the funding costs.

The concept is that a PFI provider would provide the infrastructure on an output based payment basis. This would be for a period of six years after the initial construction period. Only part of the funding for the whole system would be provided by the PFI provider – a figure of £100m has been considered.

This structure would transfer significant risk in terms of the operation and maintenance of the system during the key first six years of the project, when latent defect risk is most likely to emerge.

In this way, the short term PFI approach delivers the benefits of the Enhanced Conventional Procurement approach, and puts more of the Infraco's money at risk.

However, having this additional money at risk increases the cost of this approach compared with the Enhanced Conventional Procurement approach.

Moreover, on closer inspection, this approach has some drawbacks which, taken together, make it less attractive and probably more difficult to implement than the Full PFI, an approach which has already been ruled out.

The key drawbacks arising from the Short Term PFI Approach include:

Confused signals to the Infraco – A PFI is a purely output based solution, with handback of assets in the distant future. The Short Term PFI would marry a short term output based contract with handback which is relatively early in the life of the assets. This could create perverse incentives for the Infraco. For example, if in year 5 of the contract the Infraco has a damaged ticket machine, why replace it with one which it believes has the best whole life cost, if it can procure a cheaper model which will still be functioning at the end of the 6 year period? Dealing with interface issues like this would require unpicking of the basic, simple approach of a PFI, which would increase complexity and risk for both public and private sectors.

Potential Low Gearing Increasing Funding Cost – Lending banks analyse project risks on the basis of sensitivities carried out on the funding structure. In a conventional PFI with a 90:10 funding structure, banks can satisfy themselves on key sensitivities such as construction cost and time overrun, because there is sufficient cover over the life of the concession to absorb a shock at the start of the concession. With only a six year operating period, the Short Term PFI would need to have increased cover in each year to achieve the same overall level of cover. In order to achieve this, a relatively low level of gearing would be required compared with a conventional PFI – ie more equity and less debt. This low gearing would increase the weighted cost of capital of the project company, reducing the saving which arises from moving away from a full PFI.

Unusual Equity Investment Failing to be Attractive – The above analysis suggests that proportionally more equity would be required than under a conventional PFI. This equity may be difficult to source, because of the relatively short term investment period. While developers usually provide equity funding in PFI vehicles, often they will look to third parties (often investment funds) to source part of the equity. These funds are unlikely to be interested in such a short term investment because their stated focus is on long term investments, and they also wish to have the opportunity to recycle investments (which is also true for the developers). It will be difficult to sell on such investments in the market (because of their short remaining life), and as this will make the deal less attractive, it could increase the returns that developers look for on their equity.

All of the above suggest that the Short Term PFI option will be difficult for the market to price, and result in an expensive funding solution.

tie's view is that the combined effect of the above issues makes this approach less attractive than a Full PFI.

Annex 1

Continuing validity of Nov'05 VfM Assessment

1.1 A phased approach to the procurement of the ETN has been **tie**'s recommended approach for the reasons are set out in the Nov'05 VfM Assessment on pages 6 and 7. Whilst total funding availability remained to be finalised, the assumption in the paper was *'that any first phase is likely to be in excess of £200m'* in terms of capital cost.

> *'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…about the likely VfM of the alternative procurement routes.*
>
> *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…uses costing and other figures from the ETN Line 1 and 2 configurations. The results of the VfM analysis are consistent across all configurations.'*

1.2 Consequently, both the qualitative and quantitative analyses remain directly applicable to the current proposed Phase 1 and the conclusions on both are unchanged. As the Assessment also makes clear, *'given the breadth and depth of qualitative analysis that has driven the formulation of [the] 'enhanced' conventional option, and the unique characteristics of the ETN…qualitative factors merit a significantly greater weighting and emphasis than quantitative'*.

1.3 The basis of the conclusions of that qualitative analysis was the essential similarity, in terms of proposed risk transfer and risk management approaches, between **tie**'s 'enhanced' conventional procurement strategy and the PPP option. Both options would be based on a planned series of advanced contracts which directly reflect the lessons learned from previous (largely PFI) light rail projects, with the aim ultimately of facilitating a fixed price contract for the infrastructure, under which the private sector Infraco was responsible for the key risks associated with that infrastructure (construction, system integration, maintenance and continuing system availability) but which mitigated wholly or substantially the pre-construction risks which often carry large price premiums under PPP structures e.g. design, planning, land purchase/access and utilities diversions.

1.4 Details of the advance contracts are set out more fully in the Nov'05 VfM Assessment at pages 10 to 14. In summary these cover the operation of the network (DPOFA), system design (SDS – to be novated to the Infraco), advance utilities diversion (MUDFA) and transport modelling (JRC). The contract for the tram vehicles will initially also form a separate contract, but will be novated to Infraco, who take on the risks associated with vehicles as part of the responsibility for the construction and integration of the network under the main Infraco contract.

1.5 The management of these interlocking contracts, to establish the best possible 'platform' for a fixed price Infraco contract, is a challenge, but one that applies whether the Infraco contract is let under an 'enhanced' conventional or PPP framework. The level of expertise and experience that **tie** has assembled within the tram project team and the group of specialist advisors who form part of that team (including Transdev as the future operator) is a direct response to this challenge.

1.6 The case for the 'enhanced' conventional procurement strategy includes the assertions that **tie** has assembled the means to carry out its own 'due diligence' on all aspects of the project ahead of the Infraco contract, in effect, simulating the rigorous analysis of contractual and management arrangements that would normally be undertaken by the senior lenders under a PPP approach.

1.7 Under the enhanced conventional procurement approach being followed by **tie**, it is still possible to overlay a PPP approach to transfer additional risk to the Infraco in respect of timely delivery of the system and continuing availability of the system post commissioning.

1.8 Following the announcement of the overall funding package and assumed Phase 1, **tie** is now engaging with CEC and SE in the examination of the 'PFI-style' incentives which could be adopted within a structure which would in any case be highly likely to be 'on balance sheet' for the public sector. As with the analysis of the full PPP option, the examination of these PFI style incentives will be completed in the context of the value for money of the additional risk transfer benefits compared with the additional financing costs.

Appendix D

Review notes from specific documents

Set out in this Appendix are the notes written as a result of the review of the contractual documentation and the ITNs for both the infrastructure and tram projects. The notes are set bout in the following order:

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Infrastructure contract	17
InfraCo ITN	22
DPOFA	28

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Notes based on brief review of the tram supply contract

Set out below are findings and points arising from Ian Brooks' review of selected sections of the tram supply contract (undated) prepared for release with the Tram ITN.

