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Commercial Due Diligence Report

TIE, Edinburgh Tram Network,

Update Nr 1

April 2011



TIE00358216\_0001

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## 1.0 Introduction

Cyril Sweett have been requested by Tie Ltd to carry out an independent commercial review of the Edinburgh Tram project. This report is a follow on from Cyril Sweett Initial Due Diligence report and provides further commentary on the following topics:

- An assessment of the value of work carried out to date on site
- A detailed estimate of the cost to complete by others
- A review of Preliminaries and other specific contract requirements
- A commentary on current market conditions
- A report on alternative procurement routes

To carry out this review Cyril Sweett have worked with Tie Ltd to gain a better understanding of the Contract Price agreed for the Tram project works and this is clarified later in this report. Cyril Sweett have also carried out site visits with Tie representatives to estimate the value of the civil engineering works carried out to date.

It is the intention to build upon this report by carrying out further measurement and cost checks on the on street works and to establish a more accurate assessment of the Siemens element of the works and further evaluate in detail the extent and value of the overall works completed to date. This report does not include Cyril Sweett's valuation and measurement of the Haymarket to York Place section of work as this is programmed to be incorporated in the next update.

Cyril Sweett would clarify that it is not the intention of this report to review the legal position of any disputes but instead to carry out commercial due diligence of the level of works carried out to date on behalf of Tie Ltd.

## 2.0 Contract Price Analysis

2.1 A breakdown of the 'Contract Price' is detailed within clause 2.5 of Schedule Part 4 and is as set out below:-

Construction Works Amount	£238,607,664
SDS Price	£3,308,815
SDS Provisional Sums	£1,675,000
Tram Supply Price	£55,781,634
Infraco Maintenance Mobilisation	£1,782,292
Tram Maintenance Mobilisation	£2,275,806
Infraco Spare Parts	£1,013,090
<b>Total Contract Price</b>	<b><u>£304,444,301</u></b>

2.2 The Construction Works Amount of £238,607,664 is understood to be allocated in the contract Price as noted below, as per information provided by Tie:

	Off Street (£m)	On Street (£m)	Total (£m)
BBUK Preliminaries	21.69	13.24	34.93
Escalation	<u>11.46</u>	<u>6.37</u>	<u>17.83</u>
Subtotal	33.15	19.61	52.75
Civil Engineering Works	55.18	26.95	82.13
Siemens Preliminaries	15.71	6.73	22.44
Siemens Design	8.12	3.48	11.60
Systems Installations	38.39	17.45	55.84
Systems Wide Works	4.92	2.11	7.03
Value Engineering	(11.32)	(1.31)	(12.63)
Provisional Sums	8.41	16.03	19.44
Total	147.55	91.05	238.61

2.3 The Contract Sum was subsequently allocated into mobilisation payments, preliminaries amounts, Network rail immunisation costs, *SDS design*, incentivisation and sectional milestones amounts and these were used as the mechanism to ascertain the interim valuation stage payment amounts. The milestone and mobilisation amounts incorporated the reallocation of Escalation and Value Engineering amounts although further clarity is required to provide a full understanding of how the Construction Works Amount has been established.

2.4 It should be acknowledged however that, as detailed within Schedule Part 4, although the Construction Works Price was stated as being a fixed and firm lump sum price it did include amounts for value engineering opportunities and targets where Tie carried the risk of Infraco delivering these, amounts for provisional sums and that it was based on certain pricing assumptions. The reason for establishing a Construction Works Price on this basis as stated within clause 3.2.1 of Schedule Part 4 arose 'as a consequence of the need to fix the Contract Price against a developing factual background'. This approach is not unusual on construction projects where there is a need or a desire to make an early site start however it does increase the level of risk within the project as well as increasing the level of cost control required after contract award.

### 3.0 Cost of Work Carried Out

3.1 The overall value of work carried out has been assessed by Cyril Sweett at £145,431,975 and is detailed within the attached analysis sheet (refer to Appendix A). The methodology used and the basis for assessing the costs are as set out below. It should be noted that this is our current estimate of the value of the works and as yet this is not a completed item of work. We have assessed the value of work carried out to date under the following headings which are explained further in this section:-

- Preliminaries
- BBUK Construction Work
- Siemens Design, Systems Installation and Preliminaries
- Provisional Sums
- SDS Design Services
- Additional Works

3.2 BBUK Preliminaries – Appendix A2 and Spreadsheet No.2 within Appendix F of Schedule Part 4 contains a breakdown of Preliminaries and General Items split into both fixed and time related amounts based on an on-site programme of 169 weeks. It should be noted that these values do not correspond with the preliminaries milestone amounts as per previous note in 2.3 of this report. It is our understanding that the breakdowns were included within the Schedule Part 4 as they were transposed from the original tender for the works. As detailed below the total of fixed and time related items equate to £52,755,023 however within this amount there is £17,828,910 for Escalation resulting in a Nett Preliminaries amount of £34,926,113 however the Escalation amount of £17,828,910 has been spread throughout the Preliminaries rates as has any amount included for Overheads and Profit (understood to be 10%).

