

## Edinburgh Tram Network

OJEU proposed for Dec 2004

### Scope of Services for Integrated Tram Systems Design Services (ITSDS)

#### Notes

For Sharon Fitzgerald - Sharon

Andrew and I had a meeting with Ian this afternoon to brief him on what we have been up to.

I had just completed my draft forming the basis of what follows and had moved on to the role of ITSS and immediately realised that defining the likely duties of the ITSS was going to much more fraught. So I leapt straight in and argued the case for postponing the OJEU process for ITSS for so long as it takes us to be clear about the ITSS's role.

So we would like to go full steam ahead on ITSDS making reference only to the fact that there is likely to be an ITSS.

Hope this is clear.

Paul

#### Summary

The Bills for Tram Lines One (1) and Two (2) first phase of the Edinburgh tram Tram nNetwork comprising Tramlines One & Two is are currently being considered by the Scottish Parliament. Parliament is scheduled to decide on the principle of the trams in February 2005 and then move onto the detailed consideration of the tram routes. It is anticipated that the this bill-Bill process, culminating in Royal Assent, could be complete by the end of 2005.

TIE Ltd (tie)tie is currently developing its procurement strategy in relation to the procurement of tram vehicles, infrastructure works and service integration services for the Edinburgh Tram Network. As part of this procurement strategy, In order to be prepared to implement the tram system, TIE Ltd tie intends to appoint a consultant to providedeliver Integrated Tram Systems Design Services (ITSDS) by early 2Q2005. ITSDS. The ITSDS provider will be required to develop a detailed design for key elements of Lines 1 and 2 of the Edinburgh Tram Network, started by others as part of the current ongoing parliamentary process. [ This detailed design will be developed from the design work which has already been carried out for tie to support the parliamentary process. ] A list of services which it is currently anticipated will be provided by the ITSDS provider is set out [later in this MOI/PQQ.]

Comment [MSOffice1]: What do we mean by this?

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~~It is the current intention of tie that The detailed design along with the ITSDS provider will be novated to a future Infraco the infrastructure provider (Infraco) appointed by tie who will be commissioned to construct and install the design generated by ITSDS. The ITSDS provider will, therefore, be required to provide ITSDS pre and post novation.~~

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~~{Ultimately, The provider of ITSDS will be required to prepare Detailed designs of all of the features and components of a modern Tram scheme. The Provider of ITSDS will also be responsible for will be required together with obtaining all the associated [design] statutory and planning agreements and consents, where these have not already been obtained by others both pre and post-novation.~~

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~~The level of detail to which the detailed design is to have been developed by the provider of ITSDS at the point of novation, is likely to be such that the functionality, layout, appearance and technical specification of the system and its components [and their subsequent detailed design does not make sense] and specification is clear unambiguous in the context of any or all of the following characteristics:-~~

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- ~~• configuration~~
- ~~• spatial layout~~
- ~~• design and appearance~~
- ~~• specification~~

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~~Consideration is being given to the level of completeness of the design at the point of novation. The Instructions to Tenderers for the ITSDS (ITT) will identify those aspects of the design that it requires to be fixed pre novation and which aspects of the design it is prepared to pass on as an Infraco responsibility. It is tie's intention that any residual design risk to be passed onto Infraco, is only that which can be managed effectively by Infraco on tie's behalf. should only have to prepare working drawings and technical specifications for the purpose of procuring and constructing the specified designs of the various components of the System using its own resources and those of its supply chain of specialist suppliers and subcontractors. ] Needs to be re-drafted to reflect pre and post novation services, and the fact that design responsibility sits with InfraCo.]~~

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### Range of Services likely to be required

The following paragraphs identify a range of activities likely to be required to be undertaken by ITSDS. The list which should not necessarily be considered to be comprehensive necessarily at this stage.

ITSDS will be required to undertake technology reviews so as to identify the most appropriate ways of delivering the functionality required of the system and its components.

ITSDS will be required to develop detailed designs and complete associated technical specifications which will deliver:-

- Overall System functionality, capability and performance requirements ~~which will be set by TIE Ltd~~
- Sub system functionality and technical requirements for the following probable system components:

~~also to set by TIE Ltd:~~

- Light Rail Vehicles (LRV)s
- Track
- OHLE
- Traction Power supply network
- Operational Signals and Control system
- Communication Systems
- Fare Collection
- Security Systems
- Maintenance Plant and Equipment

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~~ITSDS is also likely will also be asked to assist tie and its team of other advisers as required with the process of Tram Procurement procurement of tram vehicles and infrastructure works and system integration services,] which is an exercise which will be undertaken prior to the procurement of Infracore.~~