In general further consideration appears to be required of the detail and implications surrounding:

- Not providing guidance on the payment milestones (ie is **tie** content for bidders to make proposals? what is **tie** looking for? what would be acceptable/ unacceptable);
- Tram reliability – in particular addressing some ambiguity in the drafting;
- Provisions where trams are overweight – is **tie** assuming the right risk?; and
- Client termination provisions – these could really worry bidders. It makes sense to establish a negotiating provision but what is currently proposed could put bidders off and undermines the partnering principles that we would like to encourage.

Ref	Observation	Action	Responsibility	Priority (High, Medium, Low)
Clause 31	Payment related to the achievement of milestones. Schedule 5 sets out the milestone payment schedule and invites bidders to complete the schedule. For better protection of our interests and for ease of evaluating bids might be more sensible to set some parameters for the milestone payment eg the main profile should related to the acceptance of trams	Need to consider this issue with input from the financial and evaluation teams	David Powell	H
Clause 34.6	Note that the Tram Supplier's liability under liability, retentions and liquidated damages is capped at 20% of the Aggregate Tram Price	No action – note only	Note only	Note only
Clause 34.7	Our liability capped at the Aggregate Tram Price	No action – note only		
Clause 34.8	Provides for a late delivery retention which is to be released provided the relevant tram is commissioned on time. Not clear how **tie** obtains the monies to be 'retained' if the milestone payment proposed do not match deliveries	Explain how **tie** gets hold of the amount to be retained – can it be deducted from milestone payments?	Iain Bowler	M
Clause 34.8	The retention is 1% of the price of the tram. Is this retention is big enough to incentivise the Tram Supplier to deliver on time, in particular if the retention can be recovered or may not be paid over anyway (see row above)?	Explain rationale	David Powell	M

Ref	Observation	Action	Responsibility	Priority (High, Medium, Low)
Clause 34.9.1	If the first train is commissioned late Tram Supplier to pay liquidated damages of 1% of the price of the tram per seven days late. Late commissioning of subsequent trains compensated at 0.5% of the price of the tram per seven days	Explain how **tie** gets hold of such monies. Confirm the thinking behind these amounts – what work has been done to assess the actual losses **tie** will incur owing to late commissioning?	Iain Bowler David Powell	M M
Clause 34.13	Provides that liquidated damages be paid if the tram is overweight, reflecting the fact that **tie** is providing the power. Is there provision/ any incentive for the Tram Supplier to fit more efficient motors?	What was the thinking behind this? How will **tie** estimate consumption and power prices to feed into our bid evaluation?	David Powell David Powell	H H
Clause 34.13	Why are we allowing a tram to be overweight at all? Surely overweight = extra cost to **tie** and an invalid evaluation (assuming we include fuel consumption in our evaluation). Shouldn't the relevant comparator be either: • The weight bid that we evaluated; or • The maximum weight we specified with **tie** being compensated however much the supplied trams are over weight – this would be appropriate where we did not evaluate the fuel costs associated with bids but built something based on maximum weight into the Final Business Case (this seems an unlikely approach).	Need to consider what we are trying to achieve and how best to protect **tie**'s position	David Powell	H
Clause 38.1	Provision of a reliability bond. With regard to the definition of "Reliability" what are the consequences of a tram not covering 10,000kms in the two periods? Is it 10,000kms in each period or over the two consecutive periods? If over both periods, is 180km per day for every day of the period achievable?	Explain how each of these points are addressed – does drafting need to be clarified?	Iain Bowler	H

Ref	Observation	Action	Responsibility	Priority (High, Medium, Low)
Clause 38.1	If any tram fails the test, does this put the whole bond at risk or a relevant proportion of the bond at risk?	Please claify	Iain Bowler	H
Clause 38.1	Has any consideration been given as to how the existence of this bond might influence the behaviour of the tram supplier at the daily fault attribution meetings? How, for example, would one stop the 'trading' of delays?	Explain thinking – this may be a micro point	David Powell	L
Clause 48	30 days notice only for a no fault termination by the Client.	Appears draconian and is likely to put bidders off. What is the thinking?	David Powell	H
Clause 53.1.1.5	Ability to reject the fleet on termination	Same point as above	David Powell	H
Clause 54	Why is the order of additional trams limited to 5?	What is the thinking behind this – shouldn't it be related to the most likely extensions and the extra trams that would necessitate?	David Powell	M
Schedule 1, Part 3	Why is **tie** not specifying words for a parent company guarantee? Surely bidders need to know the words to take a view on whether they can give a guarantee?	Please clarify	Trudi Craggs/ Iain Bowler	L
Schedule 5, clause 4.1	Consider the need to provide guidance before bids come in because there may be a set off here that bidders want to consider i.e. lower price for the tram (better built using heavier materials) but higher fuel consumption. How will this be evaluated?	Advise timing for guidance	David Powell	H
Schedule 5	Why is there no provision for the Tram Supplier to put right the weight problem. Surely these would be possible if the first tram was found to be overweight?	Please clarify	Iain Bowler	H

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Notes reflecting brief review of tram maintenance contract

Set out below are findings and points arising from Ian Brooks' review of selected sections of the tram maintenance contract (undated) prepared for release with the Tram ITN.

The main issues arising are:

- There appears to be no drafting of the tram maintainer's obligations to deliver softer performance issues eg working CCTV, doors and provision to stop trams with specified failings from entering service or withdrawing such trams from service (this may be addressed in the tram requirements specification set out in Appendix 13 to the ITN but we have not seen a copy);
- The appropriateness of tram reliability measures – is **tie** measuring total reliability or just that relating to the performance of the tram maintainer?
- The adequacy, timing and access of **tie** to assess handback condition; and
- Responsibility for repair costs and achieving best value for money.