	Off Street (£m)		On Street (£m)		Total (£m)
	Fixed	Time	Fixed	Time	
<b>General Consortium Preliminaries</b>					
Bonds & Insurances	-	2.95	-	1.55	4.5
Accommodation/Equipment	0.37	2.28	0.21	1.24	4.10
Supervision	-	2.69	-	1.45	4.14
Consortium costs during negotiation	2.2	-	-	-	2.20
<b>Method Related Preliminaries</b>	4.70	4.55	17.94	10.62	28.56
<b>Total</b>	<b>7.27</b>	<b>12.47</b>	<b>18.15</b>	<b>14.85</b>	<b>52.75</b>

The gross preliminaries, in addition to being identified as being fixed or time related were also split into Consortium Preliminaries, for site wide and general project requirements and Method Related Preliminaries to cover site works being managed directly by BBUK and their sub-contractors. It should be noted that within Schedule Part 4 the Bonds and Insurances are noted as being Time Related and that Cyril Sweett's experience is that some of these items would be a fixed Cost to the project. To establish the value of work done to date we have however, assumed Bonds and Insurances are not fixed costs as per the Contract Document.

The BBUK preliminaries value of work done to date has been assessed at £29,914,882 as per the detailed spreadsheet attached under Appendix B to this

report. This amount incorporates allowances for Escalation and Overheads and Profit as the rates are inclusive of these as per 3.2 of this report.

It is important, however to note that Cyril Sweett have valued the Preliminaries in the basis that these are a function of the work carried out and not the time spent on site. This assumption assumes that any preliminaries costs due for any extensions of time awarded to Infracore are included in the Additional Works section as they will relate to any changes which may or may not have caused any delays to the project.

- 3.3 The estimated value of the civil engineering work carried out to end Feb 2011 has been assessed at £34,801,401 as detailed within the attached summary/breakdown sheet (refer Appendix C). to carry out this estimate Cyril Sweett have visited the Off Street works sites and reviewed the measurements of the civil engineering works and applied the Tie contract rates to provide a total value of work done for each section of work.

For the Section 1 (on street) works between Newhaven Road and Haymarket the TIE Construction Milestone amounts and the completion percentages recorded against these have been used to establish the cost of work carried out. An independent measurement of the on street works is currently being carried out by Cyril Sweett and this will be used in due course to verify and refine the current assessments of work carried out.

It should be noted that in assessing the value of work carried out nominal adjustments have been made for work which appears not have been carried out in accordance with the contract. At this stage we have assumed that this adjustment would be offset by the value of materials on site. This should be reviewed with Tie in more detail to ensure that major items of work do not require reconstruction.

- 3.4 The Siemens Contract Price for the project equates to £96,917,007, this is summarised below and is detailed more fully within the summary sheet included under Appendix D to this report.

System Wide Works	41,073,068
Section A – Airport to Haymarket (off street)	38,390,377
Section B – Haymarket to Newhaven (on street)	17,453,562
TOTAL	<u>£96,917,007</u>

The totals noted above do not correspond with the preliminaries and construction milestone amounts and we assume the latter was adjusted to reflect and incorporate value engineering amounts and following agreement on the mobilisation payments.

The extent of these works carried out is more difficult to ascertain than the civils work given the fact that tender information provided is less detailed, no measurements are available and the majority of work has been carried out off site and is not available for inspection. We have excluded any amount for work which has been pre-fabricated off-site and is not currently stored on site. Due to the potential value involved in this section we would recommend that this item is reviewed by Tie to ascertain whether sections of completed works should be stored on site. The value of materials of site have been incorporated as per the Tie build up meantime although this will be verified further in due course.

The cost of Siemens work carried out has been estimated to be £9,577,392 based on the information made available by Tie Ltd and as set out within the attached summary/breakdown sheet within Appendix D to this report.