~~ITSDS will be required to [carry out detailed design etc.] prepare the range of drawings and specifications required to enable the construction of the tram network. The infrastructure likely to be required to support the above system components will comprisescomprise but not necessarily be limited to:-~~

- Civil and structural engineering works (formation, bridges, retaining walls and the like)
- Track formationTrack works
- Highway works
- Traffic Management arrangementssystems
- Tram stops details
- Depot and Buildings and associated external works layout
- Substation Buildings and associated external workss
- Foul and surface water drainage systems
- Building Services (M + E) infrastructure
- Building works associated with the LRT network's E&M systems
- Environmental mitigation measures
- Hard and Soft landscaping
- Stray Current and EMC control systems

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The detailed design work and preparation of associated specifications are to be developed to a level of detail that will

- firstly, and prior to novation, enable an efficient procurement process for the appointment of Infraco;
- and secondly, post-novation, enable the construction of the tram network.

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[ITSDS will also be asked to assist tie and its team of other advisers as required with the procurement of the LRV fleet, an Infraco and the provision of System Integration Services.]

[In connection with the above activities described above, the ITSDS will be responsible for required to assist tie and its advisors in activities associated with either concluding or initiating negotiations and acquiring –

- Land Acquisition
- Wayleaves and Easements
- Compulsory Purchase
- Planning Consents and Permissions
- Road Traffic Orders/Traffic Regulation Orders
- Public Utility Surveys and Investigations, establishment of diversionary works agreement and minimisation of diversionary works
- ~~agreements with all other relevant third parties~~
- ~~undertaking all necessary stakeholder and, objector & public liaison ]To be amended as discussed agreements~~
- agreements with all other relevant third parties
- public liaison

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In support of the development of the detailed design it is anticipated that there will be a requirement for reports/supporting analysis/statements of intent on a range of associated topics which may include but not necessarily be limited to

- Environmental Surveys
- Photographic, Noise and Vibration surveys for benchmarking purposes
- Frontager Structure/Property dilapidation surveys for benchmarking purposes
- Condition surveys of existing infrastructure to be utilised by project
- Basement/Cellar/Void surveys of route to identify presence of such features that may impact on design and construction
- Tree surveys
- Public Lighting surveys & design
- Archaeological and contaminated land surveys
- Network Rail asset investigation studies and preparation of accurate engineering drawings for input into both detailed design and immunisation process and Network Rail Agreements
- Topographical surveys
- Geotechnical surveys
- Hydrographic surveys

- Environmental Impact and mitigation requirements
- Earthing, Bonding and Corrosion Code of Practice
- Construction Codes of Practice

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The ITSDS will act as planning supervisor

### Starting Point for the ITSDS commission

The provider of the ITSDS will be issued with the following type of information

- ~~A detailed System Functional Requirement Specification~~
- ~~A full set of the drawings and documents that depict the design as developed as part of the Parliamentary Process~~
- ~~A Technical Requirements Specification~~
- ~~The Project's Design Manual~~
- ~~The relevant Parliamentary Bill with the supporting documentation~~
- ~~Details of Parliamentary Undertakings that have been given~~
- ~~Guidance on specific Standards and Codes of Practice to be followed~~

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### Anticipated range of competency/capability required

Disciplines likely to be required by the provider of ITSDS will include but not necessarily limited to:-

- Engineering disciplines generally
- ~~Commercial and Contracts~~ [to be expanded - QS etc] Quantity Surveying and Cost Estimating
- Procurement and contract documentation
- Operating and maintenance (LRV system asset management experts)
- Systems Integration and Coordination
- Transport Planning, & traffic management and control systems
- Transport System Modelling & analysis
- Tram system modeling and analysis
- Urban planning and design consistent with the installation of the tram within a World Heritage Site
- Architecture
- Highway design
- Street Lighting
- Hard and Soft Landscape design
- Pedestrian modelling
- Traffic engineering
- Noise and vibration
- Environmental
- Geotechnical

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- Building design (depot and substations).
- Hydrology/Drainage design
- OHLE design
- DCe Power System design
- Building Services design
- Control and communications system design
- Fare collection systems design
- Workshop and Depot design
- Cable co-ordination

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### Other requirements

The provider of ITSDS will need to be able to demonstrate a capability in operational and maintenance planning in addition to competency in detailed design. ITSDS will need to be able to demonstrate that dThe ITSDS is to take account of the long term impact that design decisions have on the future operability and maintainability of the Tram Network will deliver lowest whole life cost solutions. ...[whole life/value engineering].

Outputs from the system design and specification and the O&M models will be used as inputs to the Project's Financial Modelling process

The ITSDS will be required to act as Planning Supervisor for all relevant Designs and contract works and advise on compliance with all relevant authorities.