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
General comment	**tie** is specifying the timetable and determining the number of trams it is buying. This presumably means that **tie** is assuming that the Tram Maintainer can deliver a given level of availability. Where is this specified? Where are bidders allowed to comment on its achievability? This is important not just in terms of deliverability but also if **tie** is assuming 90% availability and the Tram maintainer believes this is easily achieved he may be able to modify the maintenance programme and reduce costs.	Please explain our approach/ thinking	David Powell	M
Clause 7.15	Understand why the Client bears the cost of Repairs that are not the Tram Maintainers fault. However when the tram contract novates, this responsibility will fall to InfraCo who will have no real way to estimate or control such costs so a provision will likely be build into InfraCo's bid. If the provision is an overestimate then InfraCo will keep the surplus as profit. If someone is to bear the cost of repairs why not the Operator who will likely have much more influence over events that cause repairs, more scope to mitigate or limit	Consider appropriateness of approach adopted. If left with InfraCo consider getting provision disclosed so that **tie** can decide whether to risk shate	David Powell	M

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
	damage (eg stop a tram and get vandals thrown off) and a greater ability to manage insurance claims – the Operator's staff are likely to be witnesses.			
Clause 7.15.5	Knowledge of agreed rates and costs of Agreed Repairs will be important to the Infrastructure bidders in assessing the requirement for provisions. Will this information be available prior to the BAFO phase for the infrastructure contract?	Consider timing of the development of negotiations	David Powell	L
Schedule 1, Part 2	Why is **tie** not specifying words for a parent company guarantee? Surely bidders need to know the words to take a view on whether they can give a guarantee?		Trudi Craggs/ Iain Bowler	M
Schedule 2	Need to be proactive in setting out minimum contents of tram maintenance specification and tram maintenance programme. Our best protection is to know that there is a clear programme that **tie** believes will properly maintain the condition of the trams so the focus of our effort can be on satisfying ourselves that the programme is being fully implemented	Consider appropriateness of this approach	David Powell	M
Schedule 3, Clause 1.6	This drafting seems to suggest that 95%i punctuality s the minimum acceptable level of performance. Is this realistic, how does it compare to Croydon, Nottingham, Sheffield or Manchester?	Need to build some form of benchmarking into the finalisation of the performance regime	David Powell	H
Schedule 3, Clause 1.6	In practice is it stated anywhere what the target level of performance is – don't remember seeing it in the ITN? Surely this important in terms of setting a clear picture for bidders	Please advise	David Powell	L
Schedule 3, Clause 2	This appears to measure overall tram performance. Shouldn't it be tailored to reflect performance attributable to the tram maintainer. For example if no delays are attributable to tram maintenance surely **tie** wants the tram maintainer to get the full reward?	Need to consider whether the current approach addresses this point	Iain Bowler	H
Schedule 3, Clause 1.6	Similarly surely the tram maintainer should only have to prepare and implement a rectification plan if his	Need to consider whether the current approach addresses	Iain Bowler	H

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
	performance is below 95%	this point		
Schedule 3, Clause 2.3	Is this compensation an agreed principle? Who is working up the proposal? How practically can the Operator deal with claims and avoid spurious claims? (This does happen on heavy rail but tickets are used as prime facie evidence of a valid claim – most tram users will likely have season tickets or travel cards so the tickets will not provide such evidence)	Need to understand the thinking behind this and the precedents	David Powell	L
Schedule 12	Return conditions are very important, in particular if the contract is short term (6 years) as dealing with assets not properly maintained to return condition standards whilst trying to re-let a contract can cause all sorts of complications. Set below are some observations can be made about the proposals	Note only	Note only	Note only
Schedule 12	This schedule refers to the Client = InfraCo. As return condition is much more of an issue for **tie** suggest that provision is made for **tie** or its contractor to undertake this work. Alternatively this Schedule needs to be replicated in the infrastructure contract AND provision needs to be made here for **tie** or its contractor to do the inspection (this may be covered by the use of 'designated person' but does **tie** have the power to demand to be designated?)	Confirm how drafting works	Iain Bowler	M
Schedule 12, Clause 1	There should be two final inspections: • in connection with the contract re-letting process to ensure that when this is happening bidders can make site visits and not be alarmed by the state of the assets; and • in connection with agreeing the final programme of works prior to returning the assets.	Need to consider our approach	David Powell	M
Schedule 12, Clause 3.1	Not clear whether this clause provides for a single intermediate inspection or as many as the Client requires?	Please advise	Iain Bowler	L

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
Schedule 12 Clause 4	What thinking has gone into the establishment of £50,000 as the threshold? How easily could this be exceeded?	Please advise	David Powell	M
Schedule 12, Clause 4 & Clause 5	What is the leverage **tie** has to get the cash deposit or bond put in place? Couldn't we have a retention from the periodic payments?	Please advise	Iain Bowler	M
Schedule 12, Part 2, Clause 2.2	What is a "satisfactory standard of cleanliness"? Surely a more objective measure is required?	Please advise	Iain Bowler	L
Schedule 12?	Not clear whether there are or should be obligations on the train maintainer to deliver specified levels of presentation and operational equipment on the tram – for example who is responsible for maintain any on tram CCTV or PIS?	Where is this dealt with?	Iain Bowler	H
Schedule 12?	Also shouldn't there be obligations relating to working doors, undamaged windows, graffiti etc the effect of which would be to require the tram to be withdrawn from service or not be put in to service.	Where is this dealt with?	Iain Bowler	H

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Notes based on brief review of the TramCo ITN

Set out below are findings and points arising from Ian Brooks' brief review of the TramCo ITN dated 27 April 2006.

Biggest concern surrounding the tram documentation, in particular the ITN, surrounds bid evaluation. Experience suggests that the more fluid the situation, the tighter the timescales and the more complex the stakeholder group that is involved in the decision making, the more it pays to plan the evaluation process in finalising the ITN. This ensures that the right questions are asked and used to gather the right information to meet the needs of the Stakeholder Group. This approach can also highlight issues with the number and clarity of question, shortages of information provided to bidders to enable them to answer questions etc and allow time to address these issues. The approach also enables a scoring process to be put in place, scorers can be identified and diaries emptied to facilitate a quick and objective evaluation of bids (this also meets EU Procurement Rules). Finally, the more guidance **tie** can provide to bidders on how it will evaluate bids/ its priorities, the more bidders can focus there efforts on the areas that matter.

Also need to give consideration to dealing with clarification questions. Poor handling of early questions can undermine bidder confidence, create a backlog that is difficult to clear and lead to bidders providing caveats or making assumptions. The Project Team needs to be realistic about who is available to answer questions and what will be the process for quality controlling the answers. This is even more important where there will be common bidders for the tram and infrastructure contracts. The approach needs to reflect the likelihood that David Powell will be engaged fully in finalising the infrastructure documents.