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- 3.5 The estimated cost of work carried out against Defined and Undefined Provisional Sums is £804,762 and is primarily for utility diversion works with sums remaining unexpended or where expended the costs having been included under other cost headings.
- 3.6 Estimated costs for works carried out in respect of SDS design services, CAF tram supply costs and maintenance mobilisation works have all, for the purposes of this report been based on the Tie projected certified amounts.
- 3.7 A summary sheet relating to the Additional Works/Change Application items identified by Tie Ltd has been attached within Appendix E to this report. The estimated cost of work attributable to SDS, BBUK, Siemens and CAF and not reflected within the measures carried out is £17,445,173.

## 4.0 Estimate of the Cost to Complete by Others

4.1 To carry out the Cost of completing the Works by others Cyril Sweett have reviewed the quantity of work to be completed in each section of the off street works sections on the project and priced this at present day market rates. We have also made an allowance for an element of working around incomplete works from previous contractors. The on street civil works have been estimated meantime using the Tie milestone amounts and their assessments on the completed and partially completed milestones. A independent measurement check and rating exercise is currently being undertaken to verify and more accurately define the extent of on street works remaining.

4.2 The cost of completing the works by others is currently estimated to be in the region of £189,773,602 and this is summarised within Appendix F to the report. This compares with the £304,444,300 figure in section 2.0 of this report although it should be noted that there are change costs which require to be added to this figure when comparing totals.

4.3 For the purposes of this Report the Preliminaries associated with the project have been included at 18% as per the following :-

	%
Main Contractor site management, plant and equipment, overheads and profit	10
Site logistics	1.5
Bonding/securities	0.5
Maintenance (included elsewhere)	Nil
Allowance for sub-contractor preliminaries	6
<b>Total</b>	<b>18%</b>

4.4 Design risk has been estimated at 3% on the basis that the design has been substantially completed and will be value engineered for the base scheme.

Value engineering opportunities have been excluded from this section of the report and any design costs associated with these would we assume be funded by and offset against any cost reductions achieved.

4.5 The estimated cost of completing the Siemens works has been assessed by calculating the balance between the original contract sum and the estimated value of work carried out to date. This may be a simplification as we have no clarity on whether any of the escalation to the Siemens works but we assume that this is not the case.

4.6 The tram supply cost to complete has also been estimated by calculating the balance between the original contract sum and the value of work certified. No allowance has been made for any delay or storage charges which may be applied due to the postponement of the delivery date for the trams.

4.7 Maintenance costs have been estimated as per the amounts originally included within the agreed Contract Price for the works and set out above. These amounts should be checked and verified.



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## 5.0 Review of Preliminaries

- 5.1 The original preliminaries value (excl the £2.2m pre-contract negotiation costs) of £32.7m equated to a level of approximately 40% against the Consortium price of £82m. This is substantially higher than would be expected on such a project particularly as escalation costs (£17.8m) were included under a separate heading. For the purposes of calculating preliminaries to apply to the works to complete a level of 22% (as set out in item 4.2 above) has been applied to the estimate of construction works outstanding
- 5.2 The original preliminaries value for Siemens of £22.4m equated to a level of approximately 30% against the construction price, system wide and design costs of £74.5m. This we assume includes allowances for risk and inflation and is more consistent with what would be expected on a specialist works contract.

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## 6.0 Commentary on current Market Conditions

The current market conditions that exist in Scotland are a reflection on the general UK economy with a reduced number of construction projects progressing to site. The UK construction market had moved out of recession in the second quarter of 2010 although this has not reflected in the tender pricing which continues to fall and are not expected to increase until the latter part of 2011. Cyril Sweett's Tender Price forecast for Scotland show tender prices bumping along the bottom for most of 2012. Thereafter prices are predicted to rise by 1.8% in Scotland during 2013 before further increases of 2.8% in 2014. We would however highlight that within this wider picture of tender price deflation the one sector which is not suffering major shortages of workload is the infrastructure sector.

We have allowed 0.9% for tender price inflation within the cost to complete section of the Report to allow for 6 months tender price inflation when the construction works should be nearing completion on site following a procurement exercise.

Our current belief is however that due to the general national economic slowdown and concern about a potential double dip the procurement of the Tram Project will appear to be very attractive to the Scottish and global supply chain and it is expected Tie will receive a large degree of interest in any Pre-qualification documents issued. This increased level on interest can positively influence Tie's procurement choices.

## 7.0 Report on alternative Procurement Routes – On Street Works

7.1 Cyril Sweett have prepared separate Procurement Reports on the potential Procurement strategies which could be adopted should the current contract with Infracore be determined following completion of the off street works.

7.2 Following workshops with the Tie Project Team, the following key areas have been identified that need to be considered in the selection of the procurement strategy for the construction of the remaining on street works yet to be completed.