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
Throughout	Dates need updating. References to Iain Kendall	Need to check all timetable dates and deadlines Need to remove all references to Ian Kendall. Why not use generic titles rather than the name of an individual?	DLA	H
P1 Confidentiality	Has any consideration been given to the need for confidentiality letters to be signed by Bidders? If Bidders get to see SDS or DPOFA does **tie** need to get permission of counter parties to share them? Are there any other Schedules or disclosures that **tie** might need permission to share	Please consider requirements	Trudi Craggs	H
P3	Why state the procurement timetable in such detail: - use spring/ summer rather than specific dates? - are all lines required?	Consider whether there is a more practical approach that better sets bidders'	David Powell	H

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
	Bidders will likely be most interested in what happens between 25/8 and 25/10 – what are **tie**'s expectations of the bidding team – **tie** might want to indicate there will be clarification questions and clarification meetings	expectations		
P3	This document would benefit from a 3-4 page executive summary – in effect a briefing document for senior executives at the bidders who might reasonably ask, what's it about? Should we bid?	Consider preparing such a document – would also be useful for internal and Stakeholder Group briefings	David Powell	H
P8 Sect 2.5	Spelling of PricewaterhouseCoopers	Please correct	DLA	L
Sect 2.6	Why is there no reference to MUDFA? – without it bidders may be thinking that the infrastructure will be late and discounting our delivery timetable	Please consider	David Powell	H
P10 para that runs across onto P11	Third sentence repeats the first sentence. Are timescales still appropriate?	Please consider	DLA	M
Sect 2.6 P10 & 11	The two diagrams do nothing to enhance the understanding of the practicalities of the structure post novation, why TramCo should not worry about it and why **tie** has done it. The text at top of P11 just leaves a reader asking why rather than informing.	Consider revising text to ensure that such concerns are addressed. Is there further bidder feedback to address	David Powell	H
Sect 3.1	**tie** should be highlighting here both the reliability requirements and the delivery timeframe. If they are not in the Tram Supply Agreement they could at least be written into the text before going into the contract detail	Please consider	David Powell	H
End 3.1	Welcome the proposal to cut down to less than 20 options. Less than 10 would be better. Large numbers of options always give the impression that a poorly prepared scheme is being taken to market. This adversely impacts the effort that bidders put in and the value of bids. Evaluating this many schemes is difficult and the final decision could be heavily influenced by irrelevant options.	Plans in hand to address but how many options are we able to get down to? How will we evaluate the options – what is the base bid/ relative weightings etc	David Powell/ DLA	H

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
3.2 mid P15	Not sure how this will work if the contract is extended. If a review is done at the end of year five and **tie** wants to extend, the initial six year contract will facilitate this ie **tie** will be negotiating at around the beginning of the sixth year. However this does not work so well for the third review (undertaken at end year 15) when the contract is also up for renewal at the end of year 15.	Please consider	David Powell/ DLA	L
3.2 end of P15	For various reasons the SRA has not been able to re-let franchises before the franchise agreement has expired. This has put it in a position of weakness in negotiating extensions. Nowadays, rail franchises provide for the public sector to be able to call a 7 period extension at a contracted price. Do the tram and operator contracts not need this?	To consider	David Powell/ DLA	M
Sect 3.3, para 2, line 2	What is meant by "neutral cashflow"?	Please explain – will bidders understand?	David Powell	M
Sect 3.3, para 3	More helpful to refer to where the standard form parent guarantee can be found (eg Schedule X to the TramCo contract)	Note that **tie** is not providing a draft guarantee. Won't the form of words influence the acceptability of the guarantee. **tie** could be giving up its negotiating position.	DLA	
Sect 3.3, para 4	Is the bond called on a pro rata basis or is the whole bond called? – bidders will be sensitive!!	Please address	PwC	H
Sect 3.3, last para on P16	ITN appears to be encouraging bidders to offer something that would not be attractive. Whilst making the cashflows more attractive to the supplier we are giving up the leverage of being able to make retentions. Bidders will not price this 'stick' as they will bid assuming that they will not cause retentions.	Please advise rationale for the drafting	David Powell	H
P17 Tram Maintenance Agreement	Why not point out that the performance mechanism proposed put up to 30% of periodic payments at risk? – risk is that bidders determine a higher figure and are put off.	Consider drafting	David Powell	M

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
P18 para 1	**tie**'s requirements are mentioned – these are clearly important and therefore **tie** should state where these are clearly defined	Are **tie**'s requirement clearly recorded in the bidding documentation	David Powell	H
P20 top p20	Given the delay and the shorter bidding period does this need caveating? Why do these documents need to be re-issued at the end of July?	To consider drafting	Iain Bowler/ David Powell	H
4.6 top of P21	Don't understand this instruction. If they don't have an answer bidders will likely have to make an assumption in order to submit a bid. Suggest they are required to state clearly the assumption and which unanswered question it relates to.	To consider drafting	David Powell	H
4.7 end of	Won't **tie** want to deal with clarification of bids largely by E mail?	To consider drafting	Trudi Craggs	M
4.15.3	On many politically sensitive bids there has been a requirement that the financials are provided separately from all technical aspects of the bid. Not only does this stop advisers receiving financial information unnecessarily but it also reduces the risk of leaks.	Consider approach	Strewart McGarrity/ David Powell/ Trudi Craggs	H
4.16	More than one party will want an electronic copy of the bid. On some bids bidders are required to pack boxes as complete bids so that they can be distributed easily.	Consider approach	Trudi Craggs	M
4.17 para 2	Is key personnel a defined term? If this is important to us the documentation needs to enable bidders to know who/ which roles would be consider as 'key personnel'	Consider approach	David Powell	M
4.21	Deadline just begs the question, why?	Consider drafting	David Powell	M
4.23	Won't there be meetings with **tie** in CARP and BAFO phases?	Consider drafting	David Powell	M
4.23 end first para	Don't understand why ITN says "authorised" – this suggest that bidders can ask for access. Doesn't **tie** want total control i.e. they can only talk to SDS Provider when instructed	Consider drafting	Trudi Craggs	M

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
4.23 para 2	Presumably this deadline can still be met since SDS will complete by end of July?	Consider validity of deadline	Trudi Craggs	M
P28	Same issue about keeping financial response separate from technical response	Please consider	Trudi Craggs	M
Section 6.3	Other information that could usefully be obtained from bidders: • Examples of maintaining trams at an operator's depot. • Views/ commitment to the daily delay attribution meeting • What are bidders' views on appropriate fault reporting systems requirements?	This goes to the heart of satisfying ourselves that the ITN poses questions that will elicit the right detail and relevant information from bidders for evaluation purposes	David Powell	H
P32, start final para	Shouldn't it be stated that these noise levels are maxima?	Please consider	David Powell	L
P32	Where are bidders required to set out the power consumption for their vehicles?	Please consider as this must be important for evaluation purposes as **tie** bears power costs	David Powell	H
Sect 6.5, final bullet	Hourly rate *per what?*	Please address	David Powell	H
P37 top	Who are the 'key personnel' – the list below?	Please consider providing guidance	David Powell	M
P42 Section 7A final bullet	The ITN should be clear what **tie** wants Candidates to comment on – impact on cost? How it alters their approach? What they think the best period would be and why?	Please consider providing guidance	David Powell	M
Sect 6.15, para 2	Reference to "originally drafted". Does this mean as issued with the ITN or as issued on 28 July?	May now be irrelevant but please consider	David Powell	M
Sect 6.18, P47, second bullet on page	Don't **tie** want bidders to provide the cost of each insurance policy so that it can consider whether to buy the policy itself?	Please consider	David Powell	M
Sect 6.25	Where is it made clear that tram maintenance personnel are employed by TramCo and not the Operator.	Please address	David Powell	L