- Cost Certainty after contract award
- Clear allocation and identification of risk
- Ability to achieve competitive tender returns
- Programme certainty
- Quality of workmanship

The project will be tied to the European Journal rules for tendering which have stipulated timescales associated with them which also require to be accommodated.

Cyril Sweett would propose that a Restricted Procedure be followed by Tie to meet the EU Procurement guidelines and deliver competition through a two stage procedure. The first stage allows Tie to set the minimum criteria relating to economic, technical and financial capabilities that the suppliers have to satisfy. Following evaluation and scoring a minimum of five suppliers (unless fewer qualify) are invited to tender in the second stage.

With the restricted Procedure the following options are available to meet the criteria noted for the scope of procuring the balance of works remaining:

- Traditional tender using drawings, specifications with/without Bills of Quantities
- Design and Build tender
- Management Forms of Tender (separation of civils and systems)
- Target Cost Form of Procurement (a two stage form of tendering)

7.3 During the Workshop process Cyril Sweett developed a matrix to evaluate the merits of the procurement options noted above in 7.2. the key criteria which were considered to consider the importance noted, with 5 being the highest score and 1 the lowest.

Out turn Cost Certainty	(5) The likelihood of the Final Account being the same as the returned tender sum – the rating this is maximum to reflect the desire for Tie to have fully inclusive tender return amount which will not be subject to a significant amount of change if no client variations are introduced
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Optimum Risk Transfer	(4) The ability to manage the transfer of commercial and programme risks to the
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	<p>contractor at contract award. The remaining risks need to be fully understood by both parties and costed appropriately. Clear identification and allocation of risk will be achieved by the use of standard forms of contract consistent with each of the procurement options. Further analysis of the risks which can be transferred by the key procurement options is provided in Appendix B</p>
Commercial Tender Returns	<p>(4) The ability to achieve best commercial returns from the tender process to support the value for money – the rating this is given will reflect the need to deliver the project within budget</p>
Programme Certainty	<p>(3) Ability to deliver greater levels of programme certainty for the works, (including phasing), avoidance of potential extension of time claims and maximise the probability of completion on time – the rating this is given will reflect the importance of the completion date</p>
Quality of Workmanship	<p>(3) The ability of the procurement route to determine and control the quality of workmanship for the project – this aspect of the project must meet the expectations of all involved. Note – the specification should be mature and included in the tender documents</p>
Timescale to Procure	<p>(2) Extent to which it is important to commence works on site as quickly as possible with a new contractor. This rating reflects Tie's stance of scope completion prior to tendering over need to start quickly on site</p>
Value Engineering/ Buildability	<p>(1) Extent of advice from contractor and specialist contractors during the design stage/ prior to tendering (e.g. track bed formation or changes to rail/tarmac) – this weighting reflects the level of input which Tie have had to the project to date from contractors</p>
Quality of Design	<p>(1) The ability of the procurement route to determine the quality of design for project – this aspect of the project must meet the expectations of all involved – the weighting reflects the position that the design will be taken to near completion prior to tender issue thus largely defining the quality aspirations</p>

7.4 In addition to carry out the strategic procurement review of the project the following assumptions were made:-

- |                                     |   |
|-------------------------------------|---|
| (i) Standard Form of contract       | A key assumption which has been made is that a standard form of contract will be adopted which will be well understood by the tendering marketplace and Tie   |
| (ii) Scope of Work                  | Another key assumption is that Tie will agree the scope of the works for civils and systems installations with all stakeholders and take these to a stage near completion; this will allow more competitive pricing by the tenderers without resorting to pricing of uncertainty/risk and also improve the likelihood of change post contract award |
| (iii) Design Information            | Our understanding is that Tie have rights to the existing designs and can use these for a future tendering process  |
| (iv) Traffic Management Information | It is understood that the current temporary Traffic Management proposals can be adopted by Tie for a future tendering process   |
| (v) Site Investigation              | A degree of site investigation is currently available to Tie from investigation works carried out by contractors on the site to date and this will be completed with other specific targeted site investigation prior to tender issue   |

7.5 The scoring of the matrix following the procurement workshops with Tie identified that the Restricted Procedure be followed to carry out a single stage Design and Build tender for the remaining on street works. This recommendation is current but relates to the assumptions identified within 7.4 above. A copy of the completed matrix is included in Appendix G.

## Appendix A

### Estimated Value of Work Carried Out

## Appendix B

### Estimated Value of Preliminaries

## Appendix C

### Estimated Value of Civil Works



## Appendix D

### Estimated Value of Siemens Work

## Appendix E

### Estimated Value Change Application Works

## Appendix F

### Estimated Value of Cost to Complete the Works

## Appendix G

### Procurement Routes Matrix