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
Sect 7.2	Important to be clear whether or not this list is in order of importance.	Please consider	David Powell/ Trudi Craggs/ Iain Bowler (procurement rules)	H
End sect 7.2	Very unclear as to the relative importance of Base Bid v Mandatory Variants v Voluntary Variants	Please consider how ITN could be more informative	David Powell	H
Sect 7 generally	See scoring point in text above this review table	Please consider	David Powell	H
Sect 7.7 second bullet	Surely **tie** wants bidders to accept the agreement? – this text appears to be inviting comment	Please consider	Trudi Craggs	H
Sect 7.10	Are there to be no clarification meetings before submission of bids?	Please consider appropriateness of text given our plans	David Powell	M
App 2	Need to be clear that 'Query Number' in top right hand corner is their's and that it should run sequentially (allows us to check all their queries are being dealt with). Should be only one query/ one set of related queries per form. It would help if the query would clearly cross reference the source of the query i.e. if they want clarification of something in the ITN they should clearly reference the relevant text.	Please consider	Trudi Craggs	H
App 4	Don't understand why this organisation structure is provided. It could become out of date quickly which sends a bad message. More importantly, it effectively provides a contact list for bidders and could result in them contacting any of the identified team members.	Please consider value of providing structure	David Powell	M
App 7 and App 8	Don't recollect any of these being referred to in the body of the ITN	Please consider	David Powell	M
App 9	Should this form also identify the cost of the extension. If necessary an assumed date for calling the extension could be provided.	Need clarity over what the figures actually bid mean.	David Powell	H

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
	Also what are the prices being bid – real or nominal, 2003/04 prices or what or is this the cash amount that **tie** will contract to pay?			
App9? Part 13 (P109)	Rate per set or per tram? How does the 'per fleet' column work – is it the cost of initial fleet plus the cost of the five extras?	Please clarify bidding instructions	David Powell	H
P110	Is the amount in the middle column (a) the amount to be paid for maintaining the trams? Or the amount put at risk (the 30%) (b) do maintainers have to provide a consistent amount per period or can it vary? © Is the amount nominal or real and in what year's pounds? In the end column: (d) Is this an NPV (in which case what discount rate to use) or an absolute amount? (e) In practice are we contracting in real or nominal? NB These questions repeat across most of the templates	Please clarify bidding instructions	David Powell	H
App 14, P128	Whilst not really understanding what is to be provided here, as a bidder I would be surprised that such basic information was not available with the ITN. Is it clear when it will be available? Is it possible to indicate by when in order to look better prepared?	Please consider	David Powell	L
App15	Not clear from the hard copy ITN whether this is available. Needs to be provided to bidders with the ITN? Ditto App 16 – App 19	Please consider	David Powell	M
App 20	It is not clear that where a Bidder does not accept a requirement: (a) They have to explain why not; and (b) They have to explain why their alternative will be 'fit for purpose'/ meet our requirements	Please consider clarifying instructions	Trudi Craggs	H
App 21	Are minima or maxima stated somewhere?. For example if	Please consider clarifying	David Powell	H

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
	there is a slope of 1:8 on the route, there is no point in someone offering us a solution of a tram that can only operate on a maximum gradient of 1:10.	instructions		
App 21 table on p140	Does assumed = a level bidders are expected to be below?	Please consider clarifying instructions	David Powell	H
App 21 P148 items 49-2 etc	Where are the requirements specified eg size of displays, size of characters, no of displays per tram, how displays are to be updated (eg real time or pre recorded)? Has the specification been checked against the obligations to be met by the Operator?	Please cross refer as appropriate If no specification how to manage stakeholders aspirations?	David Powell	H
App 28 & App 37	Private sector column is confusing. I read this document initially thinking that private sector = TramCo, InfraCo or Operator and therefore did not find that it clarified my responsibilities as a bidder. In practice I think private sector = TramCo	Please consider clarifying	David Powell	H

PRICEWATERHOUSECOOPERS

Notes based on brief review of the infrastructure contract

Set out below are main findings and points arising from Ian Brooks' brief review of the infrastructure contract (Fourth draft dated 24 April 2006). This brief review did not encompass the whole contract but instead focused on key sections such as development of deliverables, milestones, maintenance, service performance and performance monitoring, payments and bonding.

The infrastructure contract is clearly work in progress and therefore it is recognised that plans may be in hand to address many of the points below.

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
Cl 34.3	What happens where **tie** has to issue instructions because InfraCo has not done the job properly?	Please consider clarifying	Trudi Craggs	M
Cl 44.3	Can the Certificate state a date prior to when the inspection took place?	Please consider clarifying – only concern is if this can impact the timing of payments	Sharon Fitzgerald	M
Cl 46.1	Cross references don't work so it is difficult to understand this clause. Why are there two Defects Rectification Periods?	Please address/ explain	Sharon Fitzgerald	M
Cl 46.2 and 46.2.3	Should the bond period be extended, or at least have the discretion to do so, if the Defects Rectification Period has been extended	Please consider	David Powell	M
Cl 52.1.1/ 52.1.2	Need to do a review of definitions. The ones used in this drafting are inconsistent with the definitions in the document	Please address	Sharon Fitzgerald	L
Cl 52.1.4	Operator Specification not defined	Please address	Sharon Fitzgerald	L
Cl 52.2.2	Definition of System required	Please address	Sharon Fitzgerald	L
Cl 52.8.3.2(b)	Need to be satisfied that an appropriate range of labour rates is contracted. What is the process whereby 'Agreed Labour Hours' for works will be agreed? How to stop InfraCo from charging Agreed Labour Hours	Please consider	David Powell	M

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
	even if it can do/ it does the job more quickly			
Cl 52.10	Why is InfraCo 'entitled'? Surely it should be obliged to do this work?	Please consider	David Powell	M
Cl 52.15.1	Shouldn't there be minimum notice periods or incentives to maximise the notice period so that the Operator can manage the issue properly and inform customers	Please consider	David Powell	H
Cl 53.1	Concerns have been raised on other projects re the understanding the owner had about the quality of the maintenance work being done by the Operator. This became apparent when, for the purposes of re franchising, they struggled to describe the state of the infrastructure being taken over. Based on this experience suggest that: (a) The right to inspect can be exercised every two years, regardless of whether **tie** reasonably believes there are problems; and (b) InfraCo is required to maintain a comprehensive and up to date fixed asset register that reflects the results of inspections and maintenance work undettaken. This would make it possible for **tie** to inspect the process more regularly and the quality of work when it felt this was appropriate.	Please consider	David Powell	H
Cl 53.4.1	Suggest that this is extended to cover quality of records	Please address	Sharon Fitzgerald	M
Cl 54	As is recognised, this clause needs developing in parallel with the TramCo agreement and content also needs drafting and agreeing for the DPOFA. As currently drafted, the contract does not refer to the daily delay attribution meetings. This is probably fundamental to avoiding a backlog of disputed items and ill feeling.	Please address	David Powell	M
Cl 54.2	Service Quality Report is undefined. In practice this should not just be a statistical report to enable the calculation of deductions – it should explain the failings, the fault attribution	Please consider	David Powell	M

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
	and sources of problems (to inform **tie** and to demonstrate that InfraCo is identifying the issues) and set out plans to address the issues.			
Cl 54.4.1	Self Monitoring Plan not defined. **tie** needs to think about whether self-,monitoring will achieve **tie**/ TEL's objectives	Please consider	David Powell	M
Cl 54.6 & Cl 55	Without having worked out the maths surrounding the calculation of Underperformance Points, the potential to issue the Underperformance notice appears draconian even if it is only exercised at **tie**'s discretion. May be better to allow for some form of calibration based on practical experience before this clause kicks in	Please consider	David Powell	H
Heading to 61.8	Why does this refer to 'Employer' – shouldn't it be **tie** or Client?	Please consider	Sharon Fitzgerald	M
Cl 61.8	Don't understand reference to Safety Case	Please consider	Sharon Fitzgerald	M
Cl 61.9	Rationale for the bonus is clear who is quantifying how much it is worth to us and therefore how much **tie** is prepared to share? For example does **tie** really want to pay a bonus if services can't be started earlier?.	Please consider	David Powell	M
Cl 62.1	If InfraCo has been subject to notification under Cl 62.1, can it still be entitled to bonus payments?	Please consider – this may be the right incentive for catching back up	Trudi Craggs	M
Cl 62.2	Previously referred to a 'Period for Completion'	Please address	Sharon Fitzgerald	L
Cl 64.2.3.1	It appears possible for there to be a foreseeable relief event against which InfraCo can be protected. In such a case, InfraCo should be required to mitigate or manage the impact in order to maintain the protection.	Please consider	Trudi Craggs	M
Cl 64.12	Abortive Works not defined	Please address	Sharon Fitzgerald	M

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
Cl 65.1.2	How will **tie** determine whether an event that makes InfraCo unable to meet a milestone is a Compensation Event? Is our best opening position not to provide this protection and see what bidders say?	Please consider	David Powell	M
Cl 66.1	Who is determining the milestones? How well specified are they? A major risk for bidders will be disputes over the achievement of milestones resulting in delayed payments. The documentation sent with the ITN needs to be as clear as possible on this in order to remove concerns.	Please consider – don't believe that iit would be in **tie**'s interest to allow bidders to propose milestones	David Powell	H
Cl 66.5	Does the Interim Certificate cover costs incurred or merely confirm that work has passed a specified level of completion?	Please consider	Sharon Fitzgerald	M
Cl 66	The payment mechanism appears very complicated with paper work going backwards and forwards between the parties. Why are so many steps required? What is the distinction between 'Application for Payment' and VAT invoice?	Please consider whether all steps are necessary	Sharon Fitzgerald	L
Cl 67.4.2	This list needs to be extended to include all the specific InfraCo obligations? Has it been checked against the final list of obligations in the TramCo documents	Please consider	Trudi Craggs	H
Cl 67.4.3	Don't know what the cross reference is to, but why is **tie** prepared to pay for any repairs?	Please consider	David Powell	M
Cl 82.3	Suggest that these two periods are not the same. As drafted, there is no discretion over the termination and if there is a cock up in **tie** clearing its default the contract will automatically go into termination. Suggest the periods are 90 days for the agreement terminating and 60 days to rectify. Note that if the agreement terminated under this clause, **tie** would have very little time to ensure continuity.	Please consider	Trudi Craggs	M
Cl 82.7	Not clear who determines the amounts payable under this	Please address	Trudi Craggs	M

Ref	Observation	Action	Responsibility	Priority (High, Medium or Low)
	clause.			
Cl 89	This clause should be expanded to allow **tie** to undertake: • Ongoing monitoring of maintenance (as previously discussed) and maintenance records • Provision for maintenance records to be transferred to the next maintainer	Please consider	David Powell	M
Definitions	What is the significance of "and complete" in the context of Infrastructure Maintenance Plan?	Please advise	Sharon Fitzgerald	M
Appendices generally	Need to be very clear as to what is being produced (is it fit for the purposes of an ITN) and when it will be available for review and comment prior to completion.	Please consider carefully providing guidance to bidders	David Powell	H
Schedule 5 Milestone Payments	From a tactical point of view, do **tie** really want this to be blank in the ITN. Shouldn't **tie** provide some guidance as to what sort of milestones **tie** would like to pay against.	Please consider	David Powell	H
Schedule 6 – below 7.2 and 8	Need to consider how these multipliers fit with the concept that 30% of periodic income only should be at risk	Please consider	David Powell	M
Schedule 6, Table 1	Table and related decisions outstanding	Please address	David Powell	M
	All other document appears to be template rather than tailored.	To note only	David Powell/ Trudi Craggs	Note only

PRICEWATERHOUSECOOPERS

Notes based on brief review of the InfraCo ITN

Set out below are main findings and points arising from Ian Brooks' brief review of the InfraCo ITN (Fourth draft dated 5 April 2006.

This document is clearly work in progress and therefore it is recognised that plans may be in hand to address many of the points below. However, before the document is developed any further careful consideration needs to be given to the overall content of the document given its role of informing bidders and 'selling' the opportunity to take part. As currently drafted the document will be dominated by detailed descriptions of the content of the contracts. This is unhelpful in that the contracts are being supplied anyway and the Project Team will likely face a big challenge to keep the descriptions consistent with the detailed drafting. Of much more interest to bidders will be a short summary of the key points so that they can read the detail in the contracts against a background that they undetstand the overall approach, why it has been adopted and what it is trying to achieve.

This document also requires an Executive Summary. It is likely that senior executives of all of the bidders will want a briefing on the proposals before they commit to bidding. **tie** needs to ensure that it is easy for bid teams to provide an accurate and focused briefing by providing much of the information they need in the Executive Summary – this will also probably help with our own stakeholder briefings.

Ref	Observation	Action	Responsibility	Notes
Confidentiality	Are bidders to/ have they signed confidentiality letters?		Trudi Craggs	
Confidentiality	Intention is to include a number of signed agreements with the ITN eg SDS. Does **tie** have permission to disclose?		Trudi Craggs	
1.4 (p2)	Why are the tenderers listed out here?		Trudi Craggs	
Sect 2	I assume that this section is/ will be taken from the TramCo document in order to ensure consistency and then it will be updated as necessary. Consistency is important given the overlap of bidders.		Trudi Craggs	
2.5 first para	Text like this is unsettling – it looks as though **tie** might just drop extra work on InfraCo. Need to add comforting text that: (a) describes what to assume for the purposes of the bid (to create a level playing field); and (b) outline how such works would be introduced and paid for (eg separately negotiated and priced).		David Powell	
2.5	EARL and NR sections were not included in the TramCo ITN. Whilst they are not really relevant to the tram contracts they are relevant to understanding the context of the overall		David Powell	

Ref	Observation	Action	Responsibility	Notes
	scheme. Suggest they are reflected in TramCo.			
2.6 first para	Reference is made to a number of third party agreements with objectors to Bills. This is rather negative and begs the question whether there are problems: (a) Can the reference be deleted; or (b) Can the other agreements be explained away as immaterial or non constraining?		Trudi Craggs	
2.7 first line	Tense – has been? is being		David Powell	
2.7 last para	Will bidders understand what a Pre Tender Health and Safety Pan is/ why it is being included?		David Powell	
Sect 3	Consider re-planning this section (which will likely reduce workload) so that it: (a) addresses the principles surrounding the major areas of concern; and (b) demonstrates how, for example, tram obligations are back to backed with TramCo thereby strictly limiting the risks relating to the trams assumed by InfraCo. The section requires an introduction that explains: (i) The overall approach and its similarity with an SPV – aim would be to make InfraCo comfortable that they are familiar with the end structure; and (ii) why this approach has been adopted. If we do not provide these answers to bidders, there is a real risk that they may mis-understand the structure and conclude that there are greater risks than in reality. Such a misunderstanding will likely impact price and possibly willingness to bid.		Trudi Craggs	
Section 3.2.7	Care with this drafting. Whilst it may be factually correct, as written it will just worry bidders that **tie** can disrupt their plans for efficient delivery of the Infrastructure works. Whilst **tie** should be honest, at the very least it should at least describe		David Powell	

Ref	Observation	Action	Responsibility	Notes
	how InfraCo would be protected if **tie** exercised these rights.			
3.2.11	As drafted it looks as though **tie** is dumping responsibility on InfraCo. In practice **tie** should be creating value from the extensive works that the Tram project has undertaken by highlighting just how much, and the nature of the, work that has been done.		David Powell	
3.6.1 last para	This is the sort of high level, informative text that should be included in Section 3. However the drafting then descends into too much detail		David Powell	
3.6.4 last para	Experience suggests that mixing bidding instructions into sections that are to inform is unhelpful. Suggest all instructions are contained in the bidding instructions chapter/ section – this makes it easier for bidders to address all requirements. It also removes the risk that the Project Team fails to check remote text resulting in contradictions in the instructions.		David Powell	
3.6.6 last para	Given InfraCo sensitivities to the implications of changes to the Tram spec this sort of text is very helpful in spelling out to bidders that this issue has been properly addressed.		David Powell	
3.13	MUDFA is surely a key selling point. It should not therefore be buried at the end of this section.		Trudi Craggs	
3.13 final two para	Again an example of highlighting obligations but not outlining that there will be compensation.		David Powell	
Section 6	I have not been through this section in detail as it is clearly a very early draft. It is important to ensure that the instructions are designed around: • How **tie** will evaluate bids • Comfort that **tie** has taken into account/ is addressing key issues for stakeholders • Confidence that **tie** knows how it will mark/ allocate marks (so that the Project Team knows that it has asked the right questions and that it has enough marks to allocate to answers – it is very easy to ask too many		David Powell	

Ref	Observation	Action	Responsibility	Notes
	questions; and • Markers have been properly engaged in the question setting process (this will facilitate timely marking).			
6.4 and 6.5	Need to provide guidance on meetings expected during the bid period so that bidders can make sure they are properly resourced at the right time. However, there is no need (and it is potentially unhelpful if our plans subsequently change) to set out meetings beyond bid submission.		David Powell	
6.10	Why resist the use of e mail? Surely it will facilitate both bidder clarification of instructions and our own clarification of bids?		David Powell	
6.19.3	Does **tie** really want to reject late submissions or to have the right at our absolute discretion to reject late submissions?		Trudi Craggs	
6.21	Tender validity: given the timetable for getting to a signed contract shouldn't **tie** be seeking a longer tender validity period?		Trudi Craggs	
Section 7	No comments on this Section as it seems to have been lifted without amendment from the TramCo ITN. Many of the TramCo instructions will not be relevant to InfraCo.		David Powell	
Sect 8.2	Price is not one of the evaluation criteria? Need to determine whether **tie** wants to list them in order of importance – this would likely be helpful to bidders		David Powell/ Trudi Craggs	
Sect 8.3 bullet 2	Need to be clear about reference to budget. Is **tie** looking for evidence that the bidder has met budget on previous jobs or that there is a particular budget for these works at the moment (ie bids to be below an amount **tie** can afford). **NB** This is a good example of where the Project Team needs to plan for the evaluation and perhaps clarify questions. Any bidder should be able to find examples of projects delivered within budget. Surely what **tie** is looking for is: • Delivery of projects within amounts bid/ amounts contracted; and		David Powell/ Trudi Craggs	

Ref	Observation	Action	Responsibility	Notes
	• Some measure of the proportion of jobs delivered by the contractor that achieve this (is it the exception or the norm?). The Project Team will need to think carefully about a practical way of eliciting this information			
Section 8.3	Does **tie** want bidders to demonstrate skills surrounding managing local stakeholders/ not winding up residents/ putting the roads back into proper condition/ working with Network Rail……		David Powell/ Trudi Craggs	
Sect 8.4	Need to define key personnel. Consider developing questions to obtain the information **tie** wants. For example what would convince **tie** that a bidder has demonstrated "communication skills amongst team leaders"? is **tie** looking for good communication with the team, or good skills with the client?		David Powell/ Trudi Craggs	
App 1 Tender Query Form	Need to be clear that 'Query Number' in top right hand corner is their's and that it should run sequentially (allows the Project Team to check it is dealing properly with all their queries). Should be only one query/ one set of related queries per form. It would help if the query would clearly cross reference the source of the query ie if they want clarification of something in the ITN they should clearly reference the relevant text.		Trudi Craggs	
App 2	This Appendix is vitally important. Experience suggests that the technical team responsible for its production may not have objectives/ a vision/ an understanding that is aligned with the requirements of an ITN and the need to inform bidders. There needs to be an exercise to work methodically through the proposed contents of this Appendix and ensure that outputs, timescales and checking processes are clearly understood		Trudi Craggs	
App 3	Why is **tie** providing details of the Project Team. This may		David Powell	

Ref	Observation	Action	Responsibility	Notes
	encourage bidders to approach other team members?			
App 4	Ditto Appendix 2		David Powell	
Commentary matrices	Note that these are for TramCo and have not been developed for InfraCo		David Powell	
P104 Part 5 Standard Tender	Much work still required to develop these instructions Whilst a certain amount of tailoring has been done and the document is a useful 'straw man' this Part needs to be worked through line by line in order to : (a) elicit the information **tie** needs; (b) consider how it would be scored; and (c) give adequate guidance on length, detail etc		David Powell	
P129 Part 6	The pricing schedule is critical. What are the processes by which the Project Team is producing the bill of quantities and quality controlling the output?		David Powell	
Part 8	Does **tie** really want to leave it to Bidders to define 'Key Personnel'? Isn't their incentive to make this list as short as possible?		David Powell	
P151 Part 11	No details of the mandatory variant, nor is there any reference in the body of the ITN. What does the mandatory variant relate to? Is it really required?		David Powell	

PRICEWATERHOUSECOOPERS

Notes based on brief review of the Development Partnering and Operating Franchise Agreement ('DPOFA')

Set out below are findings and points arising from Ian Brooks' brief review of the DPOFA.

Ref	Observation	Action	Responsibility	Notes
N/A	This is one of the few signed documents available for review as the Operator was brought on board in 2004 to inform the design and development of the project. HOWEVER much of the agreement reflects work to be done rather than final, agreed terms. A major exercise will be required during 2006 to: (a) Finalise details eg KPIs and performance; and (b) Update the financials for the purposes of the OBC		David Powell/ Trudi Craggs	
P28 Sect15.1	Note the requirement to manage and agree Project Development costs. Has this been happening? David needs to be aware going forward as I assume that Ian was doing this?		David Powell	
P32 Sect 15.5	Note the protection provided by the provision for retention of Project Development Costs. Should this be happening? Is it?		David Powell	
P136 Sect 2.6	Operator has a role to develop and refine Target Costs and Target Operating Costs that he has already provided. What are the controls for ensuring that these costs are properly challenged so that this does not become an automatic upward revision?		David Powell	
P131 Index to Sch 2	Note Operator's project development obligations set out in Section 5 (P142), Section 16 (P153), Section 31 (P188) and Section 33 (P188)		David Powell/ Trudi Craggs	
P161 Sect 24	Section describes how the KPI regime will be developed and reported. Need to think about mirroring in Infra contracts so that reports are common, coterminous and problems don't fall through the gap.		David Powell/ Trudi Craggs	

Ref	Observation	Action	Responsibility	Notes
	NB The KPI regime is not established.			
P163 Sect 24.7	Sets out the basic approach to performance measurement. Need to make sure that this is mirrored in the Infra and tram contracts		David Powell	
P164 Sects 24.9, 24.10 and 24.11	Good examples and probably not all the examples. These clauses set out the standards/ obligations expected of the Operator. There needs to be an exercise to ensure that the specifications in the Tram and Infra contracts support the obligations already placed on the Operator		David Powell	
P166 Sect 25	Note provision for a Performance Monitoring Regime and Performance Indicators. What is required is specified but not how it will be used. This may need to dovetail with InfraCo and TramCo contract and therefore needs to be considered in completing these contracts.		David Powell	
P212 Financials 3a Line 1	Note that there are detailed costings in this section for operating routes/ lines that do not now form the basis of a project. For the purposes of the OBC it will be necessary to obtain revised, relevant costings		Rod Cameron / Stewart McGarrity	
P 264 Performance Scoring	Has this schedule been developed	Low priority now, but needs considering going forward	David Powell	
P266 App 14	Don't understand why the Performance Bond has been signed. Is there an agreed position and amount?		Trudi Craggs	
P284 Base Case Assumptions	Need to ensure that these are updated when the contracted model is updated. Must try to limit the scope for spurious adjustments when the financials are updated – persistent problem with changes on heavy rail franchises		Rod Cameron / Stewart McGarrity	
P288	Is the approach to billing a 7 hour day being followed when Operator raises bills?		Stewart McGarrity	
P292 Purchase of capital items	Need to be aware of these capex assumptions when placing, for example, cleaning or maintenance obligations on the Operator		David Powell	
P319 etc	Need to consider status of this paper. In particular need to		David Powell	

Ref	Observation	Action	Responsibility	Notes
KPI /punctuality/ revenue protection	address when to set about agreeing KPI measures and monitoring with Operator. Also punctuality measures do not make sense: Part 5(2): if a tram is turned or diverted it won't pass the measurement point so what to multiply by 2.5? Point 6: has the Project Team addressed this clock issue in the instructions?		David Powell David Powell	
P352	Note caveat should number of trams exceed 50.		David Powell	
P361	Remember to build estimate for electrical power into the OBC		Rod Cameron/ Stewart McGarrity	
P361….	Remember to build costs of **tie** management/ monitoring/ inspection team into the OBC		Rod Cameron/ Stewart McGarrity	
P364	Not clear what the provisions are surrounding possessions and other maintenance activities and how the Operator has to work with the InfraCo and possibly TramCo to minimise disruption to passengers. Doesn't appear to be covered as a 'Special Event' and shouldn't be.		David Powell	
P368	All aspects of fares and revenue protection appear to be in the air. On the assumption that **tie** takes revenue risk need proper incentive for Operator to collect fares and approach should work on a crowded tram. Need to address: • Measure applied to operator; • Money riding on it; and • Design support required from TramCo (siting of machines etc)		David Powell	
P371	Note that contract defines Operator Maintenance and Infrastructure Provider Maintenance. Need consistent use in the other contracts		David Powell	
Re letting of the contrat	None of the contracts make provision for support in re-letting the contract. This could result in unnecessary time and cost		David Powell/ Trudi Craggs	

Ref	Observation	Action	Responsibility	Notes
	in reletting and could become a barrier to entry. Need an obligation on the operator to (as a minimum): • Provide information and analysis • Answer reasonable questions and help explain financial and non financial (eg ridership) trends • Allow visits and meeting by bidders • Hep answer clarification questions			